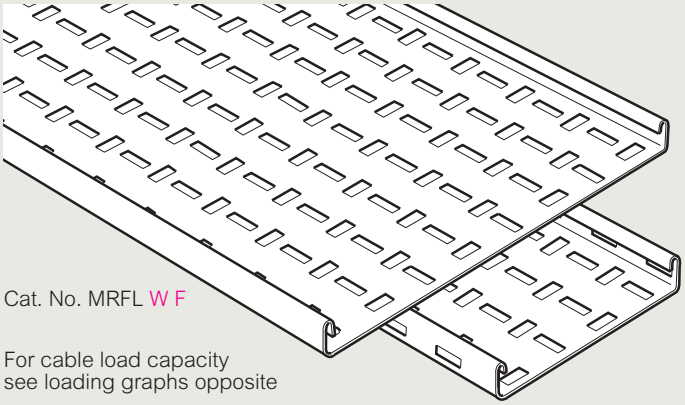
Swifts® MRF medium duty return flange
straight lengths

25

■ Dimensions and weights

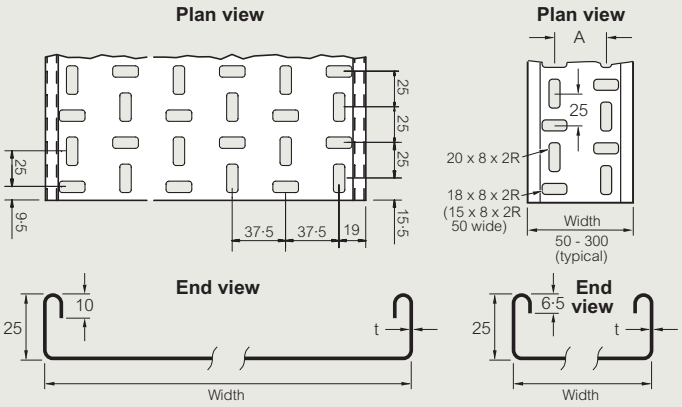


Cat. No. MRFL W F

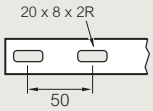
For cable load capacity
see loading graphs opposite

Dimensions

Standard length 3 m



Side flange detail
50 - 225 (typical)



Width (mm)	A (mm)
50	20·00
75	37·50
100	31·75
150 to 900	37·50

R = radius

Gauges and weights

The gauge 't' for each cable tray width and finish can vary by product and range

Non-standard gauges and finishes are available to special order, contact us on +44 (0) 845 605 4333

Cat. Nos.	Width (mm)	Weight (kg)	Gauge t (mm) G	PG
MRFL 50 F	50	2·0	0·7	0·7
MRFL 75 F	75	2·6	0·7	0·7
MRFL 100 F	100	3·0	0·8	0·7
MRFL 150 F	150	3·9	0·8	0·8
MRFL 225 F	225	6·8	1·0	0·8
MRFL 300 F	300	9·2	1·2	1·0
MRFL 450 F	450	16·5	1·2	1·2
MRFL 600 F	600	21·6	1·2	1·2
MRFL 750 F	750	33·7	1·5	1·4
MRFL 900 F	900	39·7	1·5	1·4

All weights given are in kilograms (kg) and are for a 3m straight length in hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

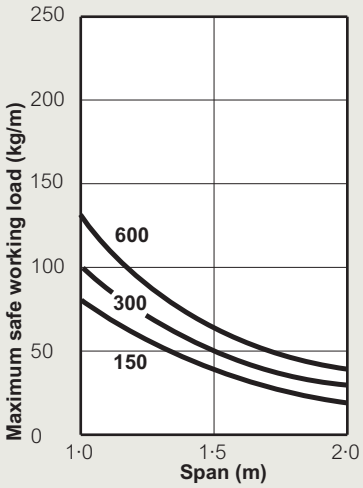
■ Loading graphs

Load tests carried out to BS EN 61537

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

The graphs show the maximum load for tray 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



For lengths 450 mm wide and greater, the addition of fishplate Cat. No. WF F across the underside of the length-to-length joint provides added strength and increases the safe working load, see p. 101

■ Finishes and standards

Standard stocked finish :

G Hot dip galvanised after manufacture to BS EN ISO 1461
PG Pre-galvanised steel to BS EN 10346 : 2009 grade DX51D

Additional finishes :

D Deep galvanised high silicon steel made from BS EN 10025-5 : 2004 Grade S355JOWP
S Stainless steel to BS EN 10088 – 2 grade 1·4404 (equivalent to 316L31)
E Powder coated (to customer's specification)

Note

50 mm wide not available in deep galvanised (D) finish

Sheared steel (particularly stainless steel) does have relatively sharp edges and protective gloves must be worn during handling

All dimensions (mm) are nominal

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

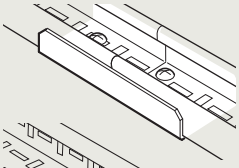
→ Coupler sets : see p. 47-48

→ Fishplates : see p. 101

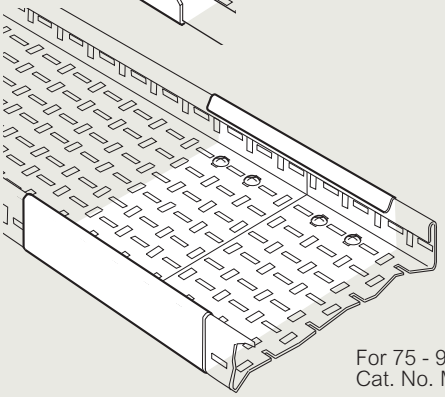
■ Standard couplers

Couplers are required for joining together MRF straight lengths or cut lengths of tray without the need for further drilling
MRFC standard couplers are supplied in pairs
MRFC 50 standard coupler is supplied singly
Supplied without fasteners – use M6 nuts, bolts and washers (see opposite)
As an alternative coupling method, use quick bolt couplers (Cat. No. MRQBCF), which are supplied with quick bolt fasteners (Cat. No. QBF) and a tool, see p. 48

■ Installation (typical)



For 50 mm wide MRF tray
Cat. No. MRFC 50 F



For 75 - 900 mm wide MRF tray
Cat. No. MRFC F

Illustration : SRF shown, MRF similar

Cat. Nos.	Tray range
MRFC F 50(1)	MRF
MRFC F (2)	MRF

(1) MRFC 50 for 50 mm wide tray only
(2) MRFC for 75-900 mm wide tray only

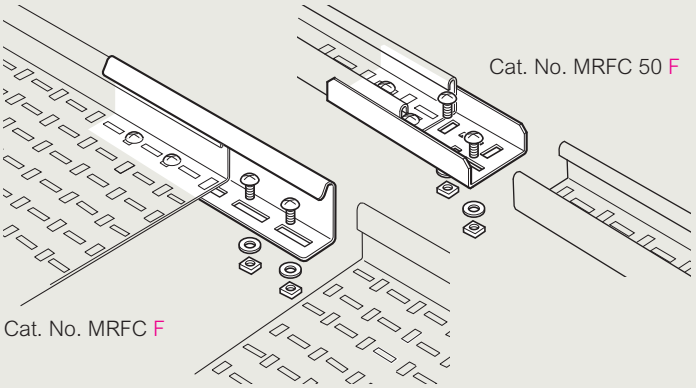
■ Assembly

For 50 mm wide MRF tray

Bring together two lengths and locate the coupler across the underside of the tray joint as shown
Insert two roofing bolts through aligning slots in each tray bed and into the coupler (four bolts per coupler) and secure with roofing washers and nuts

For 75 - 900 mm wide MRF tray

Bring together two lengths and fit a coupler on the outside of adjacent flanges at both sides of the tray joint
Locate the coupler as shown and insert two roofing bolts through aligning slots in each tray bed and coupler (four bolts per coupler), and secure with roofing washers and nuts



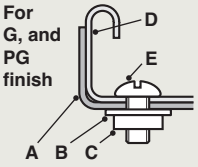
Cat. No. MRFC 50 F

Cat. No. MRFC F

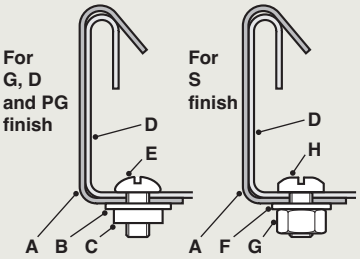
■ Assembly (continued)

Fasteners

Cat. No. MRFC 50 F



Cat. No. MRFC F



A Coupler
B Roofing washer
C M6 square nut
D Straight length
E M6 x 12 roofing bolt
F M6 form A washer
G M6 hexagon nut
H M6 x 12 pan head screw

Fastener finishes

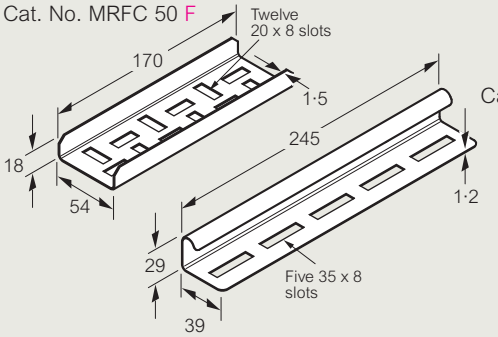
For lengths and fittings with G, D and PG finishes fasteners are galvanised or zinc plated. For trays and fittings with S finish, fasteners are corrosion resistant stainless Grade A470
For lengths and fittings with E finish the choice of material for fasteners will depend on the installation environment – contact us on +44 (0) 845 605 4333

Note

For quick bolt couplers and fasteners, see p. 48

■ Dimensions and weights

Cat. No. MRFC 50 F



Cat. No. MRFC F

Cat. Nos.	Weight (kg)
MRFC 50 F	0·2 single
MRFC F	0·4 pair

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish
To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised	(D)	x 1·06
Stainless steel	(S)	x 0·94
Pre-galvanised	(PG)	x 0·96
Powder coated	(E)	x 0·97

All dimensions (mm) are nominal

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Quick bolt couplers

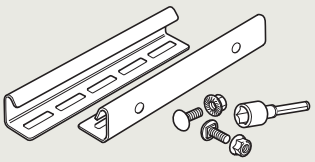
Quick bolt couplers are a stronger, faster, easier and safer method of joining together MRF straight lengths or cut lengths of tray without the need for further drilling

Square-shafted quick bolts lock firmly into position before fixing. The nuts, which have integral washers and a serrated edge to reduce slip and improve earthing, can then be easily tightened using a power tool

Supplied in packs containing 25 pairs of couplers, 100 quick bolt fasteners (Cat. No. QBF) and a FREE power tool attachment

For tray widths 300 mm and above use two additional quick bolt fixings (Cat. No. QBF) per coupler

Quick bolt couplers are not available for 50 mm wide MRF tray



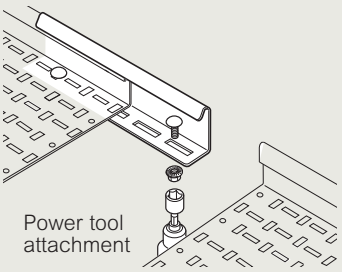
■ Installation

Typical installation as per standard couplers, replacing nuts, bolts and washers with quick bolt fasteners, Cat. No. QBF

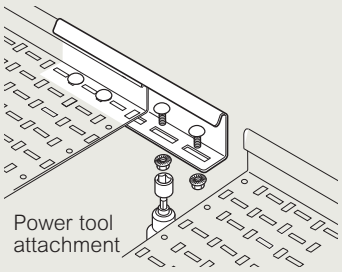
■ Assembly

Bring together two lengths and fit a coupler on the outside of adjacent flanges at both sides of the tray joint

Locate the coupler and insert coach bolts through aligning slots in each tray bed and coupler as shown and secure with nuts



Tray widths up to 225 mm
Two quick bolt fasteners per coupler



Tray widths 300 mm and above
Four quick bolt fasteners per coupler

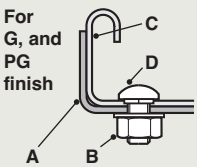
Quick bolt couplers

Cat. Nos.	Tray range	Weight (kg)
MRQBC F	MRF	0·4 pair

Fasteners

Quick bolt fasteners
High grade steel with Dacromet finish

Cat. Nos.	Pack	Size (mm)
QBF	100	M6 x 12



A Coupler
B M6 flange nut
C Straight length
D M6 coach bolt

■ Dimensions and weights

Dimensions

For coupler dimensions see p. 47

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Pre-galvanised (PG) x 0·96

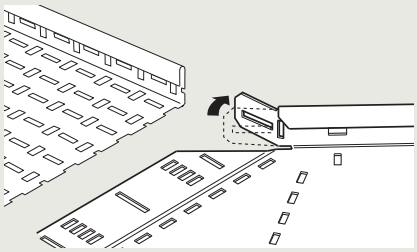
All dimensions (mm) are nominal

→ Straight lengths : see p. 46

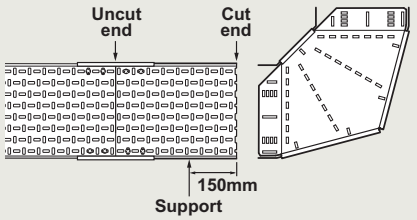
■ Straight length to fitting coupling

Cable tray fittings must be properly supported. The ideal location for supports is shown in step 2, i.e. 150 mm from the fitting to length joint. For further details see Design Notes, Recommended Support Locations, see p. 128

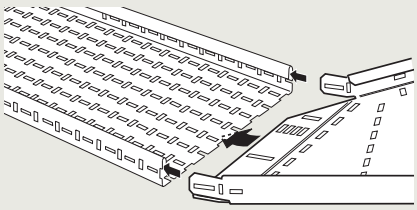
1
Where necessary re-align the fitting flange tabs from their transit position to their installation position



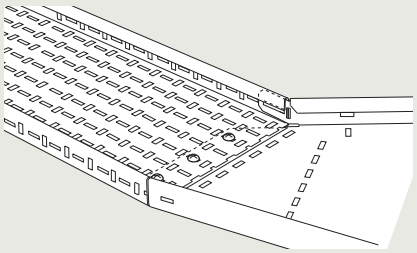
2
When a straight length of cable tray has to be cut back to accept a fitting, always fit the uncut end to the adjacent straight length; the cut end should be connected to the fitting



3
Offer the fitting at an angle to the straight length and locate, ensuring that the joggled fishplate fits under the tray bed and the flange tabs slide inside the length flanges



4
Insert roofing bolts or QBF through slots in the tray bed in to aligning slots in the fitting fishplate and secure with roofing washers and nuts



Note

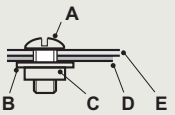
Fasteners stated are for D, G and PG finishes
For lengths and fittings with S finish use fasteners listed below

Fasteners

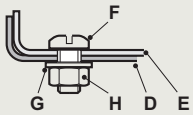
Minimum number of fasteners per joint (not included) :
Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

Roofing bolts

For G, D and PG finish

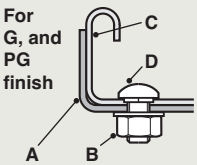


For S finish



A M6 x 12 roofing bolt
B Roofing washer
C M6 square nut
D Fitting
E Straight length
F M6 x 12 pan head screw
G M6 form A washer
H M6 hexagon nut

Quick bolt fasteners



A Coupler
B M6 flange nut
C Straight length
D M6 coach bolt

Fastener finish

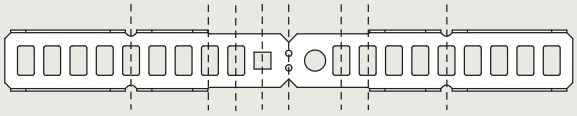
For lengths and fittings with G, D and PG finishes, fasteners are galvanised or zinc plated. For trays and fittings with S finish, fasteners are corrosion resistant stainless Grade A470
For lengths and fittings with E finish, the choice of material for fasteners will depend on the installation environment - contact us on +44 (0) 845 605 4333

Swifts® MRF medium duty fittings
universal bracket and fishplate

■ Universal bracket

The universal bracket can be easily folded at one or more of the 8 predetermined points. By overfolding a couple of times, the bracket can be split, for example on the centre line to make a hinged coupler or in between the outer flanges if the length of the bracket needs to be reduced
The square hole is provided to locate the shoulder of the quick bolt fastener – this side should be facing inwards towards the tray to avoid snagging cables
The pitch between each fold point is designed to match up with the Swifts range of MRF cable tray systems
By using different configurations the bracket can be folded to create numerous functions on-site, examples of which are shown below
For MRF 300mm to 900 mm straight lengths, fixing holes must be drilled into the side wall of the tray

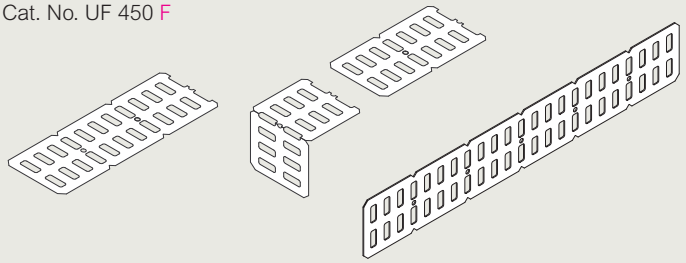
Cat. No. MRFUB F



■ Universal fishplate

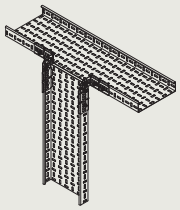
Fishplates are designed for extra strength when joining cable tray beds and can also help to protect cables from cut edges
The universal fishplate can be overfolded and split at 75 mm centres when working with narrow trays
Supplied singly without fasteners

Cat. No. UF 450 F

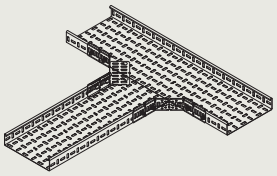


■ Installation (typical)

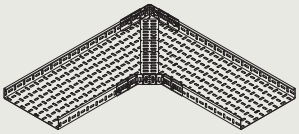
Side dropout



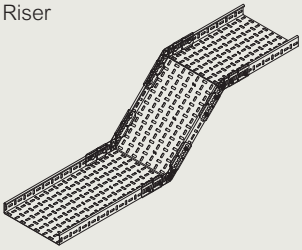
Tee



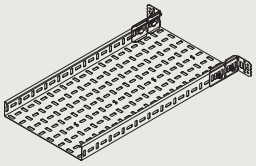
Bend



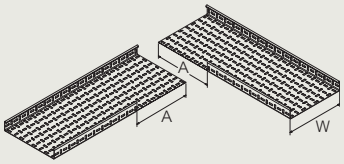
Riser



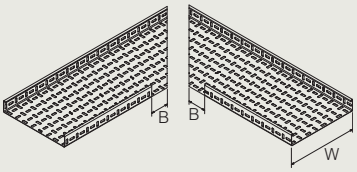
Flange assembly



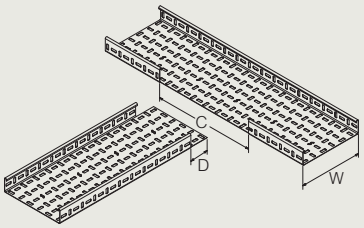
■ Dimensions



Above dimensions are for 90° bend with overlap joint



Above dimensions are for 90° bend with diagonal joint. Diagonal cuts are 45°



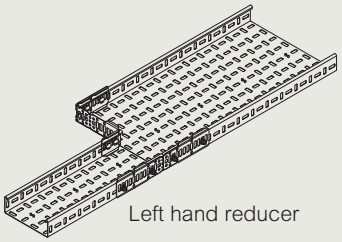
Note 1 : Dimensions are for tee with fishplate joint
Note 2 : For overlap joint tee use 'D' + 50

Cat. Nos.	Width (W)	Overlap A	Diagonal B	Tee C	Tee D
MRFL 75 F	75	80	65	195	60
MRFL 100 F	100	105	65	220	60
MRFL 150 F	150	155	65	270	60
MRFL 225 F	225	230	65	345	60
MRFL 300 F	300	305	65	420	60

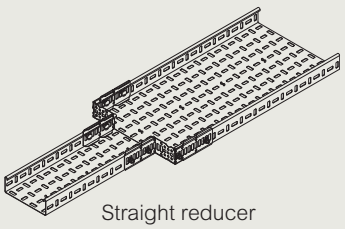
Illustrations : SRF shown. MRF similar

■ Handed and straight reducer configurations

Figures show approximated reduced width
Left or right handed reducers are not currently available as a standard factory fabricated fitting



Left hand reducer



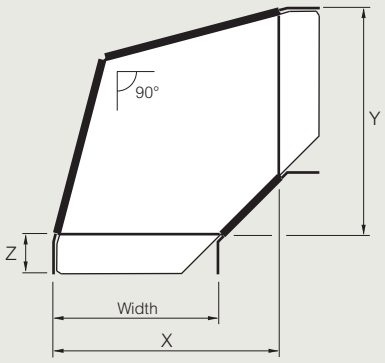
Straight reducer

MRFL														
Smaller Size	50 mm		75 mm		100 mm		150 mm		225 mm		300 mm		450 mm	
Larger Size	Handed	Straight	Handed	Straight	Handed	Straight	Handed	Straight	Handed	Straight	Handed	Straight	Handed	Straight
75 mm	25	12	–	–	–	–	–	–	–	–	–	–	–	–
100 mm	50	25	25	12	–	–	–	–	–	–	–	–	–	–
150 mm	100	50	75	37	50	25	–	–	–	–	–	–	–	–
225 mm	–	87	150	75	125	62	75	37	–	–	–	–	–	–
300 mm	–	–	–	112	–	100	150	75	75	37	–	–	–	–
450 mm	–	–	–	–	–	–	–	150	–	112	150	75	–	–
600 mm	–	–	–	–	–	–	–	–	–	–	–	150	150	75

All dimensions (mm) are nominal

Swifts® MRF medium duty fittings
flat bends – 90°, 60°, 45° and 30°

■ 90° flat bends – dimensions and weights
Cat. No. MRFB W F

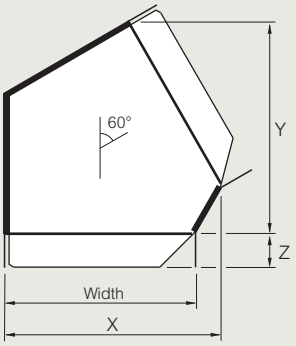


Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFB 50 F	50	172	172	55	0·3
MRFB 75 F	75	197	197	55	0·4
MRFB 100 F	100	221	221	55	0·6
MRFB 150 F	150	272	272	55	0·8
MRFB 225 F	225	345	345	55	1·3
MRFB 300 F	300	420	420	55	1·8
MRFB 450 F	450	570	570	55	4·2
MRFB 600 F	600	720	720	55	5·8
MRFB 750 F	750	870	870	55	11·7
MRFB 900 F	900	1020	1020	55	15·8

Also consider the versatile adjustable bend for widths 50 mm - 300 mm, see p. 52-53

Note
50 mm wide not available in D finish

■ 60° flat bends – dimensions and weights
Cat. No. MRFB W 60 F



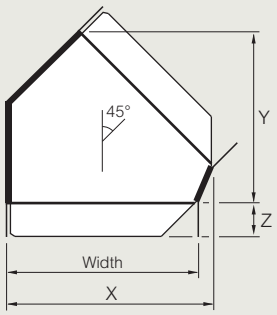
Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFB 50 60 F	50	108	148	55	0·3
MRFB 75 60 F	75	133	169	55	0·5
MRFB 100 60 F	100	158	191	55	0·6
MRFB 150 60 F	150	208	234	55	0·8
MRFB 225 60 F	225	283	299	55	1·3
MRFB 300 60 F	300	358	364	55	1·4
MRFB 450 60 F	450	509	494	55	3·0
MRFB 600 60 F	600	659	624	55	4·6
MRFB 750 60 F	750	809	754	55	6·6
MRFB 900 60 F	900	959	884	55	9·1

Also consider the versatile adjustable bend for widths 50 mm - 300 mm, see p. 52-53

Note
50 mm wide not available in D finish

All dimensions (mm) are nominal

■ 45° flat bends – dimensions and weights
Cat. No. MRFB W 45 F

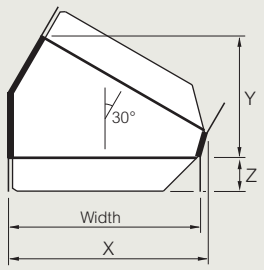


Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFB 50 45 F	50	83	120	55	0·2
MRFB 75 45 F	75	108	138	55	0·4
MRFB 100 45 F	100	133	156	55	0·5
MRFB 150 45 F	150	183	191	55	0·8
MRFB 225 45 F	225	258	244	55	1·2
MRFB 300 45 F	300	333	297	55	1·1
MRFB 450 45 F	450	483	403	55	2·3
MRFB 600 45 F	600	633	509	55	3·5
MRFB 750 45 F	750	783	615	55	5·1
MRFB 900 45 F	900	933	721	55	6·8

Also consider the versatile adjustable bend for widths 50 mm - 300 mm, see p. 52-53

Note
50 mm wide not available in D finish

■ 30° flat bends – dimensions and weights
Cat. No. MRFB W 30 F



Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFB 50 30 F	50	63	85	55	0·2
MRFB 75 30 F	75	88	98	55	0·2
MRFB 100 30 F	100	113	110	55	0·3
MRFB 150 30 F	150	163	135	55	0·5
MRFB 225 30 F	225	238	173	55	0·8
MRFB 300 30 F	300	313	210	55	1·1
MRFB 450 30 F	450	463	285	55	1·6
MRFB 600 30 F	600	613	360	55	2·5
MRFB 750 30 F	750	763	435	55	3·6
MRFB 900 30 F	900	913	510	55	4·8

Also consider the versatile adjustable bend for widths 50 mm - 300 mm, see p. 52-53

Note
50 mm wide not available in D finish

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

MRF adjustable bends : see p. 52-53

Swifts® MRF medium duty fittings
flat bends – 90°, 60°, 45° and 30°

■ Dimensions and weights – flat bends 90°, 60°, 45° and 30°

Dimensions

X = Length of fitting from each end (excluding integral coupler)
Y = Length of fitting from each end (excluding integral coupler)
Z = End extension of integral coupler

Weights

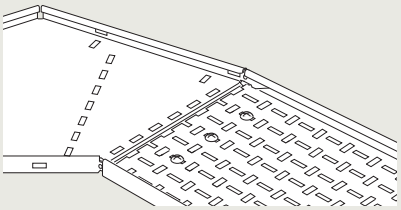
All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

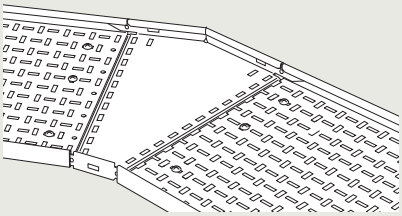
Deep galvanised	(D)	x 1·06
Stainless steel	(S)	x 0·94
Pre-galvanised	(PG)	x 0·96
Powder coated	(E)	x 0·97

■ Assembly – flat bends 90°, 60°, 45° and 30°

Coupling detail – 90°



Coupling detail – 60°, 45° and 30°



Flat bend to straight length coupling

Flat bends have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each flat bend to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225	= 2
Widths 300 to 600	= 3
Widths 750 and 900	= 4

Fastener finishes

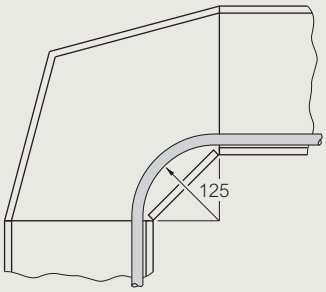
For flat bends with G, D and PG finishes, fasteners are galvanised or zinc plated. For flat bends with S finish, fasteners are stainless steel For flat bends with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

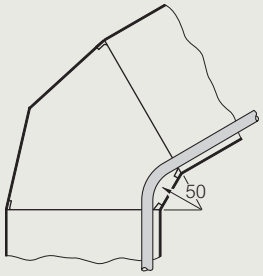
■ Assembly – flat bends 90°, 60°, 45° and 30° (continued)

Minimum bend radius for cables – flat bends 90°



Minimum cable radius = 125 mm

Minimum bend radius for cables – flat bends 60°, 45° and 30°



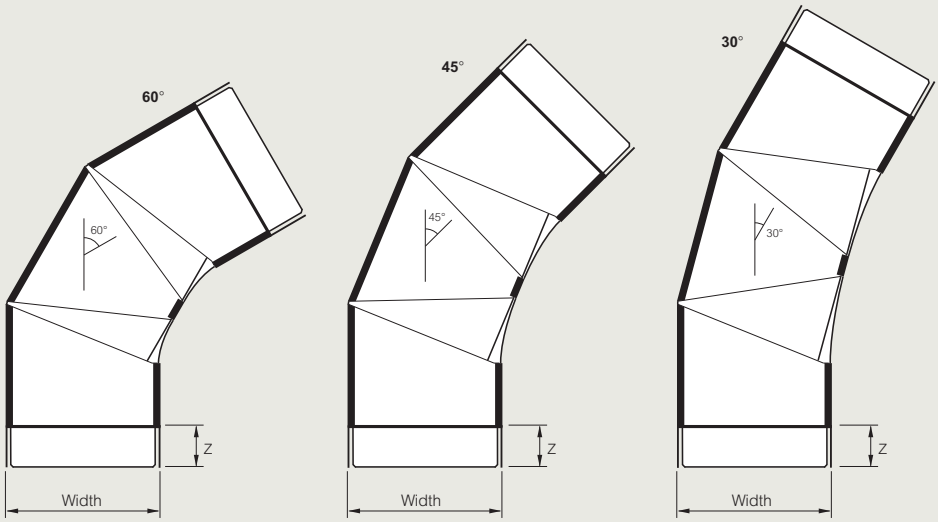
Minimum cable radius = 125 mm

All dimensions (mm) are nominal

MRF adjustable bends : see p. 52-53

Swifts® MRF medium duty fittings
adjustable flat bends – 50 to 300 mm wide

■ Dimensions and weights
Cat. No. MRFAB W F



Cat. Nos.	Width	Z	Weight (kg)
MRFAB 50 F	50	55	0·3
MRFAB 75 F	75	55	0·5
MRFAB 100 F	100	55	0·6
MRFAB 150 F	150	55	1·0
MRFAB 225 F	225	55	1·9
MRFAB 300 F	300	55	3·0

For widths 450-900 mm use 60°, 45° and 30° flat bends, see p. 50-51
For widths 300 mm and below use adjustable flat bends for all angles up to 90°. Fixed angle flat bends are also available, see p. 50-51

Note
50 mm wide not available in D finish

Dimensions
Z = End extension of integral coupler

Weights
All weights given are in kilograms (kg) and are for hot dip galvanised G finish
To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised	(D)	x 1·06
Stainless steel	(S)	x 0·94
Pre-galvanised	(PG)	x 0·96
Powder coated	(E)	x 0·97

Key : Replace the letter shown in red with your choice from the following options :
F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

All dimensions (mm) are nominal

MRF flat bends : see p. 50–51

Swifts® MRF medium duty fittings
adjustable flat bends – 50 to 300 mm wide

■ Assembly

Adjusting bend to any angle between 30° and 90°

Adjustable flat bends can be adjusted to any angle between 30° and 90°, refer to the diagram opposite

Insert fasteners through both slots **X** in the outer sections of the bed and the associated slots **Z** in the centre section of the bed. Adjust the bendable sections equally until the required angle is formed

Setting bend to specific angles

Adjustable flat bends can be set to specific fixed angles or they can be adjusted to any angle between 30° and 90° in increments of 7·5°

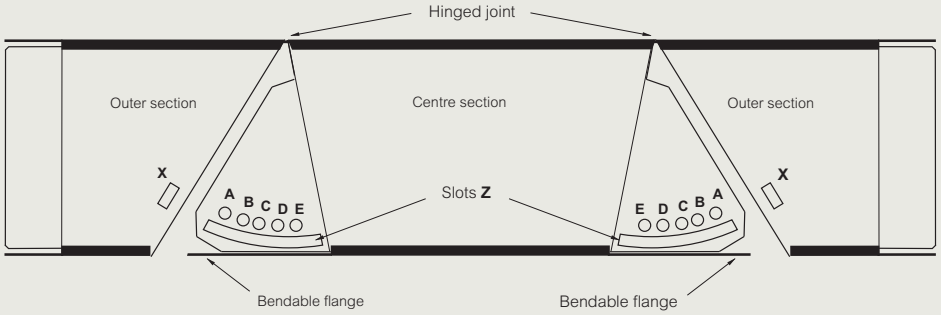
Note

When setting the adjustable flat bend to the required angle, ensure that the bendable inner flanges on the centre section engage in the return flanges on the outer sections

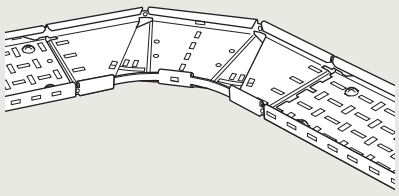
Angle (°)	Fastener holes
30	A + A
37·5	A + B
45	B + B
52·5	B + C
60	C + C
67·5	C + D
75	D + D
82·5	D + E
90	E + E

Refer to the table and the diagram below

Insert fasteners through both slots **X** in the outer sections of the bend and the appropriate holes (**A** to **E**) in the centre section of the bed (2 off M6 fasteners included)



Coupling detail



Adjustable flat bend to straight length coupling

Adjustable flat bends have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each adjustable flat bend to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Width 300 = 3

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Assembly (continued)

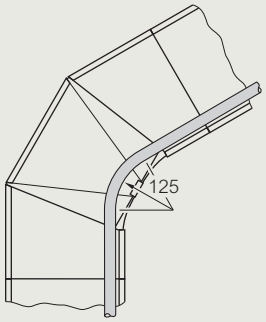
Fastener finishes

For adjustable flat bends with G, D and PG finishes, fasteners are galvanised or zinc plated

For adjustable flat bends with S finish, fasteners are stainless steel

For adjustable flat bends with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

Minimum bend radius for cables



For details on how to set adjustable flat bends to angles, see below and opposite

All dimensions (mm) are nominal

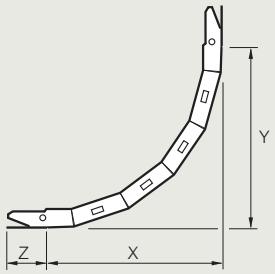
MRF flat bends : see p. 50-51

■ 90° inside and outside risers – dimensions and weights

Dimensions

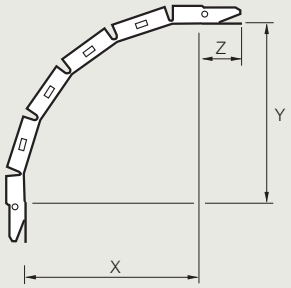
Cat. No. MRFIR W F

Inside riser



Cat. No. MRFOR W F

Outside riser



Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFIR 50 F	50	260	260	55	0·5
MRFIR 75 F	75	260	260	55	0·6
MRFIR 100 F	100	260	260	55	0·7
MRFIR 150 F	150	260	260	55	0·9
MRFIR 225 F	225	260	260	55	1·3
MRFIR 300 F	300	260	260	55	1·7
MRFIR 450 F	450	260	260	55	3·0
MRFIR 600 F	600	260	260	55	4·0
MRFIR 750 F	750	260	260	55	6·6
MRFIR 900 F	900	260	260	55	7·9

Cat. Nos. given in the table are for inside risers. For outside risers substitute MRFIR for MRFOR. All fixed risers radius = 260 mm

■ 60° inside and outside risers – dimensions and weights

Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFIR 50 60 F	50	269	155	55	0·4
MRFIR 75 60 F	75	269	155	55	0·5
MRFIR 100 60 F	100	269	155	55	0·5
MRFIR 150 60 F	150	269	155	55	0·7
MRFIR 225 60 F	225	269	155	55	1·0
MRFIR 300 60 F	300	269	155	55	1·3
MRFIR 450 60 F	450	269	155	55	2·4
MRFIR 600 60 F	600	269	155	55	3·2
MRFIR 750 60 F	750	269	155	55	4·0
MRFIR 900 60 F	900	269	155	55	4·8

Cat. Nos. given in the table are for inside risers. For outside risers substitute MRFIR for MRFOR. All fixed risers radius = 260 mm

■ 45° inside and outside risers – dimensions and weights

Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFIR 50 45 F	50	220	91	55	0·4
MRFIR 75 45 F	75	220	91	55	0·4
MRFIR 100 45 F	100	220	91	55	0·5
MRFIR 150 45 F	150	220	91	55	0·6
MRFIR 225 45 F	225	220	91	55	0·8
MRFIR 300 45 F	300	220	91	55	1·1
MRFIR 450 45 F	450	220	91	55	2·0
MRFIR 600 45 F	600	220	91	55	2·7
MRFIR 750 45 F	750	220	91	55	3·3
MRFIR 900 45 F	900	220	91	55	4·0

Cat. Nos. given in the table are for inside risers. For outside risers substitute MRFIR for MRFOR. All fixed risers radius = 260 mm

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ 30° inside and outside risers – dimensions and weights

Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFIR 50 30 F	50	157	42	55	0·3
MRFIR 75 30 F	75	157	42	55	0·3
MRFIR 100 30 F	100	157	42	55	0·4
MRFIR 150 30 F	150	157	42	55	0·5
MRFIR 225 30 F	225	157	42	55	0·7
MRFIR 300 30 F	300	157	42	55	0·9
MRFIR 450 30 F	450	157	42	55	1·6
MRFIR 600 30 F	600	157	42	55	2·1
MRFIR 750 30 F	750	157	42	55	2·7
MRFIR 900 30 F	900	157	42	55	3·2

Cat. Nos. given in the table are for inside risers. For outside risers substitute MRFIR for MRFOR. All fixed risers radius = 260 mm

Dimensions

X = Length of fitting from each end (excluding integral coupler)
Y = Length of fitting from each end (excluding integral coupler)
Z = End extension of integral coupler

Weights

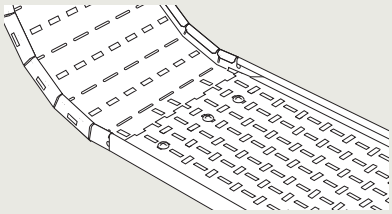
All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

■ Assembly

Coupling detail



Riser to straight length coupling

90° risers have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each riser to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

Fastener finishes

For risers with G, D and PG finishes, fasteners are galvanised or zinc plated

For risers with S finish, fasteners are stainless steel

For risers with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

All dimensions (mm) are nominal

MRF adjustable risers : see p. 55

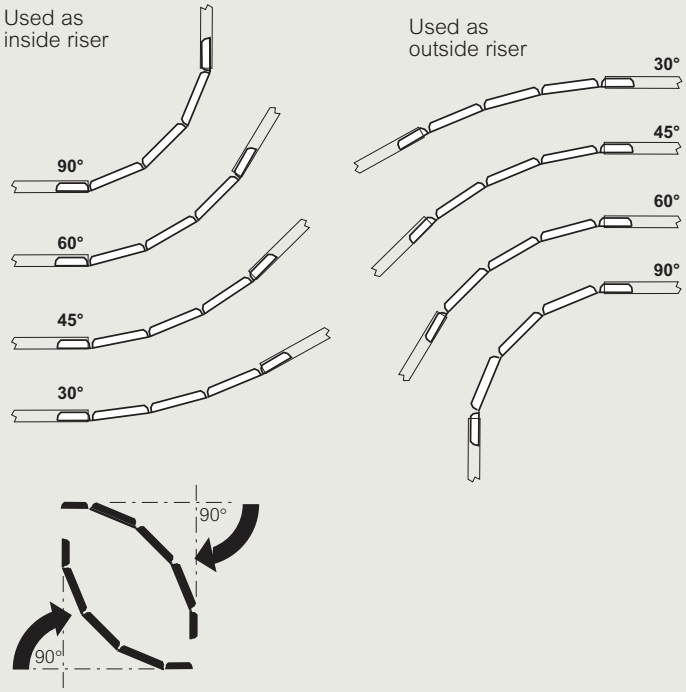
Swifts® MRF medium duty fittings
adjustable risers

■ Dimensions and weights

The adjustable riser can be used as an inside or outside riser for any angle up to 90°
Minimum radius = 200 mm
Maximum radius = 300 mm
Overall length when flat = 554 mm

Dimensions

Cat. No. MRFAR W F



Cat. Nos.	Width	Weight (kg)
MRFAR 50 F	50	0·4
MRFAR 75 F	75	0·5
MRFAR 100 F	100	0·6
MRFAR 150 F	150	0·9
MRFAR 225 F	225	1·2
MRFAR 300 F	300	2·0
MRFAR 450 F	450	3·0
MRFAR 600 F	600	4·1
MRFAR 750 F	750	5·2
MRFAR 900 F	900	6·2

Note

50 mm wide not available in D finish

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

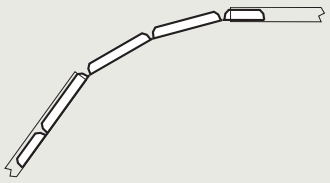
Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

Key : Replace the letter shown in red with your choice from the following options :

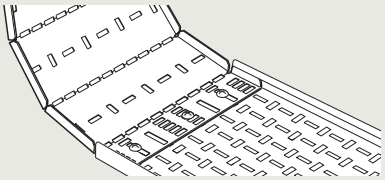
F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Assembly

As many riser segments as necessary may be inserted into the end of the straight length, thus avoiding the need for cutting



Coupling detail



Adjustable riser to straight length coupling

Adjustable risers fit into straight lengths whether they have been cut to lengths or not, without the need for further drilling

Each riser to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

Fastener finishes

For adjustable riser with G, D and PG finishes, fasteners are galvanised or zinc plated
For adjustable riser with S finish, fasteners are stainless steel
For adjustable riser with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

All dimensions (mm) are nominal

MRF inside and outside risers : see p. 54

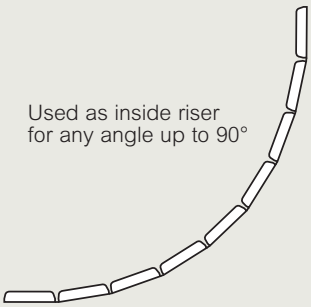
Swifts® MRF medium duty fittings
extra long adjustable risers

■ Dimensions and weights

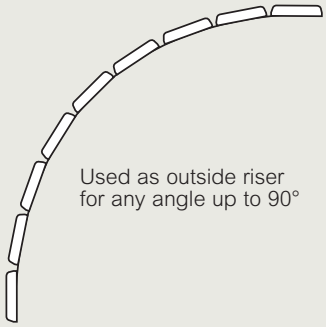
The extra long adjustable riser can be used as an inside or outside riser for any angle up to 90°
Minimum radius = 200 mm
Maximum radius = 650 mm
Overall length when flat = 1 087 mm

Dimensions

Cat. No. MRFAXR W F



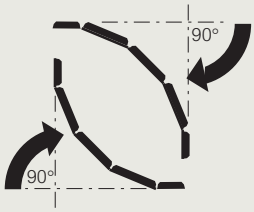
Used as inside riser for any angle up to 90°



Used as outside riser for any angle up to 90°

Used to avoid obstacles on site





Cat. Nos.	Width	Weight (kg)
MRFAXR 50 F	50	0·7
MRFAXR 75 F	75	1·0
MRFAXR 100 F	100	1·2
MRFAXR 150 F	150	1·7
MRFAXR 225 F	225	2·5
MRFAXR 300 F	300	4·2
MRFAXR 450 F	450	6·2
MRFAXR 600 F	600	8·2
MRFAXR 750 F	750	10·3
MRFAXR 900 F	900	12·4

Note

50 mm wide not available in D finish

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

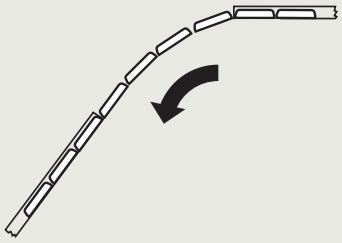
Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

Key : Replace the letter shown in red with your choice from the following options :

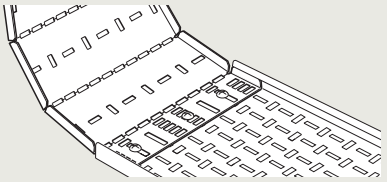
F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Assembly

As many riser segments as necessary may be inserted into the end of the straight length, thus avoiding the need for cutting



Coupling detail



Extra long adjustable riser to straight length coupling

Extra long adjustable risers fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each riser to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

Fastener finishes

For adjustable risers with G, D and PG finishes, fasteners are galvanised or zinc plated
For adjustable risers with S finish, fasteners are stainless steel
For adjustable risers with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

All dimensions (mm) are nominal

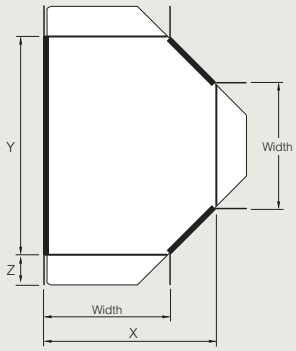
MRF inside and outside risers : see p. 54

Swifts® MRF medium duty fittings
equal tees

■ Dimensions and weights

Dimensions

Cat. No. MRFT W F



X = Length of fitting from each end (excluding integral coupler)
Y = Length of fitting from each end (excluding integral coupler)
Z = End extension of integral coupler

Cat. Nos.	Width	X	Y	Z	Weight (kg)
MRFT 50 F	50	172	295	55	0·6
MRFT 75 F	75	197	320	55	0·8
MRFT 100 F	100	221	344	55	0·9
MRFT 150 F	150	271	394	55	1·3
MRFT 225 F	225	346	469	55	2·0
MRFT 300 F	300	420	542	55	2·8
MRFT 450 F	450	570	692	55	5·7
MRFT 600 F	600	720	842	55	9·0
MRFT 750 F	750	870	992	55	16·4
MRFT 900 F	900	1 020	1 142	55	21·9

Note

50 mm wide not available in D finish

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

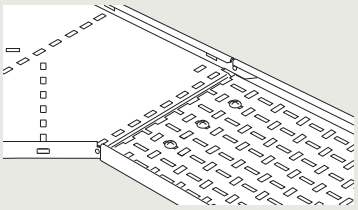
Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Assembly

Coupling detail



Equal tee to straight length coupling

Equal tees have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each equal tee to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

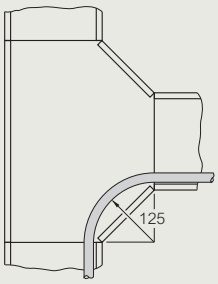
Fastener finishes

For equal tees with G, D and PG finishes, fasteners are galvanised or zinc plated

For equal tees with S finish, fasteners are stainless steel

For equal tees with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

Minimum bend radius for cables



Minimum cable radius = 125 mm

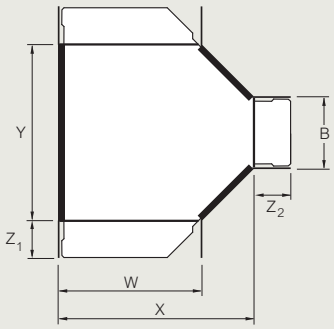
All dimensions (mm) are nominal

MRF unequal tees : see p. 58

Swifts® MRF medium duty fittings
unequal tees

■ Dimensions and weights

Dimensions
Cat. No. MRFUT W B F



X = Length of fitting from each end (excluding integral coupler)
Y = Length of fitting from each end (excluding integral coupler)
Z_1 = End extension of integral coupler
Z_2 = End extension of integral coupler

Note
50 mm wide not available in D finish

Width (W)	Width (B)	Cat. Nos.	Dimensions (mm) X	Y	Z_1	Z_2	Weight (kg)
50	75	MRFUT 50 75 F	172	320	55	55	0·7
	100	MRFUT 50 100 F	172	344	55	55	0·7
	150	MRFUT 50 150 F	172	394	55	55	0·8
	225	MRFUT 50 225 F	172	469	55	55	1·0
	300	MRFUT 50 300 F	172	542	55	55	1·2
	450	MRFUT 50 450 F	172	692	55	55	2·0
	600	MRFUT 50 600 F	172	842	55	55	2·4
	750	MRFUT 50 750 F	172	992	55	55	2·9
	900	MRFUT 50 900 F	172	1 142	55	55	3·4
75	50	MRFUT 75 50 F	197	294	55	55	0·7
	100	MRFUT 75 100 F	197	344	55	55	0·8
	150	MRFUT 75 150 F	197	394	55	55	1·0
	225	MRFUT 75 225 F	197	469	55	55	1·2
	300	MRFUT 75 300 F	197	542	55	55	1·4
	450	MRFUT 75 450 F	197	692	55	55	2·2
	600	MRFUT 75 600 F	197	842	55	55	2·7
	750	MRFUT 75 750 F	197	992	55	55	3·3
	900	MRFUT 75 900 F	197	1 142	55	55	3·7
100	50	MRFUT 100 50 F	221	294	55	55	0·8
	75	MRFUT 100 75 F	221	320	55	55	0·9
	150	MRFUT 100 150 F	221	394	55	55	1·1
	225	MRFUT 100 225 F	221	469	55	55	1·3
	300	MRFUT 100 300 F	221	542	55	55	1·5
	450	MRFUT 100 450 F	221	692	55	55	2·4
	600	MRFUT 100 600 F	221	842	55	55	3·0
	750	MRFUT 100 750 F	221	992	55	55	3·7
	900	MRFUT 100 900 F	221	1 142	55	55	4·1
150	50	MRFUT 150 50 F	271	294	55	55	1·0
	75	MRFUT 150 75 F	271	320	55	55	1·1
	100	MRFUT 150 100 F	271	344	55	55	1·1
	225	MRFUT 150 225 F	271	469	55	55	1·6
	300	MRFUT 150 300 F	271	542	55	55	1·8
	450	MRFUT 150 450 F	271	692	55	55	2·9
	600	MRFUT 150 600 F	271	842	55	55	3·5
	750	MRFUT 150 750 F	271	992	55	55	3·8
	900	MRFUT 150 900 F	271	1 142	55	55	4·1
225	50	MRFUT 225 50 F	346	294	55	55	1·3
	75	MRFUT 225 75 F	346	320	55	55	1·4
	100	MRFUT 225 100 F	346	344	55	55	1·5
	150	MRFUT 225 150 F	346	394	55	55	1·7
	300	MRFUT 225 300 F	346	542	55	55	2·3
	450	MRFUT 225 450 F	346	692	55	55	3·7
	600	MRFUT 225 600 F	346	842	55	55	4·5
	750	MRFUT 225 750 F	346	992	55	55	5·2
	900	MRFUT 225 900 F	346	1 142	55	55	6·0
300	50	MRFUT 300 50 F	420	294	55	55	1·6
	75	MRFUT 300 75 F	420	320	55	55	1·7
	100	MRFUT 300 100 F	420	342	55	55	1·8
	150	MRFUT 300 150 F	420	392	55	55	2·0
	225	MRFUT 300 225 F	420	467	55	55	2·4
	450	MRFUT 300 450 F	420	692	55	55	4·5
	600	MRFUT 300 600 F	420	842	55	55	5·4
	750	MRFUT 300 750 F	420	992	55	55	6·1
	900	MRFUT 300 900 F	420	1 142	55	55	7·1
450	50	MRFUT 450 50 F	570	294	55	55	2·7
	75	MRFUT 450 75 F	570	320	55	55	2·9
	100	MRFUT 450 100 F	570	342	55	55	3·1
	150	MRFUT 450 150 F	570	392	55	55	3·5
	225	MRFUT 450 225 F	570	467	55	55	4·1
	300	MRFUT 450 300 F	570	542	55	55	4·7
	600	MRFUT 450 600 F	570	842	55	55	7·2
	750	MRFUT 450 750 F	570	992	55	55	10·1
	900	MRFUT 450 900 F	570	1 142	55	55	12·6
600	50	MRFUT 600 50 F	720	294	55	55	3·3
	75	MRFUT 600 75 F	720	320	55	55	3·7
	100	MRFUT 600 100 F	720	342	55	55	3·9
	150	MRFUT 600 150 F	720	392	55	55	4·4
	225	MRFUT 600 225 F	720	467	55	55	5·2
	300	MRFUT 600 300 F	720	542	55	55	6·0
	450	MRFUT 600 450 F	720	692	55	55	7·5
	750	MRFUT 600 750 F	720	992	55	55	10·0
	900	MRFUT 600 900 F	720	1 142	55	55	15·6
750	50	MRFUT 750 50 F	870	294	55	55	4·2
	75	MRFUT 750 75 F	870	320	55	55	4·4
	100	MRFUT 750 100 F	870	342	55	55	4·7
	150	MRFUT 750 150 F	870	392	55	55	6·7
	225	MRFUT 750 225 F	870	467	55	55	8·1
	300	MRFUT 750 300 F	870	542	55	55	9·3
	450	MRFUT 750 450 F	870	692	55	55	11·3
	600	MRFUT 750 600 F	870	842	55	55	12·2
	900	MRFUT 750 900 F	870	1 142	55	55	13·8
900	50	MRFUT 900 50 F	1 020	294	55	55	4·9
	75	MRFUT 900 75 F	1 020	320	55	55	5·1
	100	MRFUT 900 100 F	1 020	342	55	55	5·5
	150	MRFUT 900 150 F	1 020	392	55	55	6·2
	225	MRFUT 900 225 F	1 020	467	55	55	7·2
	300	MRFUT 900 300 F	1 020	542	55	55	11·6
	450	MRFUT 900 450 F	1 020	692	55	55	13·6
	600	MRFUT 900 600 F	1 020	842	55	55	16·0
	750	MRFUT 900 750 F	1 020	992	55	55	17·0

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

Swifts® MRF medium duty fittings
unequal tees

■ Dimensions and weights (continued)

Weights

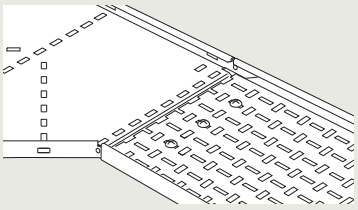
All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised	(D)	x 1·06
Stainless steel	(S)	x 0·94
Pre-galvanised	(PG)	x 0·96
Powder coated	(E)	x 0·97

■ Assembly

Coupling detail



Unequal tee to straight length coupling

Unequal tees have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each unequal tee to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225	= 2
Widths 300 to 600	= 3
Widths 750 and 900	= 4

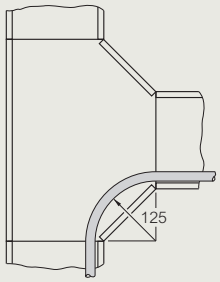
Fastener finishes

For unequal tees with G, D and PG finishes, fasteners are galvanised or zinc plated

For unequal tees with S finish, fasteners are stainless steel

For unequal tees with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

Minimum bend radius for cables



Minimum cable radius = 125 mm

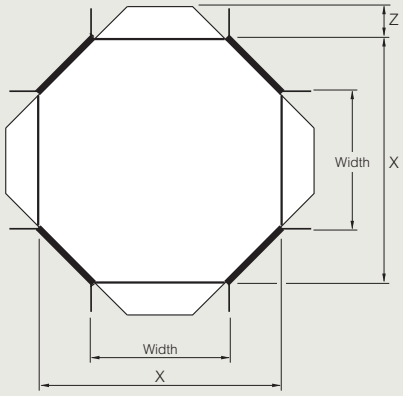
All dimensions (mm) are nominal

MRF equal tees : see p. 57

■ Dimensions and weights

Dimensions

Cat. No. MRFX W F



X = Length of fitting from each end (excluding integral coupler)
Y = Length of fitting from each end (excluding integral coupler)
Z = End extension of integral coupler

Cat. Nos.	Width	X	Z	Weight (kg)
MRFX 50 F	50	295	55	0·8
MRFX 75 F	75	320	55	1·0
MRFX 100 F	100	344	55	1·2
MRFX 150 F	150	394	55	1·7
MRFX 225 F	225	469	55	2·4
MRFX 300 F	300	542	55	3·3
MRFX 450 F	450	692	55	6·9
MRFX 600 F	600	842	55	10·2
MRFX 750 F	750	992	55	18·4
MRFX 900 F	900	1 142	55	23·5

Note

50 mm wide not available in D finish

Weights

All weights given are in kilograms (kg) and are for hot dip galvanised G finish

To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

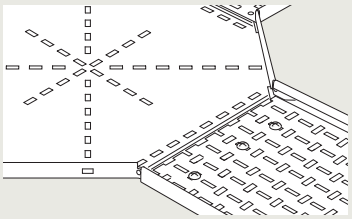
Deep galvanised (D) x 1·06
Stainless steel (S) x 0·94
Pre-galvanised (PG) x 0·96
Powder coated (E) x 0·97

Key : Replace the letter shown in red with your choice from the following options :

F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)

■ Assembly

Coupling detail



4 way crosspiece to straight length coupling

Crosspieces have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling

Each crosspiece to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included

Minimum number of fasteners per joint :

Widths up to 225 = 2
Widths 300 to 600 = 3
Widths 750 and 900 = 4

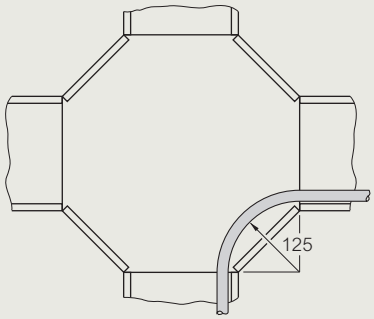
Fastener finishes

For crosspieces with G, D and PG finishes, fasteners are galvanised or zinc plated

For crosspieces with S finish, fasteners are stainless steel

For crosspieces with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

Minimum bend radius for cables



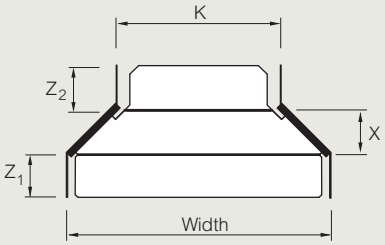
Minimum cable radius = 125 mm

All dimensions (mm) are nominal

Swifts® MRF medium duty fittings
straight reducers

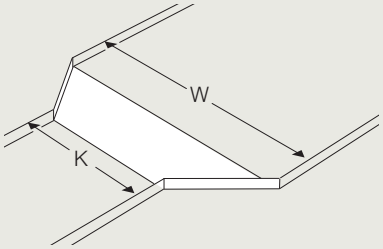
■ Dimensions and weights

Dimensions
Cat. No. MRFR W K F



X = Length of fitting from each end (excluding integral coupler)
Z_1 = End extension of integral coupler
Z_2 = End extension of integral coupler
K = Reduced width

Width	Width (K)	Cat. Nos.	Dimensions (mm) X	Z_1	Z_2	Weight (kg)
75	50	**MRFR 75 50 F**	100	55	55	0·2
100	50	**MRFR 100 50 F**	100	55	55	0·2
	75	**MRFR 100 75 F**	100	55	55	0·2
150	50	**MRFR 150 50 F**	100	55	55	0·3
	75	**MRFR 150 75 F**	100	55	55	0·3
	100	**MRFR 150 100 F**	100	55	55	0·3
225	50	**MRFR 225 50 F**	150	55	55	0·5
	75	**MRFR 225 75 F**	100	55	55	0·4
	100	**MRFR 225 100 F**	100	55	55	0·4
	150	**MRFR 225 150 F**	100	55	55	0·4
300	50	**MRFR 300 50 F**	150	55	55	0·5
	75	**MRFR 300 75 F**	150	55	55	0·6
	100	**MRFR 300 100 F**	100	55	55	0·5
	150	**MRFR 300 150 F**	100	55	55	0·5
	225	**MRFR 300 225 F**	100	55	55	0·6
450	50	**MRFR 450 50 F**	300	55	55	1·2
	75	**MRFR 450 75 F**	300	55	55	1·2
	100	**MRFR 450 100 F**	300	55	55	1·3
	150	**MRFR 450 150 F**	150	55	55	0·9
	225	**MRFR 450 225 F**	150	55	55	0·9
	300	**MRFR 450 300 F**	100	55	55	0·8
600	50	**MRFR 600 50 F**	300	55	55	1·9
	75	**MRFR 600 75 F**	300	55	55	1·6
	100	**MRFR 600 100 F**	300	55	55	1·6
	150	**MRFR 600 150 F**	300	55	55	1·7
	225	**MRFR 600 225 F**	300	55	55	1·8
	300	**MRFR 600 300 F**	150	55	55	1·2
	450	**MRFR 600 450 F**	100	55	55	1·3
750	50	**MRFR 750 50 F**	450	55	55	2·6
	75	**MRFR 750 75 F**	450	55	55	2·6
	100	**MRFR 750 100 F**	450	55	55	2·7
	150	**MRFR 750 150 F**	300	55	55	2·7
	225	**MRFR 750 225 F**	300	55	55	2·8
	300	**MRFR 750 300 F**	300	55	55	2·8
	450	**MRFR 750 450 F**	150	55	55	3·9
	600	**MRFR 750 600 F**	100	55	55	4·0
900	50	**MRFR 900 50 F**	450	55	55	3·6
	75	**MRFR 900 75 F**	450	55	55	3·9
	100	**MRFR 900 100 F**	450	55	55	3·9
	150	**MRFR 900 150 F**	450	55	55	4·0
	225	**MRFR 900 225 F**	450	55	55	4·2
	300	**MRFR 900 300 F**	300	55	55	5·2
	450	**MRFR 900 450 F**	300	55	55	5·5
	600	**MRFR 900 600 F**	300	55	55	5·9
	750	**MRFR 900 750 F**	100	55	55	6·2



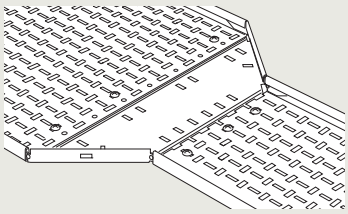
To create the Cat No., add the main run width (W), the reduced run width (K) and the finish (F)
Example :
For a hot dip galvanised reducer reducing from 300 mm to 150 mm : MRFR 300 150 G

Weights
All weights given are in kilograms (kg) and are for hot dip galvanised G finish
To obtain the appropriate component weight in other finishes, multiply the given weight by the following factors :

Deep galvanised	(D)	x 1·06
Stainless steel	(S)	x 0·94
Pre-galvanised	(PG)	x 0·96
Powder coated	(E)	x 0·97

■ Assembly

Coupling detail



Reducer to straight length coupling
Reducers have integral couplers which fit into straight lengths whether they have been cut to length or not, without the need for further drilling
Each reducer to length joint is secured with M6 x 12 bolts (roofing or pan head), nuts and washers or quick bolt fasteners (Cat. No. QBF), see p. 48. Fasteners are not included
Minimum number of fasteners per joint :

Widths up to 225	= 2
Widths 300 to 600	= 3
Widths 750 and 900	= 4

Fastener finishes
For reducers with G, D and PG finishes, fasteners are galvanised or zinc plated
For reducers with S finish, fasteners are stainless steel
For reducers with E finish, the choice of material for fasteners will depend on the installation environment. For further information, contact us on +44 (0) 845 605 4333

All dimensions (mm) are nominal

Key : Replace the letter shown in red with your choice from the following options :
F = Finish : G (hot dip galvanised after manufacture), D (deep galvanised), PG (pre-galvanised steel), S (stainless steel), E (powder coated)