

# Lightrax



**Channels**

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**Fittings**

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**Installation tools  
and accessories**

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**Hardware and  
mounting kits**

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# Introduction

## System description

The Lightrax fiber optic raceway system is a fully enclosed ducting system that segregates, routes, and protects fiber optic cables and jumpers from the point of building entry to the fiber termination and distribution equipment. The separation from twisted pair and coax cables and the convenient lay-in design provide for easy tracing and access as well as protection from being snagged, crimped, or overly stressed. Straight channels and curved fittings are specifically designed to prevent fibers from exceeding the minimum bend radius requirement. The system's modular design and extensive mounting kit selection enable the project engineer to meet cable capacity requirements and future expansion needs using existing superstructure, cable racking, and/or equipment racking. The flexibility and simplicity of the Lightrax system ensure cost effective installations for new or existing cable routes in central offices, CEVs, headends, remote offices, data centers, and wiring closets. Fittings can be offered in two types of material: FRS (Fiber Raceway-standard) fittings are made of a UL2024 rated high-impact thermoplastic and FRH (Fiber Raceway halogen free) fittings are made of a low smoke zero halogen (LSZH) material. Ducts are always made of FRH material. The channels/ducts and fittings are singlemode yellow.

## Capacities

	Duct 50 x 50 mm 2" x 2"	Duct 100 x 100 mm 4" x 4"	Duct 100 x 200 mm 4" x 8"	Duct 100 x 300 mm 4" x 12"	Tube ø 50 mm 2"	Tube ø 25 mm 1"
1.7 mm patchcord Recommended	384	960	1920	2880	250	100
2.4 mm patchcords Recommended	200	500	1000	1500	144	50
3.0 mm patchcord Recommended	128	320	640	965	100	35
1.7 mm patchcord Maximum	384	1728	3456	5184		
2.4 mm patchcord Maximum	200	905	1810	2715		
3.0 mm patchcord Maximum	128	580	1158	1738		

*Recommended numbers are according to Telcordia 449 (maximum 2" (50 mm) pile height).*

## Channels and fittings

Channels and fittings are available in four cross-sectional sizes: 2" x 2", 4" x 4", 4" x 8" and 4" x 12".

All system components are designed to provide cable lay-in capability, eliminating the need for pulling cables through an enclosed system during installation or cable retrieval. Channel covers are snapped in place. Fitting covers are easily positioned on matching Velcro strips. Channels and fittings are slipped together, end-to-end, and secured in position with bolts.

## Mounting Kits

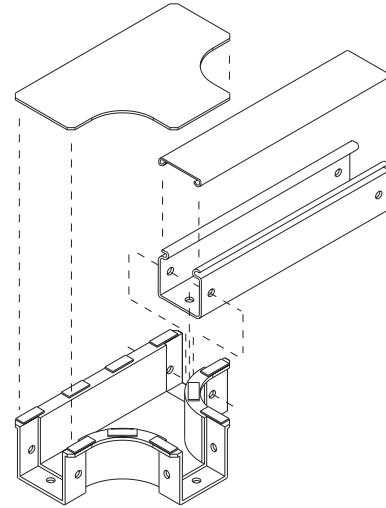
Channels and fittings are supported by direct mounting to existing supports. The Lightrax system has been designed to be supported every 900 mm. To do this easily and at minimum cost, direct mounting kits are available for attachment to existing ladder racking, equipment racks and auxiliary framing.



# Assembly procedures

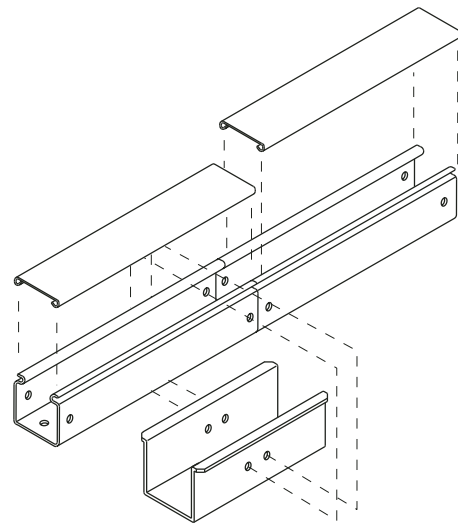
## Channel to fitting assembly

All fittings are designed with female receptacles at their outlets. These receptacles are dimensionally designed to accept straight channels without the use of additional parts or junction kits. This helps to reduce the total number of parts required for typical installations. In general, fewer parts to install translates into reduced material costs and assembly time. To install a fitting to the end of a channel section, simply slip the channel into the receptacle of the fitting. Fasten the two components using M6 mushroom head bolts and nuts (FRH-BNC-16-200). When complete, the channel cover fits under the fitting cover, eliminating any gaps.



## Channel to channel assembly

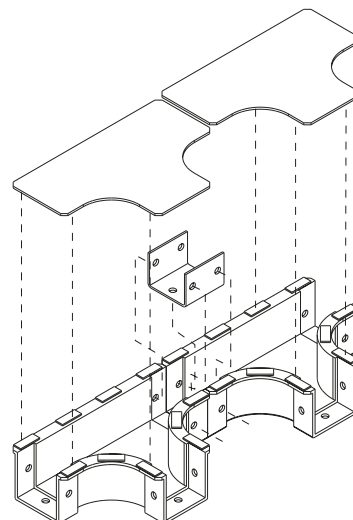
To create straight sections of channel beyond six feet (1,83 m) or 2 meter in length, individual straight sections are joined using a channel splice (FRX-SPLC-XXYLP ). Position the end of one channel half way into the channel splice. Fasten the two components using M6 mushroom head bolts and nuts (FRH-BNC-16-200). Butt the second channel to the first within the channel splice, assemble and fasten in a similar manner.



## Fitting to fitting assembly

To assemble two fittings together use a fitting splice (FRX-SPLF-XXP). Fitting splices are designed to fit within the female receptacle on each fitting. Position the fitting splice within the receptacle of the fitting itself. Fasten the two components using M6 mushroom head bolts and nuts (FRH-BNC-16-200).

Place the second fitting over the fitting splice and fasten in a similar manner.









## Channels

- All dimensions are for reference only.
- Finish: all outside surfaces have a haircell texture.
- Channels are always pre-drilled.
- Channels are always made of FRG material (halogen free).

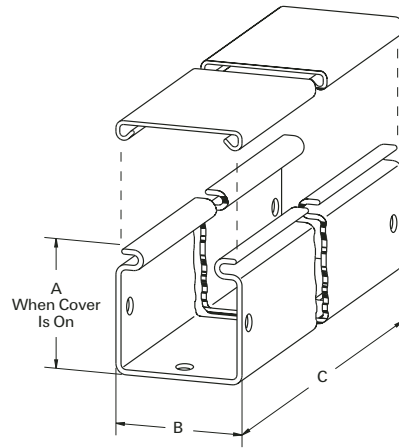
## Solid channel with cover

FRH - STWC - XX YL P

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
22	2 x 2	50x50	50	50	2000
44	4 x 4	100x100	100	100	2000
48	4 x 8	100x200	100	200	2000
412	4 x 12	100x300	100	300	2000

### Weight

22	0,93 kg
44	2,41 kg
48	3,83 kg
412	5,22 kg



## Slotted channel with cover

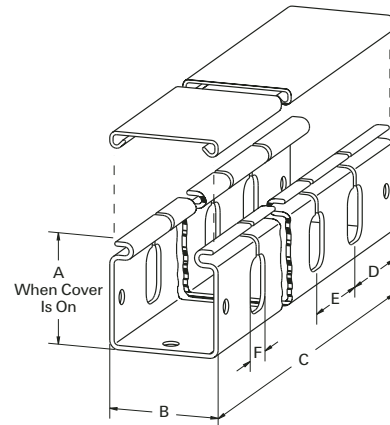
FRH - SLWC - XX YLP

XX	Size		Dimensions (mm)					
	inches	mm	A	B	C	D	E	F
22	2 x 2	50x50	50	50	2000	100	100	32
44	4 x 4	100x100	100	100	2000	100	100	32

Compatible with slotted channel trumpet FRH-SCTF-22 or 44

### Weight

22	0,86 kg
44	2,12 kg





## Fittings

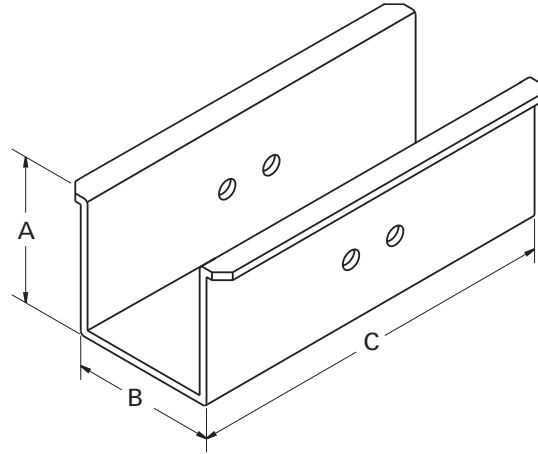
- All dimensions are for reference only.
- Finish: all outside surfaces have a haircell texture.
- Fittings are always pre-drilled.

## Channel splice

FRX - SPLC - **XX** YL P

- └ S = Standard
- └ H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
<b>22</b>	2 x 2	50x50	61	56	152
<b>44</b>	4 x 4	100x100	112	107	152
<b>48</b>	4 x 8	100x200	112	208	152
<b>412</b>	4 x 12	100x300	112	315	152

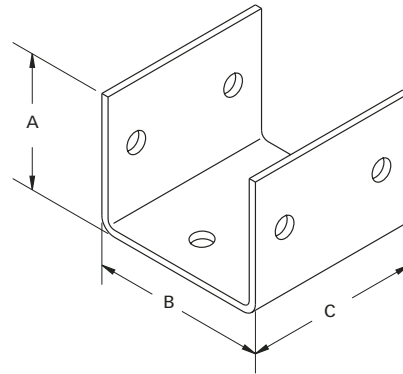


## Fitting splice

FRX - SPLF - **XX** P

- └ S = Standard
- └ H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
<b>22</b>	2 x 2	50x50	39	51	46
<b>44</b>	4 x 4	100x100	86	102	76
<b>48</b>	4 x 8	100x200	86	203	76
<b>412</b>	4 x 12	100x300	83	305	76

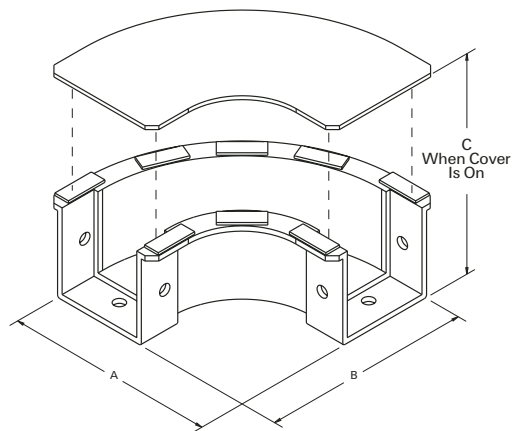


## Horizontal elbow, 90°

FRX - 9HE - **XX** YL P

- └ S = Standard
- └ H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
<b>22</b>	2 x 2	50x50	130	130	61
<b>44</b>	4 x 4	100x100	197	197	112
<b>48</b>	4 x 8	100x200	344	344	112
<b>412</b>	4 x 12	100x300	446	446	113

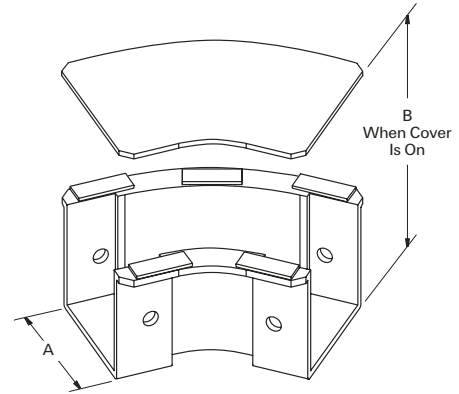


## Horizontal elbow, 45°

FRX - 4HE - **XX** YL P

└ S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)	
	inches	mm	A	B
<b>22</b>	2 x 2	50x50	58	61
<b>44</b>	4 x 4	100x100	112	112
<b>48</b>	4 x 8	100x200	208	112
<b>412</b>	4 x 12	100x300	313	113

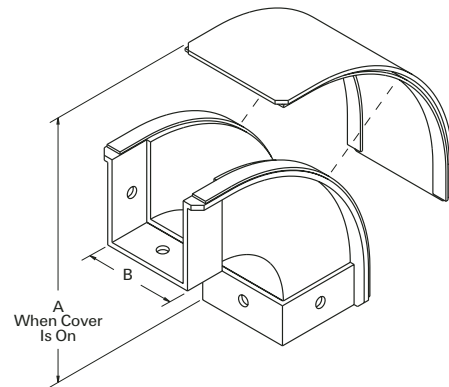


## Vertical outside elbow (down), 90°

FRX - 9VOE - **XX** YL P

└ S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)	
	inches	mm	A	B
<b>22</b>	2 x 2	50x50	130	58
<b>44</b>	4 x 4	100x100	197	112
<b>48</b>	4 x 8	100x200	194	208
<b>412</b>	4 x 12	100x300	194	313

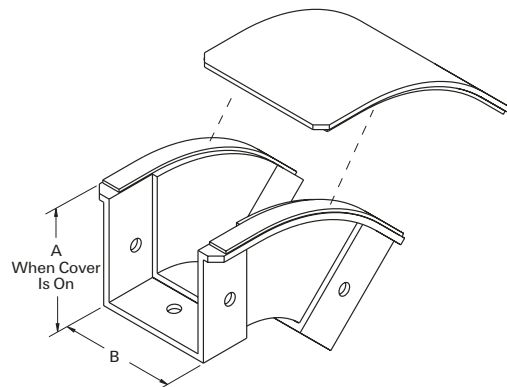


## Vertical outside elbow (down), 45°

FRX - 4VOE - **XX** YL P

└ S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)	
	inches	mm	A	B
<b>22</b>	2 x 2	50x50	61	58
<b>44</b>	4 x 4	100x100	112	112
<b>48</b>	4 x 8	100x200	112	208
<b>412</b>	4 x 12	100x300	113	313



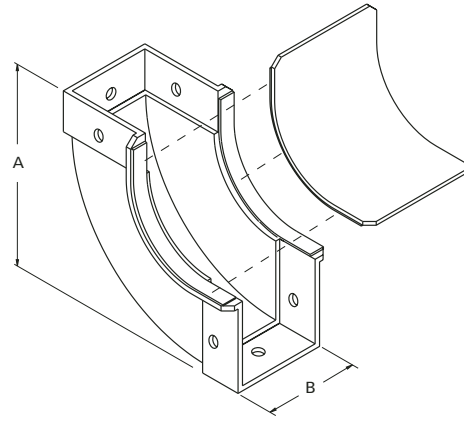


## Vertical inside elbow (up), 90°

FRX - 9VIE - XX YL P

S = Standard  
 H = Halogen free

XX	Size		Dimensions (mm)	
	inches	mm	A	B
22	2 x 2	50x50	132	58
44	4 x 4	100x100	197	112
48	4 x 8	100x200	197	208
412	4 x 12	100x300	197	313

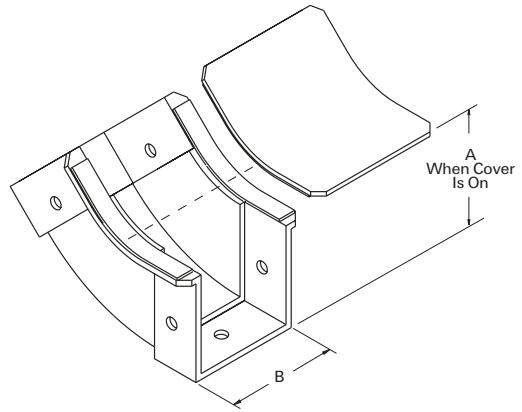


## Vertical inside elbow (up), 45°

FRX - 4VIE - XX YL P

S = Standard  
 H = Halogen free

XX	Size		Dimensions (mm)	
	inches	mm	A	B
22	2 x 2	50x50	61	58
44	4 x 4	100x100	112	112
48	4 x 8	100x200	112	208
412	4 x 12	100x300	113	313

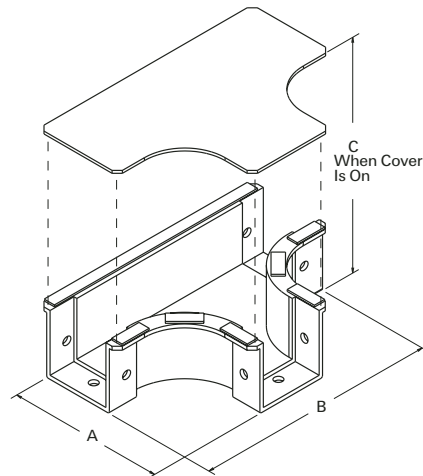


## Horizontal tee

FRX - HTC - XX YL P

S = Standard  
 H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
22	2 x 2	50x50	129	199	61
44	4 x 4	100x100	196	281	112
48	4 x 8	100x200	344	477	112
412	4 x 12	100x300	446	578	113

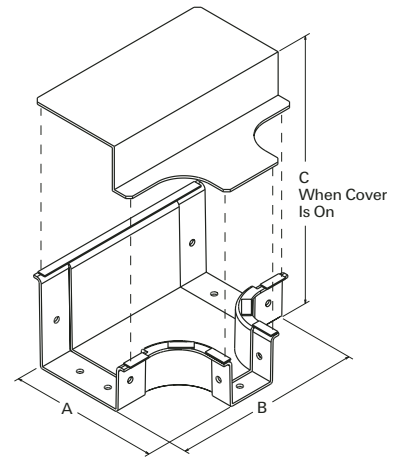


## Horizontal tee reducer, 4" to 2"

FRX - HT2 - 44 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)		
inches	mm	A	B	C
4 to 2	100 to 50	184	222	112

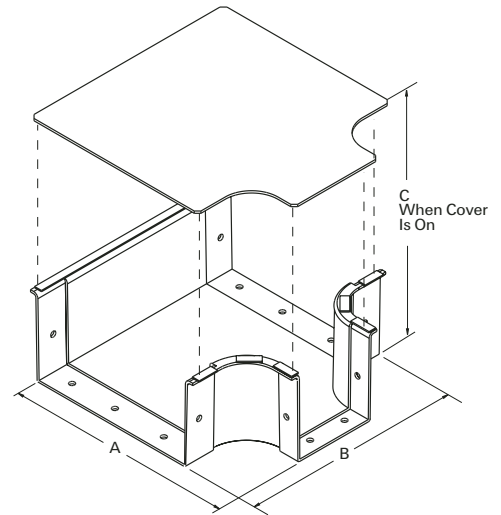


## Horizontal tee reducer, 8" to 4"

FRX - HT44 - 48 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)		
inches	mm	A	B	C
8 to 4	200 to 100	292	273	112



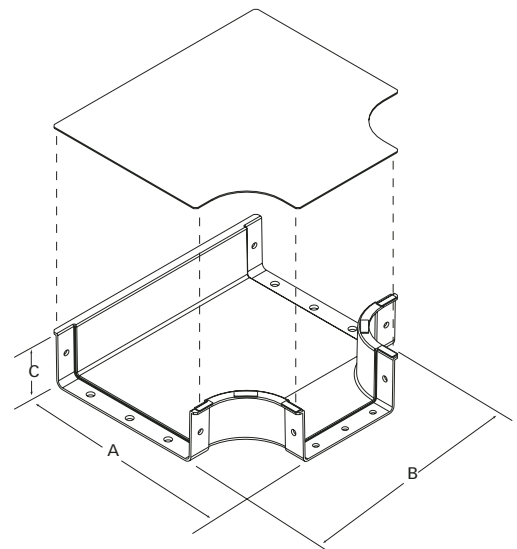
15

## Horizontal tee reducer, 12" to 8"

FRX - HT48 - 412 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)		
inches	mm	A	B	C
12 to 8	300 to 200	445	477	113

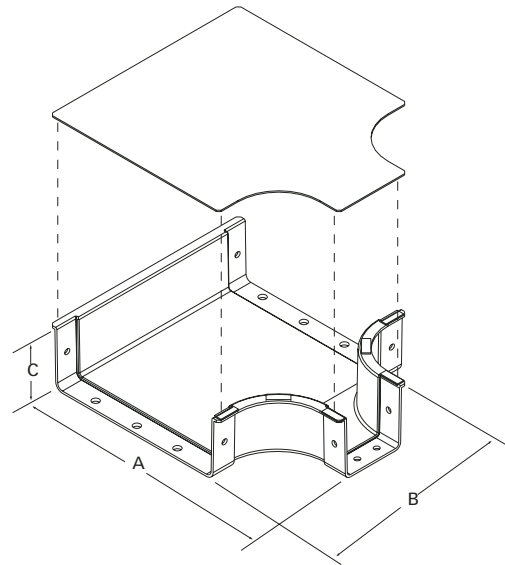


## Horizontal tee reducer, 12" to 4"

FRX - HT44 - 412 YL P

S = Standard  
 H = Halogen free

Size		Dimensions (mm)		
inches	mm	A	B	C
12 to 4	300 to 100	445	375	113

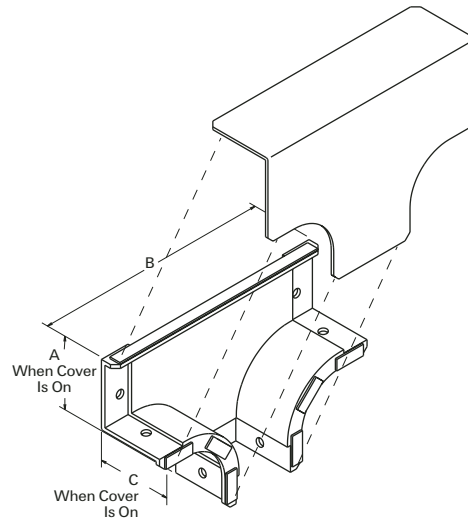


## Vertical tee

FRX - VTC - XX YL P

S = Standard  
 H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
22	2 x 2	50x50	134	199	58
44	4 x 4	100x100	197	282	112

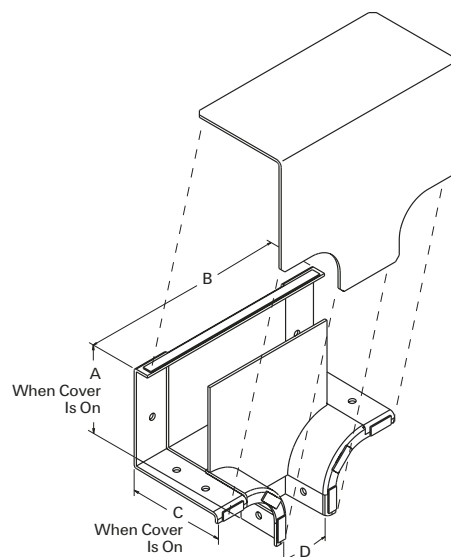


## Vertical tee reducer w/divider, 4" to 2"

FRX - VT2DD - 44 YL P

S = Standard  
 H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
4 to 2	100 to 50	183	224	112	58

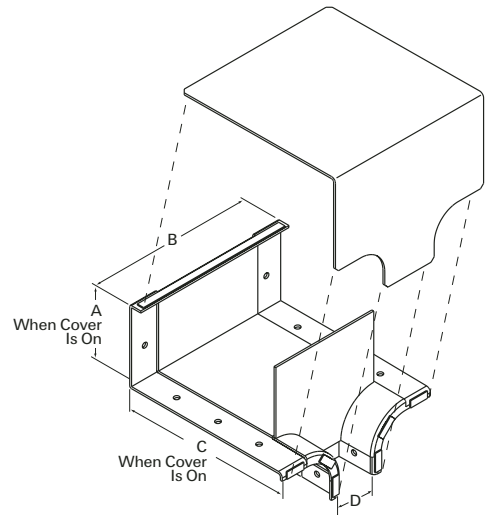


## Vertical tee reducer w/divider, 8" to 2"

FRX - VT2DV - 48 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
8 to 2	200 to 50	183	224	213	58

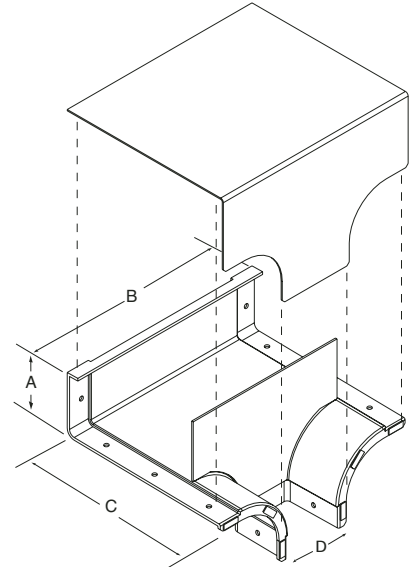


## Vertical tee reducer w/divider, 12" to 4"

FRX - VT4DV - 412 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
12 to 4	300 to 100	242	375	318	112



## Vertical tee reducer

FRX - VT2D - 44 YL P

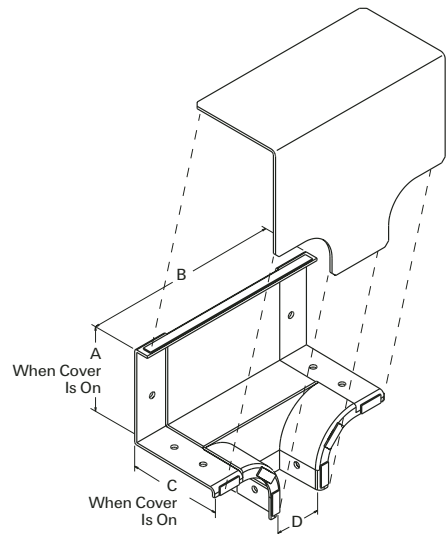
- S = Standard
- H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
4 to 2	100 to 50	183	224	112	58

FRX - VT4D - 48 YL P

- S = Standard
- H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
8 to 4	200 to 100	248	376	213	112

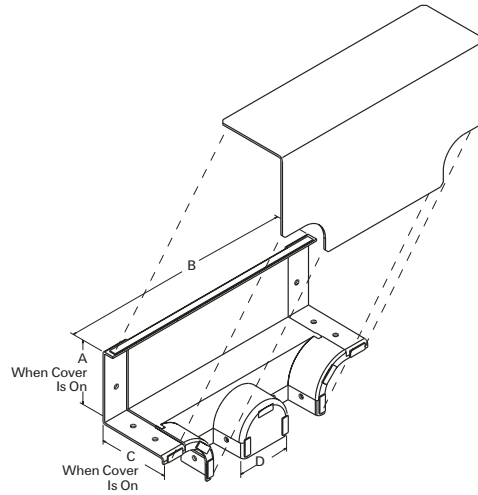


## Dual vertical tee reducer, 4" to 2"

FRX - DVT - 30 YL P

S = Standard  
 H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
4 to 2	100 to 50	181	347	112	71

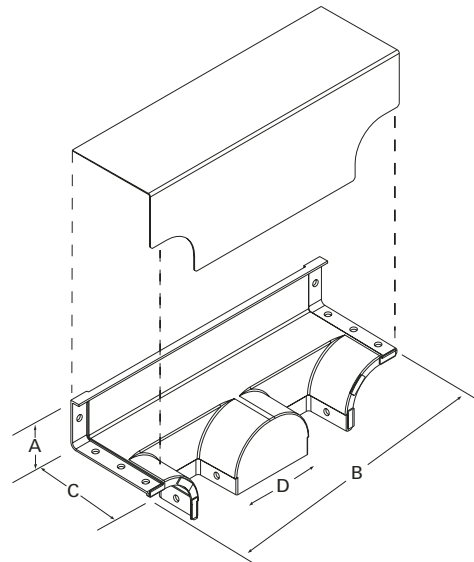


## Dual vertical tee reducer, 8" to 4"

FRX - DVT - 30 - 48 YL P

S = Standard  
 H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
8 to 4	200 to 100	224	454	216	76

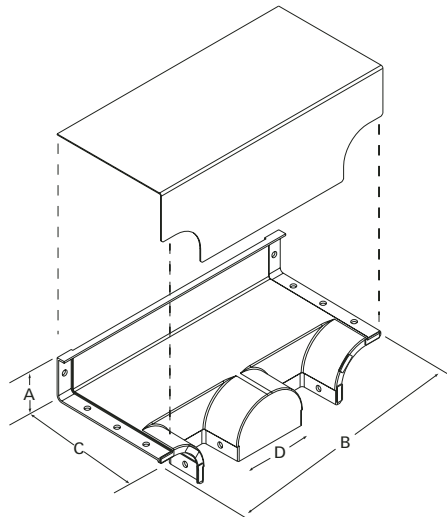


## Dual vertical tee reducer, 12" to 4"

FRX - DVT - 30 - 412 YL P

S = Standard  
 H = Halogen free

Size		Dimensions (mm)			
inches	mm	A	B	C	D
12 to 4	300 to 100	242	674	318	193

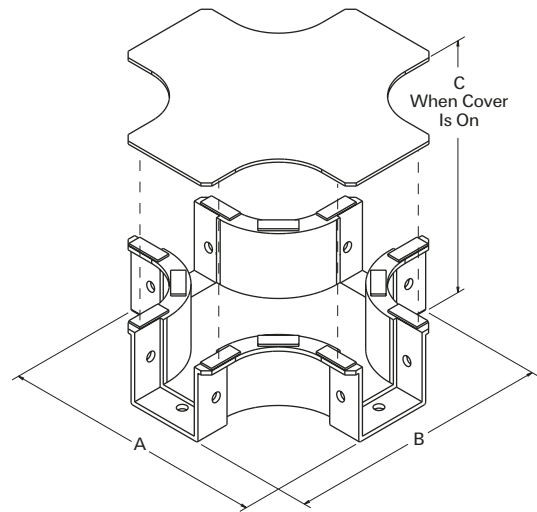


## 4-Way cross

FRX - CRSS - XX YL P

- S = Standard
- H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
22	2 x 2	50x50	199	199	61
44	4 x 4	100x100	282	282	112
48	4 x 8	100x200	478	478	112
412	4 x 12	100x300	575	575	113

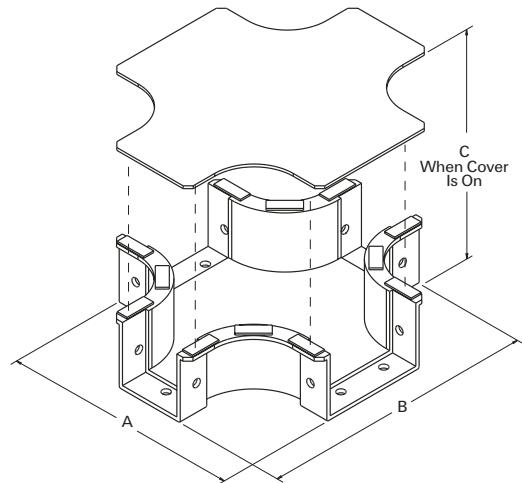


## 4-Way cross, 8" to 4"

FRX - CS44 - 48 YL P

- S = Standard
- H = Halogen free

Size	Dimensions (mm)		
	inches	mm	C
8 to 4	200 to 100	275	112

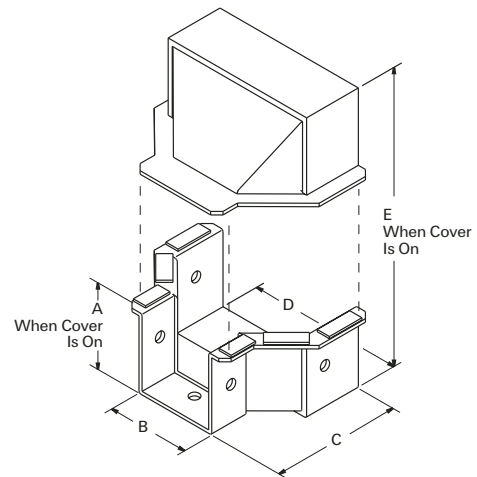


## Reducer, 4" to 2"

FRX - RD44 - 22 YL P

- S = Standard
- H = Halogen free

Size	Dimensions (mm)					
	inches	mm	A	B	C	D
4 to 2	100 to 50	61	58	89	112	112



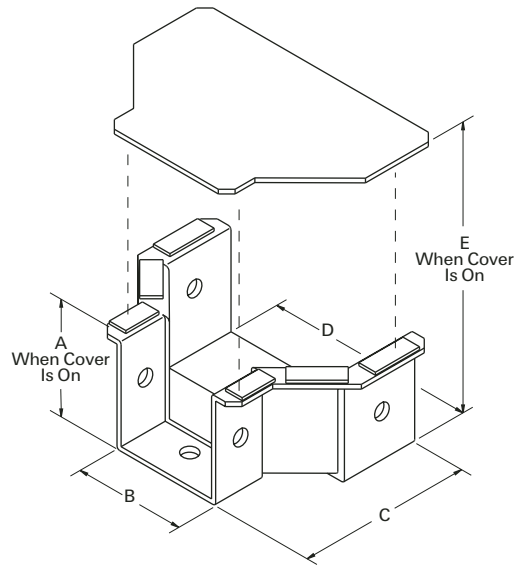


## Reducer, 8" to 4"

FRX - RD48 - 44 YL P

S = Standard  
H = Halogen free

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
8 to 4	200 to 100	112	112	152	208	112

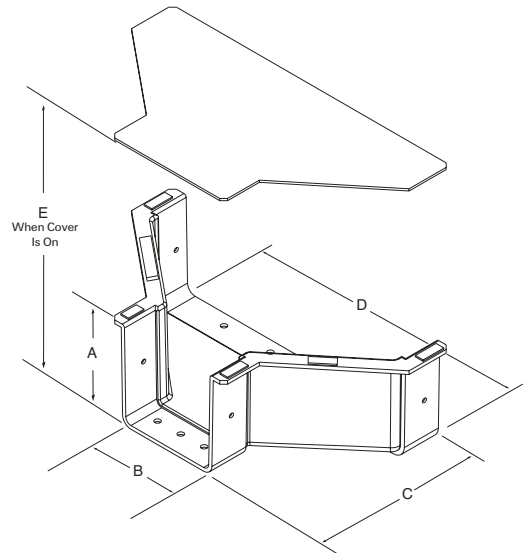


## Reducer, 12" to 4"

FRX - RD412 - 44 YL P

S = Standard  
H = Halogen free

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
12 to 4	300 to 100	113	110	178	313	113

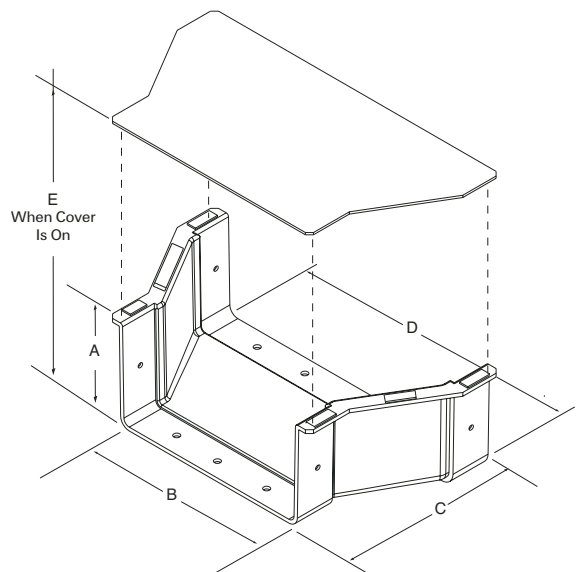


## Reducer, 12" to 8"

FRX - RD412 - 48 YL P

S = Standard  
H = Halogen free

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
12 to 8	300 to 200	113	212	178	313	113

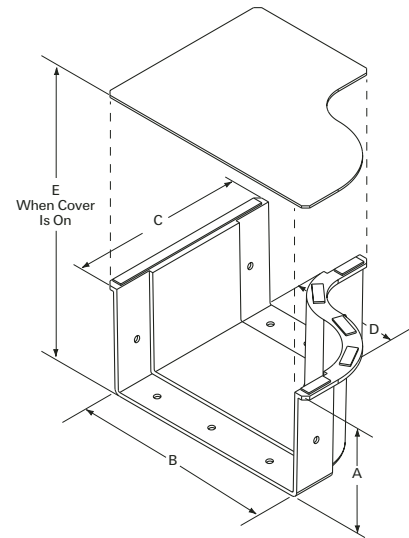


## Off-set reducer - left

FRX - RDL48 - 44 YL P

- └ S = Standard
- └ H = Halogen free

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
8 to 4	200 to 100	113	208	178	112	113

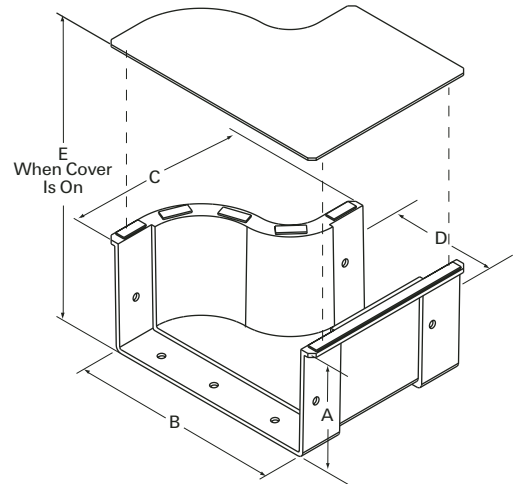


## Off-set reducer - right

FRX - RDR48 - 44 YL P

- └ S = Standard
- └ H = Halogen free

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
8 to 4	200 to 100	113	208	178	112	113

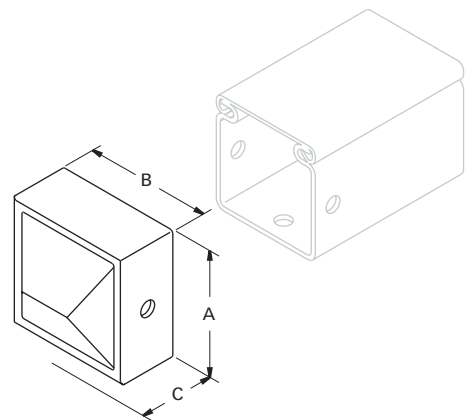


## Endcap

FRX - EDCP - XX YL P

- └ S = Standard
- └ H = Halogen free

	Size		Dimensions (mm)		
	inches	mm	A	B	C
<b>22</b>	2 x 2	50x50	57	57	38
<b>44</b>	4 x 4	100x100	108	108	64
<b>48</b>	4 x 8	100x200	112	212	71
<b>412</b>	4 x 12	100x300	112	315	71

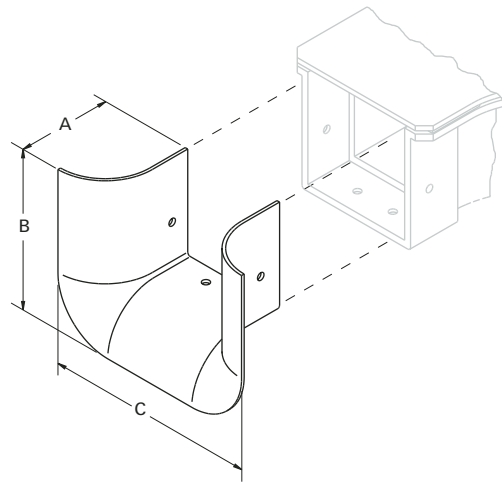


## Trumpet

FRX - TRMP - XX YL P

S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
22	2 x 2	50x50	70	92	137
44	4 x 4	100x100	89	150	198



## Lightrax to Fiberguide adapter

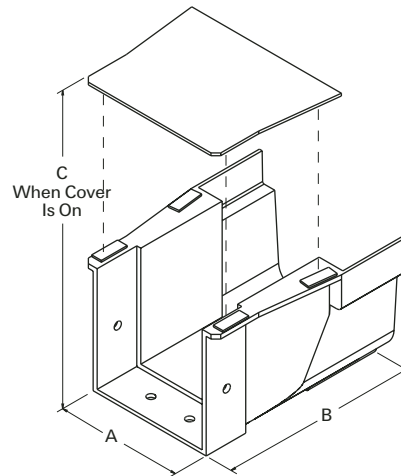
FRX - LTFA - XX YL P

S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
44	4 x 4	100x100	112	183	112

### Note

- This part is used when transitioning from the ADC Telecommunications System to Lightrax



## Lightrax to Warren & Brown adapter

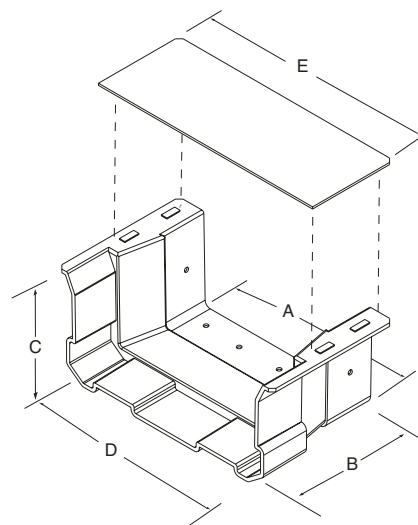
FRX - WB - XX YL P

S = Standard  
H = Halogen free

XX	Size		Dimensions (mm)				
	inches	mm	A	B	C	D	E
22	2 x 2	50x50	53	76	57	73	73
44	4 x 4	100x100	112	152	112	128	152
48	4 x 8	100x200	212	152	112	246	269
412	4 x 12	100x300	314	152	112	326	371

### Note

- This part is used when transitioning from the Warren & Brown System or RAYDUCT to Lightrax



## 2" square to single round adapter

FRX - SQRD - 22 YL P

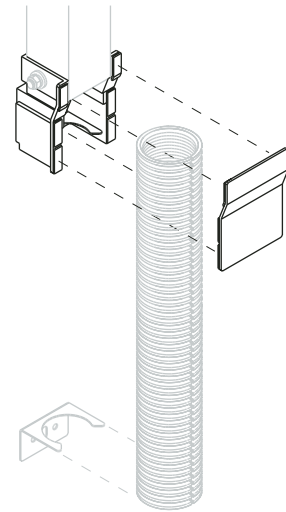
- S = Standard
- H = Halogen free

### Kit contents

1 - 2" x 2" (50 mm) square to single round adapter assembly

### Note

Accepts 2" convoluted tubing -sold separately- (FRH-SFT-20-041).  
Anchor clamps available.



## 2" square to dual round adapter

FRX - SQRD - DL - 22 YL P

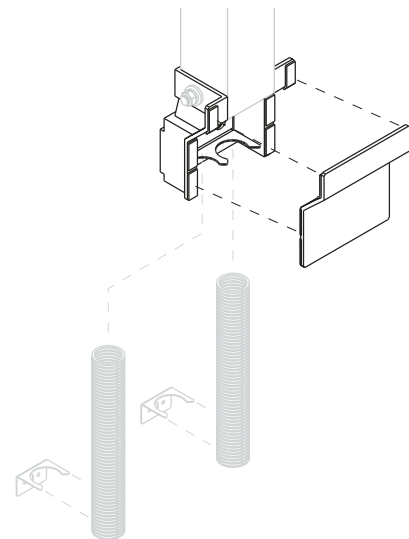
- S = Standard
- H = Halogen free

### Kit contents

1 - 2" x 2" (50mm) square to dual round adapter assembly

### Note

Accepts 2 - 1" convoluted tubing -sold separately- (FRH-SFT-10-041).  
Anchor clamps available.



## 4" square to dual round adapter

FRX - SQRD - DL - 44 YL P

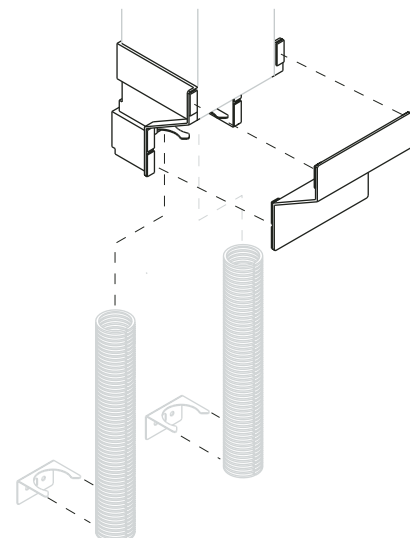
- S = Standard
- H = Halogen free

### Kit contents

1 - 4" x 4" (100mm) square to dual round adapter assembly

### Note

Accepts 2-2" convoluted tubing -sold separately- (FRH-SFT-20-041).  
Anchor clamps available.



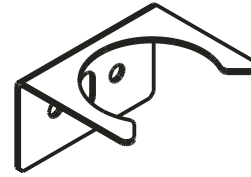
## Anchor clamp

FRH - FLEX - TUBE - CLAMP - X - 10

- Tubing \_\_\_\_\_  
1 - 1" (25 mm) convoluted tubing  
2 - 2" (50 mm) convoluted tubing

### *Kit contents*

10 - Anchor clamp



x 10

## Split flex tubing - dual shell

FRH - SFT - XX - XXX

- Flextube length  
041: 41 ft (12,5m)  
Tubing diameter  
10: 1" (25mm) convoluted tubing  
20: 2" (50mm) convoluted tubing

### *Kit contents*

1 - Convoluted flextube

Color: black  
Halogen free



## Quick drop

FRH - QD1 - X YL

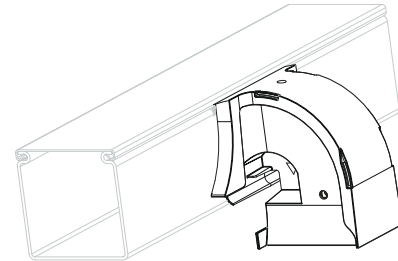
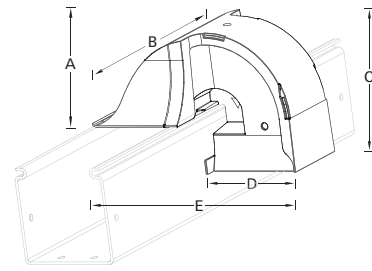
Application

- O**: over-the-top
- I**: in the duct  
(modified, smaller cover)

Size		Dimensions (mm)				
inches	mm	A	B	C	D	E
2 x 2	50x50	81	178	142	102	201

### Note

- Compatible with 4 x 4, 4 x 8, 4 x 12 ducts
- Can fit on the duct or in the duct
- Halogen free
- Max. capacity : 100 (3 mm patch cord)
- See section "Installation tools and accessories" for a template



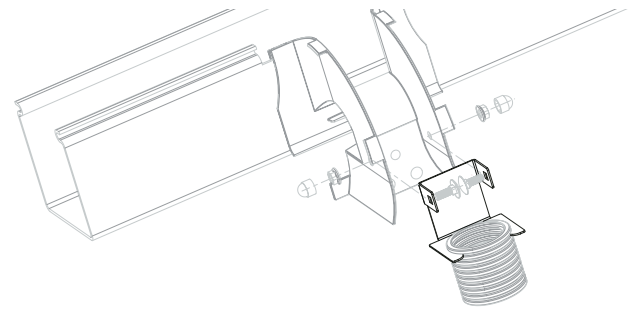
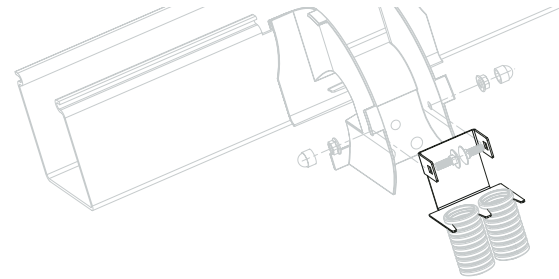
## Adapters to flex tubing

FRH - QD1 - X - X

Size

- 2 - 1**: two 25mm (1") diameter flextube
- 1 - 2**: one 50mm (2") diameter flextube

- Fits in quick drop outlets (FRH-QD1-XYL)







## Installation tools and accessories



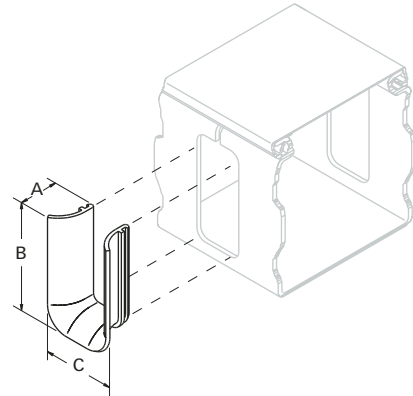
## Slotted channel trumpet

FRH - SCTF - **XX**

XX	Size		Dimensions (mm)		
	inches	mm	A	B	C
<b>22</b>	2 x 2	50x50	25	26	46
<b>44</b>	4 x 4	100x100	25	71	46

### Note

- All dimensions are for reference only
- Material: high impact thermoplastic
- Halogen free
- Fits in slotted channel FRH-SLWC-...



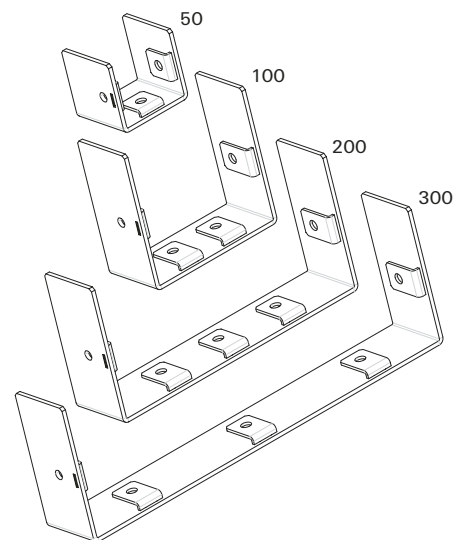
## Drilling templates

FRH - DRIL

- Easy positioning of holes in ducts
- Slides over the ducts
- One template per duct size



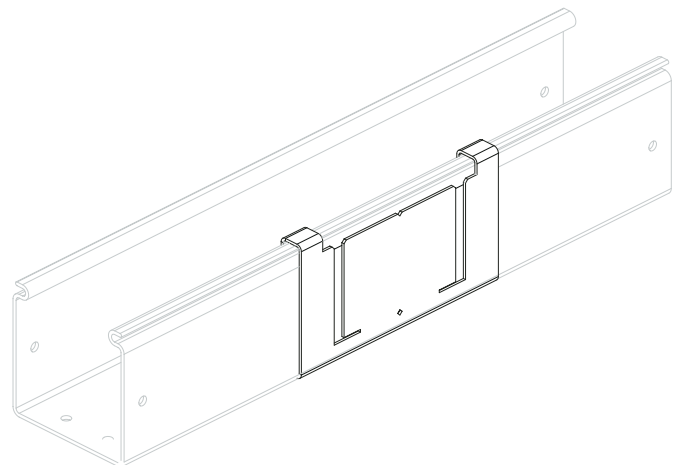
28



## Quick drop installation template

FRH - DRIL - QD1 - TEM

- To be used when quick drop (FRH-QD1 ...) has to be installed in the duct



Light grey printed items are no part of the kit - 1 inch = 25,4 mm



**Hardware and  
mounting kits**

---

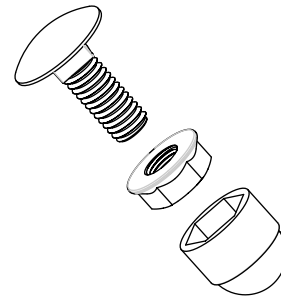


## Hardware kits

FRH - BNC - 16 - 200

### Kit contents

200 - M6 x 16 bolts  
 200 - M6 nuts  
 200 - yellow caps



**x 200**

## End accessible threaded rod mounting kit 2" (50mm) or 4" (100mm)

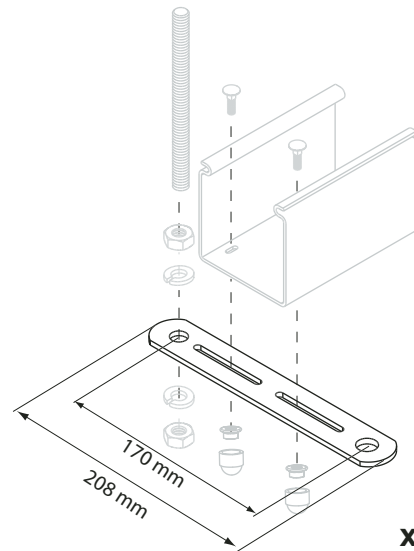
FRH - EATRK - 44 - 5

### Kit contents

5 - End accessible thread rod bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



**x 5**

## End accessible threaded rod mounting kit 8" (200mm)

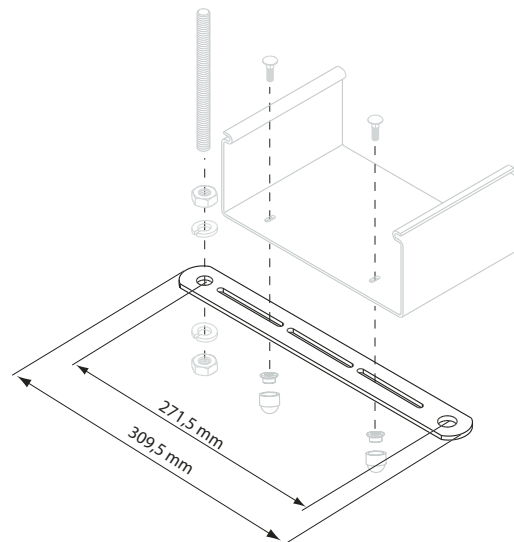
FRH - EATRK - 48 - 5

### Kit contents

5 - End accessible thread rod bracket

### Note

- Suitable for M14 or M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



**x 5**

Light grey printed items are no part of the kit - 1 inch = 25,4 mm

## End accessible threaded rod mounting kit 12" (300mm)

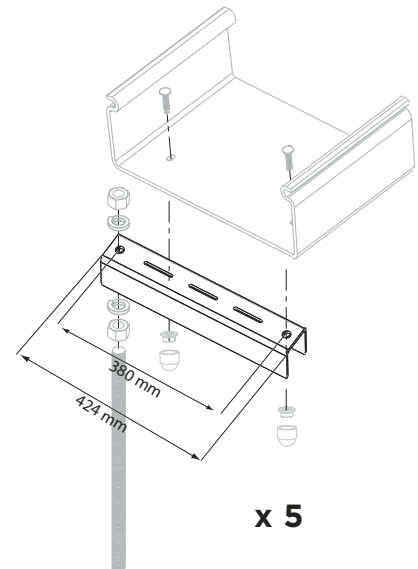
FRH - EATRK - 412 - 5

### Kit contents

5 - End accessible thread rod bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



## Saddle bracket, 4" (100mm)

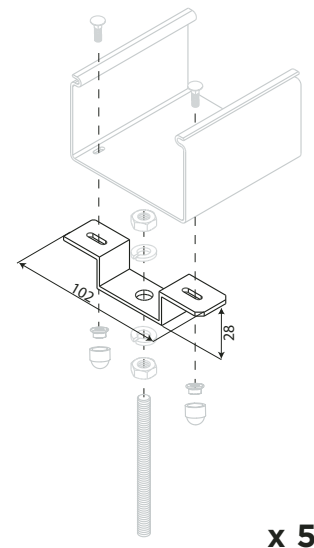
FRH - TRSBK - 44 - 5

### Kit contents

5 - Saddle bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



## Saddle bracket, 8" (200mm)

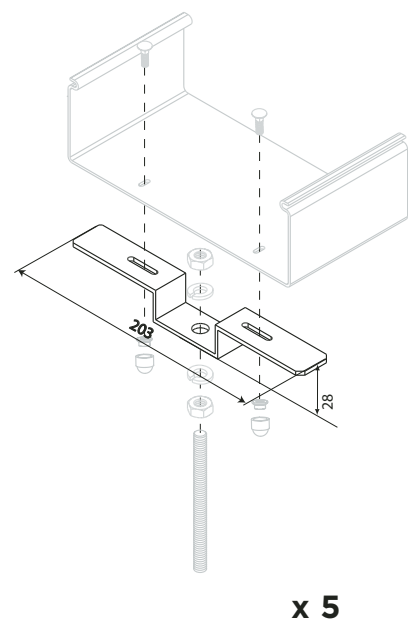
FRH - TRSBK - 48 - 5

### Kit contents

5 - Saddle bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



Light grey printed items are no part of the kit - 1 inch = 25,4 mm



## Saddle bracket, 12" (300mm)

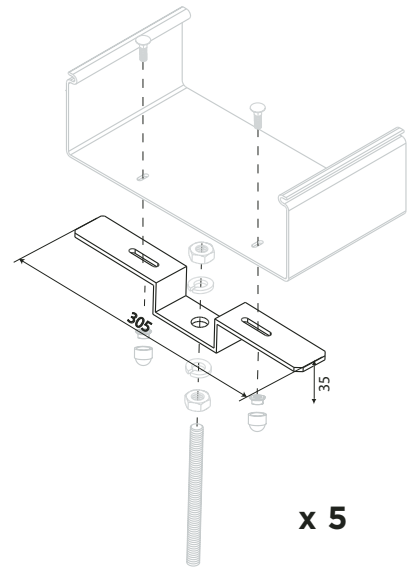
FRH - TRSBK - 412 - 5

### Kit contents

5 - Saddle bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



## Equipment rack horizontal mounting kit 2" (50mm)

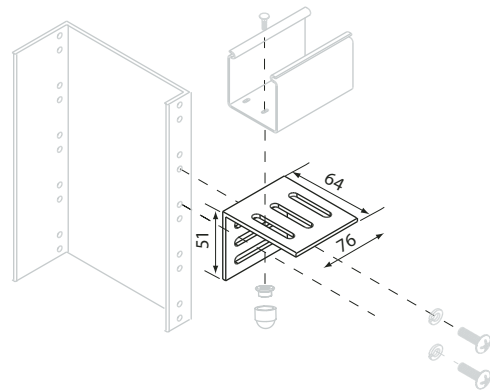
FRH - ERHK - 22 - 5

### Kit contents

5 - Equipment rack horizontal bracket

### Note

- The supplied bracket is attached to the 12 - 24 tapped holes in the uprights.
- Brackets are recommended every other rack for direct channel mounting.
- Bracket can also be used for wall mounting.



x 5

## Equipment rack horizontal mounting kit 4" (100mm)

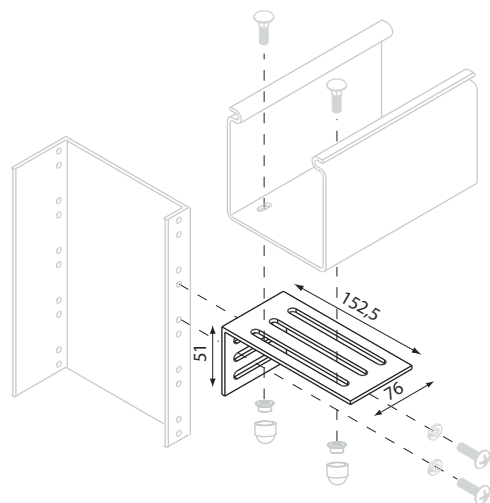
FRH - ERHK - 44 - 5

### Kit contents

5 - Equipment rack horizontal bracket

### Note

- The supplied bracket is attached to the 12 - 24 tapped holes in the uprights.
- Brackets are recommended every other rack for direct channel mounting.
- Bracket can also be used for wall mounting.



x 5

## Equipment rack horizontal mounting kit 8" (200mm)

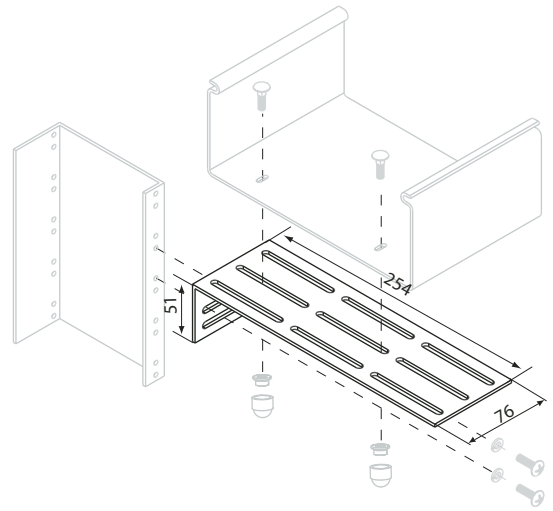
FRH - ERHK - 48 - 5

### Kit contents

5 - Equipment rack horizontal bracket

### Note

- The supplied bracket is attached to the 12 - 24 tapped holes in the uprights.
- Brackets are recommended every other rack for direct channel mounting.
- Bracket can also be used for wall mounting.



x 5

## Hanger bracket, 4" (100mm)

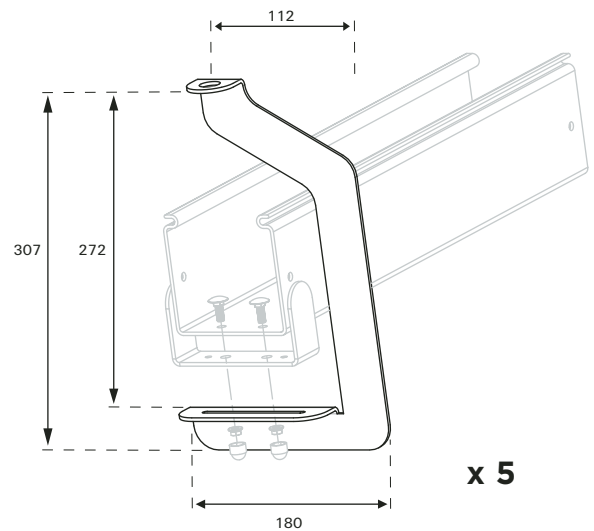
FRH - TRHB - 44 - 5

### Kit contents

5 - Hanger bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Hanger bracket, 8" (200mm)

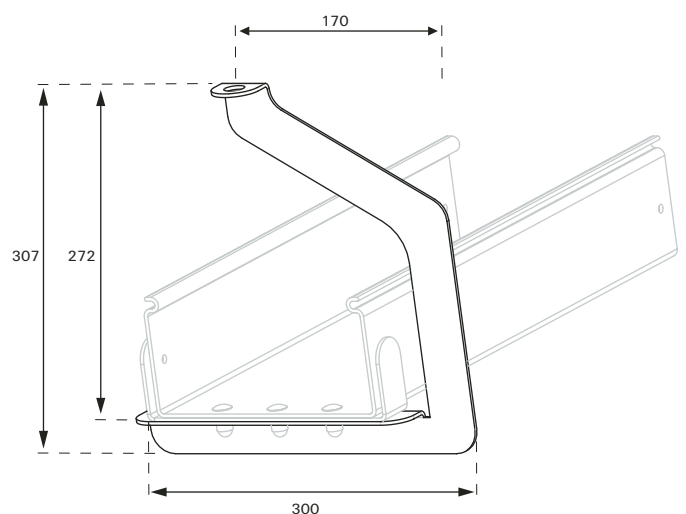
FRH - TRHB - 48 - 5

### Kit contents

5 - Hanger bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5



## Hanger bracket, 12" (300mm)

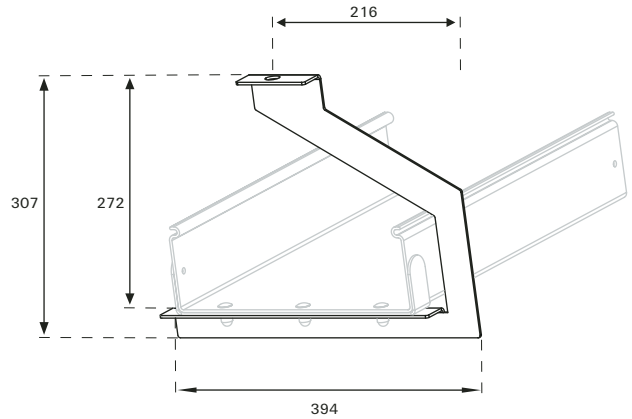
FRH - TRHB - 412 - 5

### Kit contents

5 - Hanger bracket

### Note

- Suitable for M14 and M16 threaded rod.
- Threaded rod purchased separately.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Ladder rack mounting kit, 4" or 2"

FRH - LRMK - **XX** - 5

Size

22 - 2" x 2"

44 - 4" x 4"

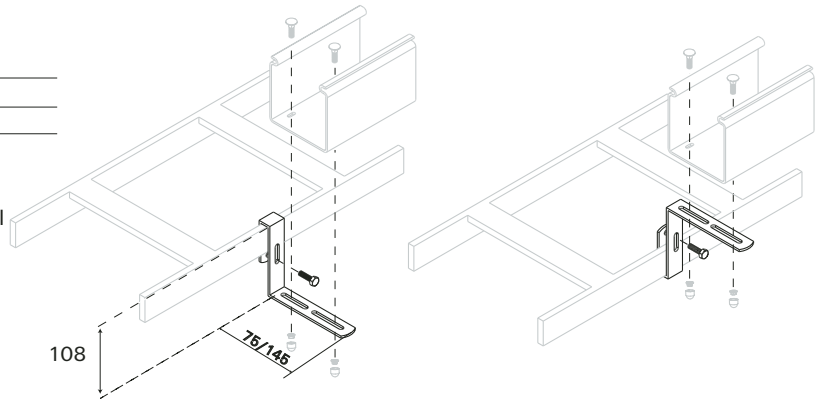
### Kit contents

5 - Ladder rack mounting bracket standard

5 - M10 bolt

### Note

- The supplied bracket hangs from either 2" or 1.5" side bars.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Ladder rack mounting kit, 8"

FRH - LRMK - 48 - 5

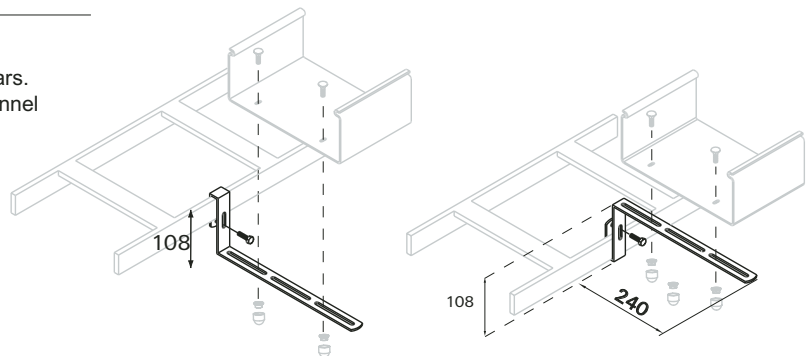
### Kit contents

5 - Ladder rack mounting bracket standard

5 - M10 bolt

### Note

- The supplied bracket hangs from either 2" or 1.5" side bars.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Offset ladder rack mounting kit 4"

FRH - FLRMK - 44 - 5

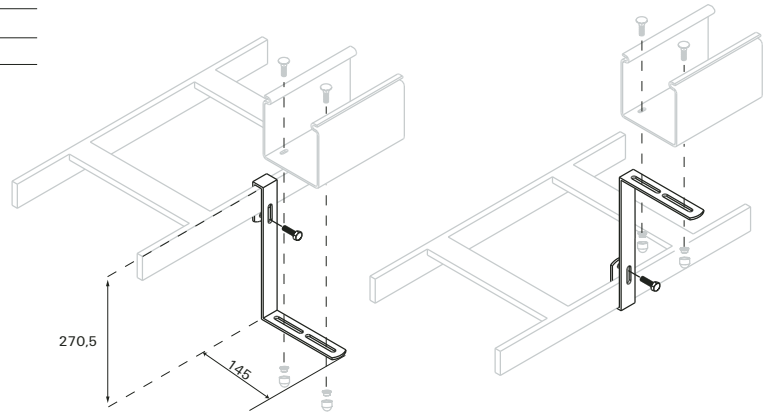
### Kit contents

5 - Ladder rack mounting bracket offset

5 - M10 bolt

### Note

- The supplied bracket hangs from either 2" or 1.5" side bars.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Offset ladder rack mounting kit 8"

FRH - FLRMK - 48 - 5

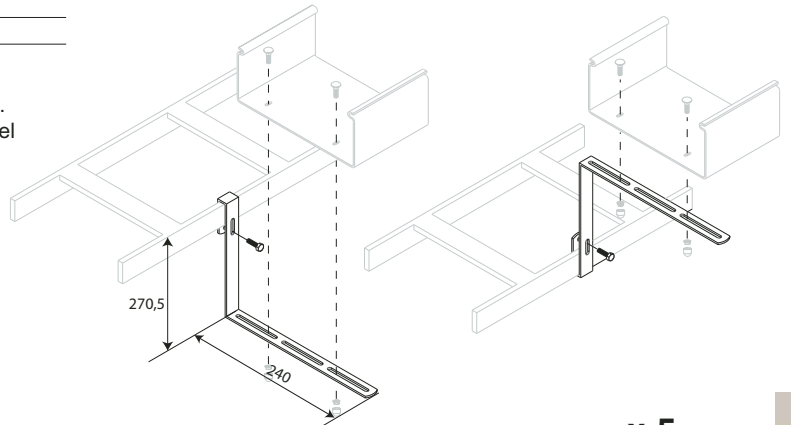
### Kit contents

5 - Ladder rack mounting bracket offset 4 x 8

5 - M10 bolt

### Note

- The supplied bracket hangs from either 2" or 1.5" side bars.
- Brackets are recommended every 900 mm for direct channel mounting.



x 5

## Side wall support 4"

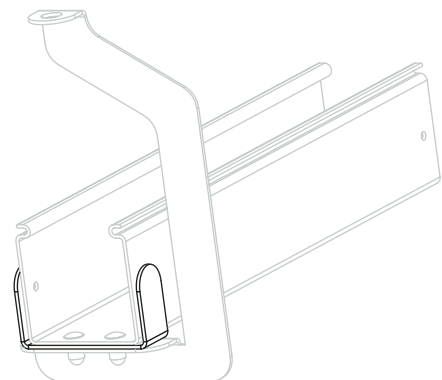
FRH - SWS - 44 - 5

### Kit contents

5 - Side wall support

### Note

- Provides additional support when no covers are used on the duct.



x 5



## Side wall support 8"

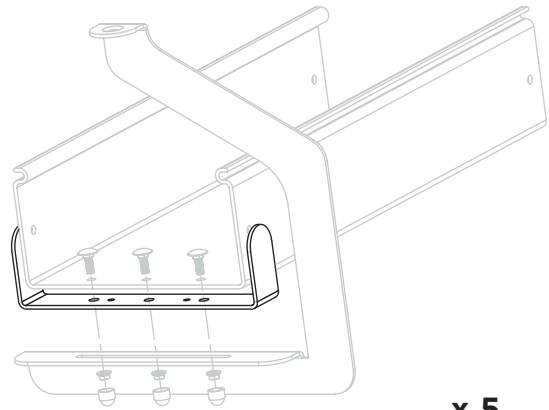
FRH - SWS - 48 - 5

### Kit contents

5 - Side wall support

### Note

- Provides additional support when no covers are used on the duct.



x 5

## Side wall support 12"

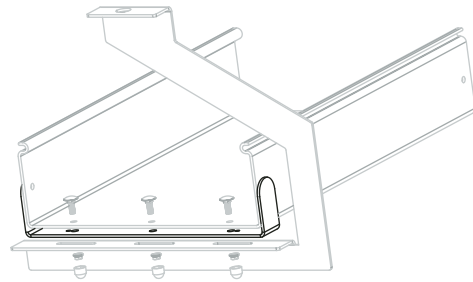
FRH - SWS - 412 - 5

### Kit contents

5 - Side wall support

### Note

- Provides additional support when no covers are used on the duct.



x 5

## Equipment rack vertical mounting kit 2" (50mm)

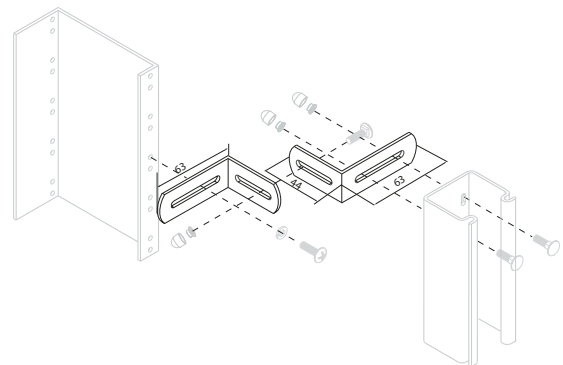
FRH - ERVK - 22 - 5

### Kit contents

5x2 - "L" adjustable bracket

### Note

- The supplied bracket is attached to the 12 - 24 tapped holes in the uprights.
- Brackets are recommended to match equipment.
- Brackets are recommended every 300 mm.



x 5

Light grey printed items are no part of the kit - 1 inch = 25,4 mm

## Equipment rack vertical mounting kit 4" (100mm)

FRH - ERVK - 44 - 5

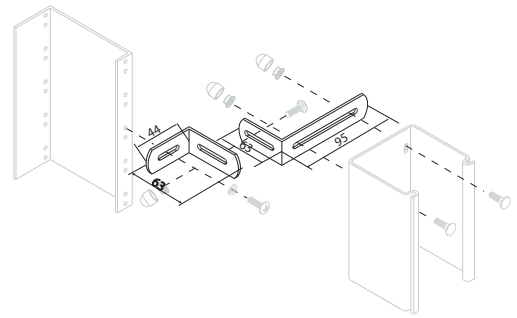
### Kit contents

5 - "L" adjustable bracket - small

5 - "L" adjustable bracket - large

### Note

- The supplied bracket is attached to the 12 - 24 tapped holes in the uprights.
- Brackets are recommended to match equipment.
- Brackets are recommended every 300 mm.



**x 5**



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FRH-DRIL .....	28	FRH-SWS-48-5 .....	36	FRS-RD412-48YLP .....	20
FRH-DRIL-QD1-TEM .....	28	FRH-TRHB-412-5 .....	34	FRS-RD44-22YLP .....	19
FRH-DVT-30-412YLP .....	28	FRH-TRHB-44-5 .....	33	FRS-RD44-44YLP .....	20
FRH-DVT-30-48YLP .....	18	FRH-TRHB-48-5 .....	33	FRS-RDL48-44YLP .....	21
FRH-DVT-30YLP .....	18	FRH-TRMP-22YLP .....	22	FRS-RDR48-44YLP .....	21
FRH-EATRK-412-5 .....	31	FRH-TRMP-44YLP .....	22	FRS-SPLC-22YLP .....	12
FRH-EATRK-44-5 .....	30	FRH-TRSBK-412-5 .....	32	FRS-SPLC-412YLP .....	12
FRH-EATRK-48-5 .....	30	FRH-TRSBK-44-5 .....	31	FRS-SPLC-44YLP .....	12
FRH-EDCP-22YLP .....	21	FRH-TRSBK-48-5 .....	31	FRS-SPLC-48YLP .....	12
FRH-EDCP-412YLP .....	21	FRH-VT2D-44YLP .....	17	FRS-SPLF-22P .....	12
FRH-EDCP-44YLP .....	21	FRH-VT2DD-44YLP .....	16	FRS-SPLF-412P .....	12
FRH-EDCP-48YLP .....	21	FRH-VT2DV-48YLP .....	17	FRS-SPLF-44P .....	12
FRH-ERHK-22-5 .....	32	FRH-VT4D-48YLP .....	17	FRS-SPLF-48P .....	12
FRH-ERHK-44-5 .....	32	FRH-VT4DV-412YLP .....	17	FRS-SQRD-22YLP .....	23
FRH-ERHK-48-5 .....	33	FRH-VTC-22YLP .....	16	FRS-SQRD-DL-22YLP .....	23
FRH-ERVK-22-5 .....	36	FRH-VTC-44YLP .....	16	FRS-SQRD-DL-44YLP .....	23
FRH-ERVK-44-5 .....	37	FRH-WB-22YLP .....	22	FRS-TRMP-22YLP .....	22
FRH-FLEX-TUBE-CLAMP-1-10 .....	24	FRH-WB-412YLP .....	22	FRS-TRMP-44YLP .....	22
FRH-FLEX-TUBE-CLAMP-2-10 .....	24	FRH-WB-44YLP .....	22	FRS-VT2D-44YLP .....	17
FRH-FLRMK-44-5 .....	35	FRH-WB-48YLP .....	22	FRS-VT2DD-44YLP .....	16
FRH-FLRMK-48-5 .....	35	FRS-4HE-22YLP .....	13	FRS-VT2DV-48YLP .....	17
FRH-HT2-44YLP .....	15	FRS-4HE-412YLP .....	13	FRS-VT4D-48YLP .....	17
FRH-HT44-412YLP .....	16	FRS-4HE-44YLP .....	13	FRS-VT4DV-412YLP .....	17
FRH-HT44-48YLP .....	15	FRS-4HE-48YLP .....	13	FRS-VTC-22YLP .....	16
FRH-HT48-412YLP .....	15	FRS-4VIE-22YLP .....	14	FRS-VTC-44YLP .....	16
FRH-HTC-22YLP .....	14	FRS-4VIE-412YLP .....	14	FRS-WB-22YLP .....	22
FRH-HTC-412YLP .....	14	FRS-4VIE-44YLP .....	14	FRS-WB-412YLP .....	22
FRH-HTC-44YLP .....	14	FRS-4VIE-48YLP .....	14	FRS-WB-44YLP .....	22
FRH-HTC-48YLP .....	14	FRS-4VOE-22YLP .....	13	FRS-WB-48YLP .....	22
FRH-LRMK-22-5 .....	34	FRS-4VOE-412YLP .....	13		
FRH-LRMK-44-5 .....	34	FRS-4VOE-44YLP .....	13		
FRH-LRMK-48-5 .....	34	FRS-4VOE-48YLP .....	13		
FRH-LTFA-44YLP .....	22	FRS-9HE-22YLP .....	12		
FRH-QD1-FL-1-2 .....	25	FRS-9HE-412YLP .....	12		
FRH-QD1-FL-2-1 .....	25	FRS-9HE-44YLP .....	12		
FRH-QD1-I-YL .....	25	FRS-9HE-48YLP .....	12		





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TC 583/CAT/6 07/07

