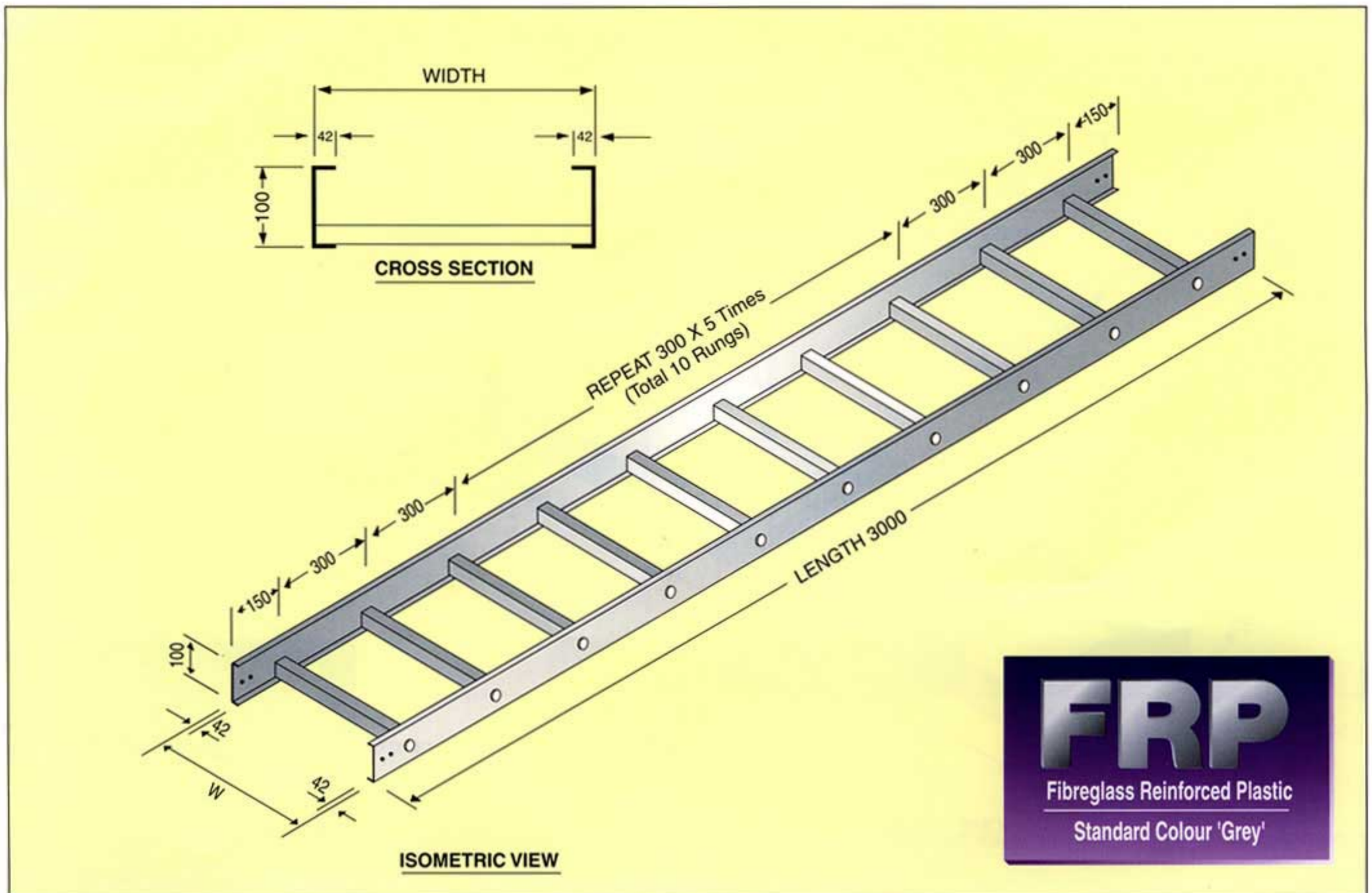


# BES-12 SERIES CABLE TRAY (LADDER TYPE)



## BES-12 Series Cable Tray in FRP Finish

### ORDERING PART NUMBERS

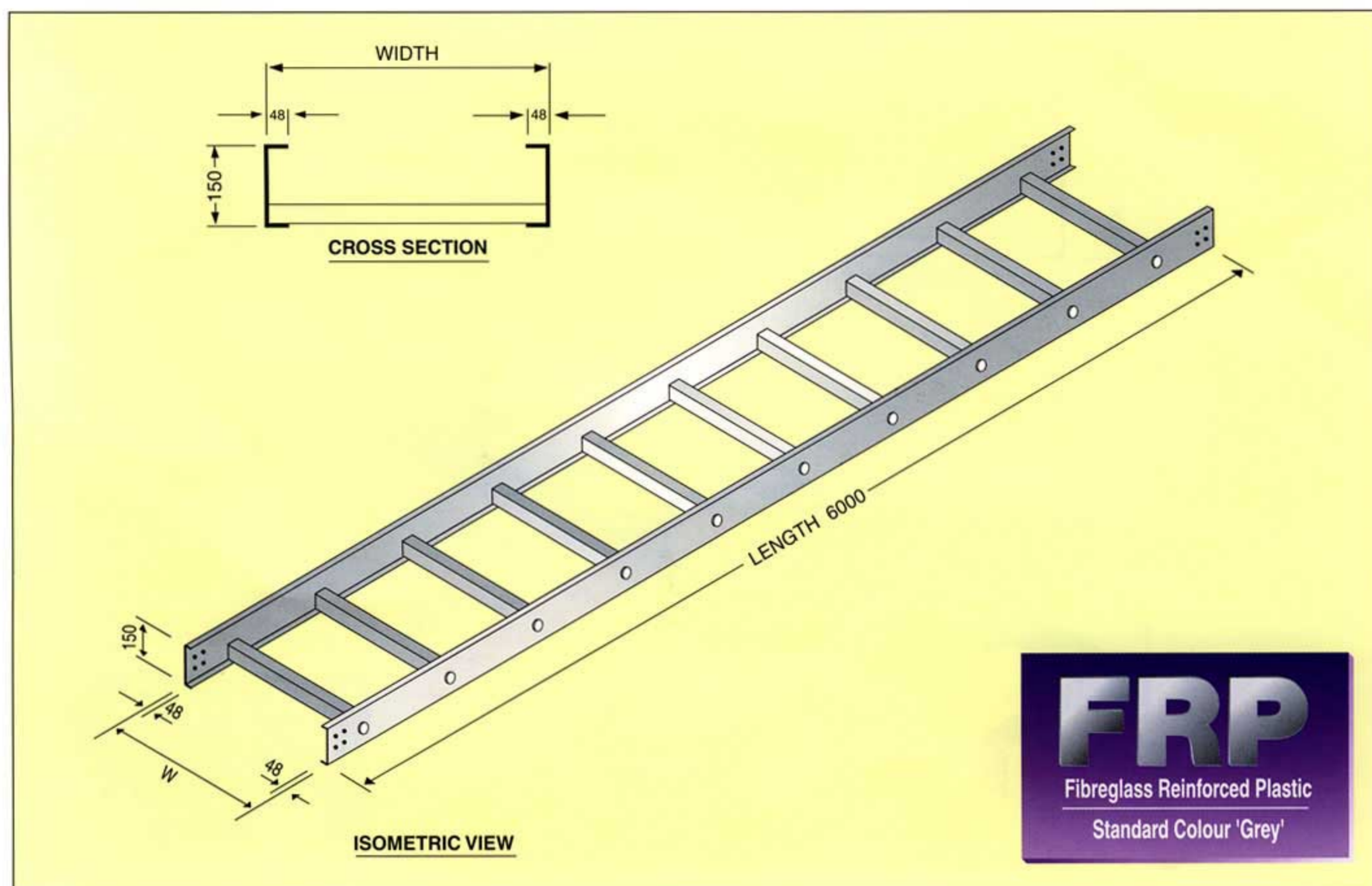
TYPES	BES-12A Straight Tray	BES-12B Straight Tray	BES-12C Straight Tray	Length	Width
<b>PART NUMBERS</b>	FCL-12A 15	FCL-12B 15	FCL-12C 15	Usual Length 3.0m.	150mm
	FCL-12A 30	FCL-12B 30	FCL-12C 30		300mm
	FCL-12A 45	FCL-12B 45	FCL-12C 45		450mm
	FCL-12A 60	FCL-12B 60	FCL-12C 60		600mm
	FCL-12A 76	FCL-12B 76	FCL-12C 76		760mm
	FCL-12A 90	FCL-12B 90	FCL-12C 90		900mm

### General Specifications

- 1) Materials shall be pultruded sections using the latest all purpose isophthalic polyester resin and manufactured in accordance to the guidelines established by Morrison Molded Fiberglass Company (MMFG) of USA.
- 2) Design and performance shall follow the guidelines established by NEMA, always provided with a safe factor of 1.5.
- 3) All joints shall be mechanically connected with specially designed PVC plugs and reinforced with structural adhesive used in accordance to the manufacturer's instructions.
- 4) Fire rating: non-fire rated or rated to Class 2 as specified in BS 476 : 1987 Part 7.



# BES-20 SERIES CABLE TRAY (LADDER TYPE)



## BES-20 Series Cable Tray in FRP Finish

### ORDERING PART NUMBERS

TYPES	BES-20A Straight Tray	BES-20B Straight Tray	BES-20C Straight Tray	Length	Width
<b>PART NUMBERS</b>	FCL-20A 15	FCL-20B 15	FCL-20C 15	Usual Length 6.0m.	150mm
	FCL-20A 30	FCL-20B 30	FCL-20C 30		300mm
	FCL-20A 45	FCL-20B 45	FCL-20C 45		450mm
	FCL-20A 60	FCL-20B 60	FCL-20C 60		600mm
	FCL-20A 76	FCL-20B 76	FCL-20C 76		760mm
	FCL-20A 90	FCL-20B 90	FCL-20C 90		900mm

### General Specifications

- 1) Materials shall be pultruded sections using the latest all purpose isophthalic polyester resin and manufactured in accordance to the guidelines established by Morrison Molded Fiberglass Company (MMFG) of USA.
- 2) Design and performance shall follow the guidelines established by NEMA, always provided with a safe factor of 1.5.
- 3) All joints shall be mechanically connected with specially designed PVC plugs and reinforced with structural adhesive used in accordance to the manufacturer's instructions.
- 4) Fire rating: non-fire rated or rated to Class 2 as specified in BS 476 : 1987 Part 7

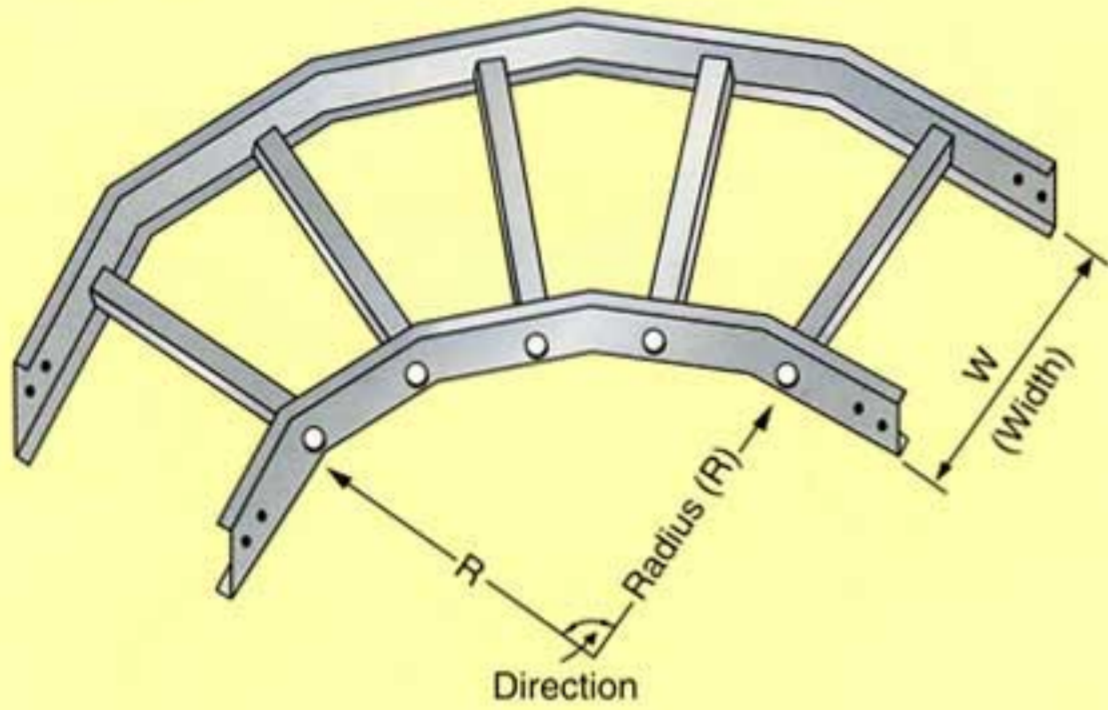


# CABLE LADDER ACCESSORIES..

## HORIZONTAL ELBOW

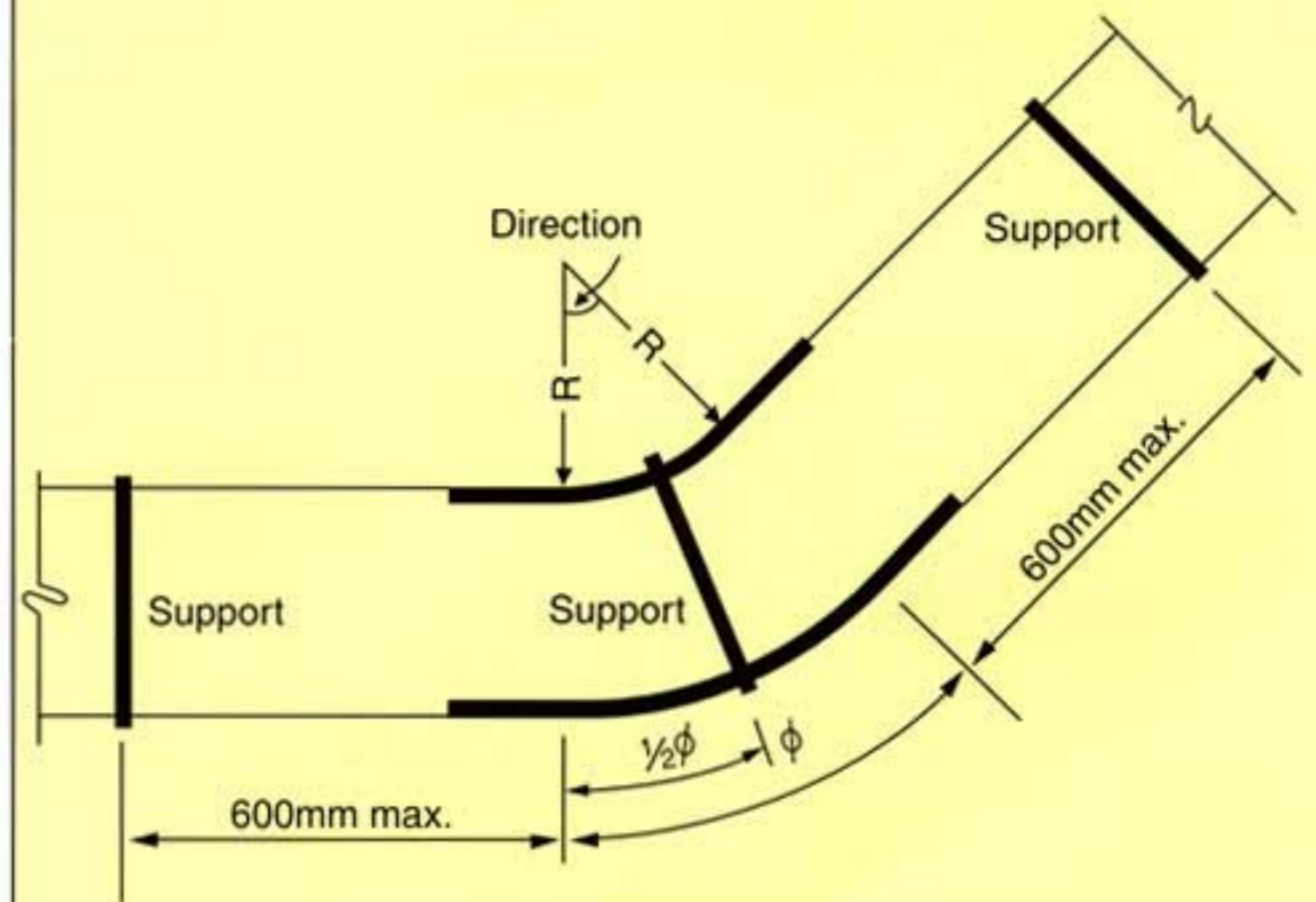
RADIUS: 300mm (450mm & 600mm on request)

DIRECTION: 30°, 45°, 60°, 90°



PICTORIAL VIEW

## SUPPORTS LOCATION RECOMMENDED BY NEMA.



PLAN VIEW

## HORIZONTAL ELBOW IN FRP FINISH

### ORDERING PART NUMBERS

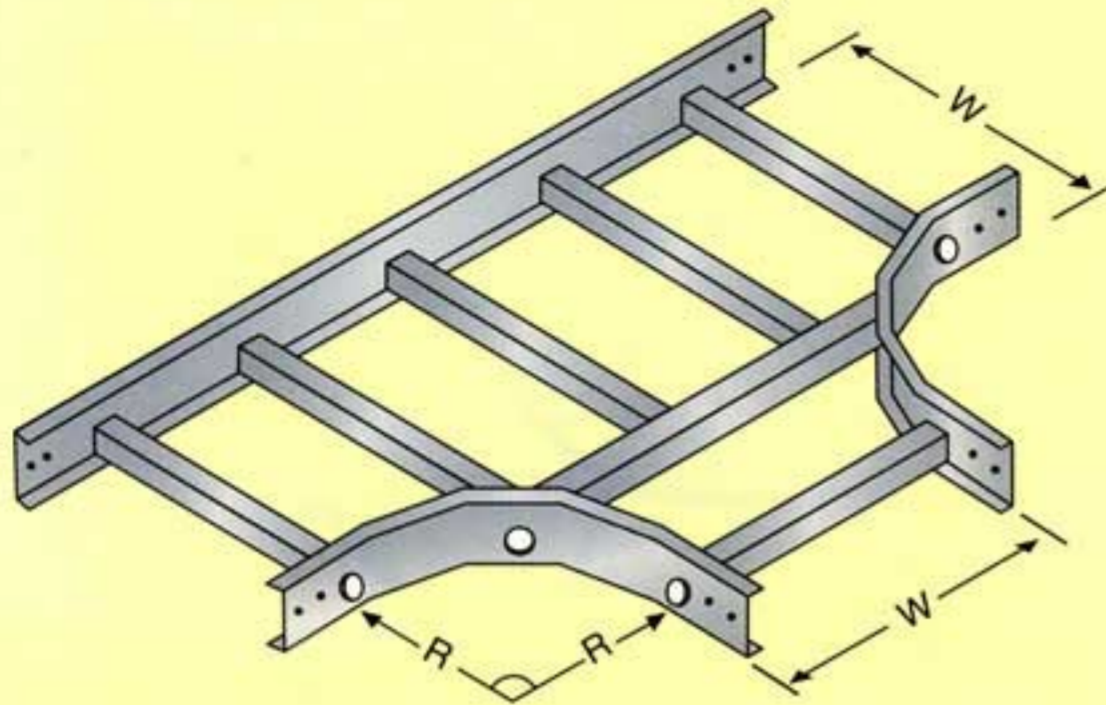
TYPES	BES-12 Series	BES-16 Series	BES-20 Series	Direction	Width
<b>PART NUMBERS</b>	FHE-12-15W-30D-300R FHE-12-15W-45D-300R FHE-12-15W-60D-300R FHE-12-15W-90D-300R	FHE-16-15W-30D-300R FHE-16-15W-45D-300R FHE-16-15W-60D-300R FHE-16-15W-90D-300R	FHE-20-15W-30D-300R FHE-20-15W-45D-300R FHE-20-15W-60D-300R FHE-20-15W-90D-300R	30° 45° 60° 90°	150mm
	FHE-12-30W-30D-300R FHE-12-30W-45D-300R FHE-12-30W-60D-300R FHE-12-30W-90D-300R	FHE-16-30W-30D-300R FHE-16-30W-45D-300R FHE-16-30W-60D-300R FHE-16-30W-90D-300R	FHE-20-30W-30D-300R FHE-20-30W-45D-300R FHE-20-30W-60D-300R FHE-20-30W-90D-300R	30° 45° 60° 90°	300mm
	FHE-12-45W-30D-300R FHE-12-45W-45D-300R FHE-12-45W-60D-300R FHE-12-45W-90D-300R	FHE-16-45W-30D-300R FHE-16-45W-45D-300R FHE-16-45W-60D-300R FHE-16-45W-90D-300R	FHE-20-45W-30D-300R FHE-20-45W-45D-300R FHE-20-45W-60D-300R FHE-20-45W-90D-300R	30° 45° 60° 90°	450mm
	FHE-12-60W-30D-300R FHE-12-60W-45D-300R FHE-12-60W-60D-300R FHE-12-60W-90D-300R	FHE-16-60W-30D-300R FHE-16-60W-45D-300R FHE-16-60W-60D-300R FHE-16-60W-90D-300R	FHE-20-60W-30D-300R FHE-20-60W-45D-300R FHE-20-60W-60D-300R FHE-20-60W-90D-300R	30° 45° 60° 90°	600mm
	FHE-12-76W-30D-300R FHE-12-76W-45D-300R FHE-12-76W-60D-300R FHE-12-76W-90D-300R	FHE-16-76W-30D-300R FHE-16-76W-45D-300R FHE-16-76W-60D-300R FHE-16-76W-90D-300R	FHE-20-76W-30D-300R FHE-20-76W-45D-300R FHE-20-76W-60D-300R FHE-20-76W-90D-300R	30° 45° 60° 90°	760mm
	FHE-12-90W-30D-300R FHE-12-90W-45D-300R FHE-12-90W-60D-300R FHE-12-90W-90D-300R	FHE-16-90W-30D-300R FHE-16-90W-45D-300R FHE-16-90W-60D-300R FHE-16-90W-90D-300R	FHE-20-90W-30D-300R FHE-20-90W-45D-300R FHE-20-90W-60D-300R FHE-20-90W-90D-300R	30° 45° 60° 90°	900mm



# CABLE LADDER ACCESSORIES...

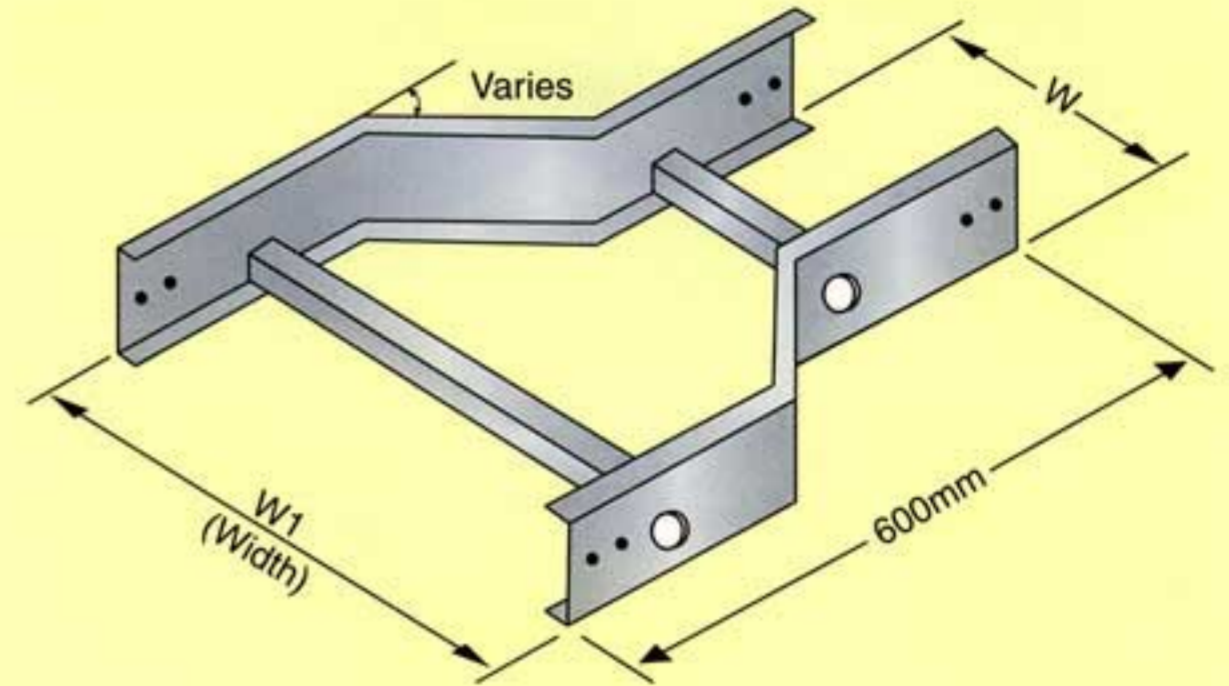
## HORIZONTAL EQUAL TEE

RADIUS: 300mm (450mm & 600mm on request)



PICTORIAL VIEW

## STRAIGHT REDUCER



PICTORIAL VIEW

## HORIZONTAL EQUAL TEE IN FRP FINISH

ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	Direction	Width
<b>PART NUMBERS</b>	FET-12-15W-300R	FET-16-15W-300R	FET-20-15W-300R	90°	150mm
	FET-12-30W-300R	FET-16-30W-300R	FET-20-30W-300R		300mm
	FET-12-45W-300R	FET-16-45W-300R	FET-20-45W-300R		450mm
	FET-12-60W-300R	FET-16-60W-300R	FET-20-60W-300R		600mm
	FET-12-76W-300R	FET-16-76W-300R	FET-20-76W-300R		760mm
	FET-12-90W-300R	FET-16-90W-300R	FET-20-90W-300R		900mm

## STRAIGHT REDUCER IN FRP FINISH

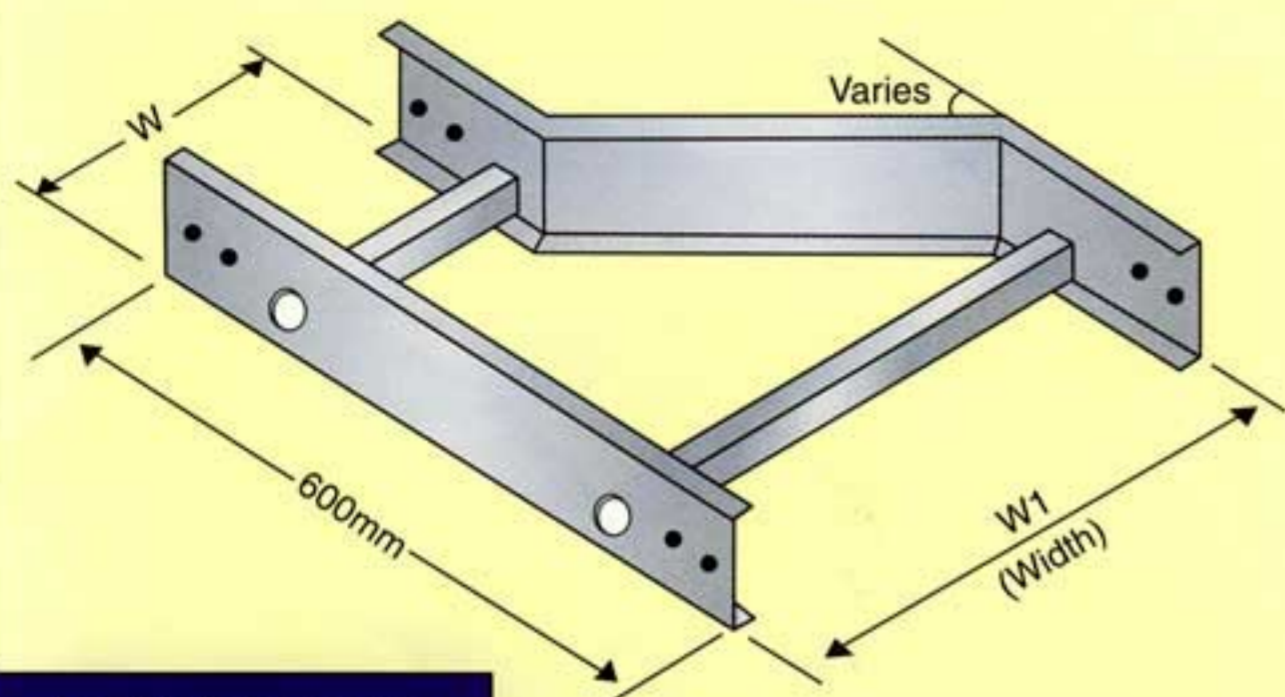
ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	W	W1
<b>PART NUMBERS</b>	FR-12-1530W	FR-16-1530W	FR-20-1530W	150mm	300mm
	FR-12-1545W	FR-16-1545W	FR-20-1545W	150mm	450mm
	FR-12-1560W	FR-16-1560W	FR-20-1560W	150mm	600mm
	FR-12-1576W	FR-16-1576W	FR-20-1576W	150mm	760mm
	FR-12-1590W	FR-16-1590W	FR-20-1590W	150mm	900mm
	FR-12-3045W	FR-16-3045W	FR-20-3045W	300mm	450mm
	FR-12-3060W	FR-16-3060W	FR-20-3060W	300mm	600mm
	FR-12-3076W	FR-16-3076W	FR-20-3076W	300mm	760mm
	FR-12-3090W	FR-16-3090W	FR-20-3090W	300mm	900mm
	FR-12-4560W	FR-16-4560W	FR-20-4560W	450mm	600mm
	FR-12-4576W	FR-16-4576W	FR-20-4576W	450mm	760mm
	FR-12-4590W	FR-16-4590W	FR-20-4590W	450mm	900mm
	FR-12-6076W	FR-16-6076W	FR-20-6076W	600mm	760mm
	FR-12-6090W	FR-16-6090W	FR-20-6090W	600mm	900mm
	FR-12-7690W	FR-16-7690W	FR-20-7690W	760mm	900mm



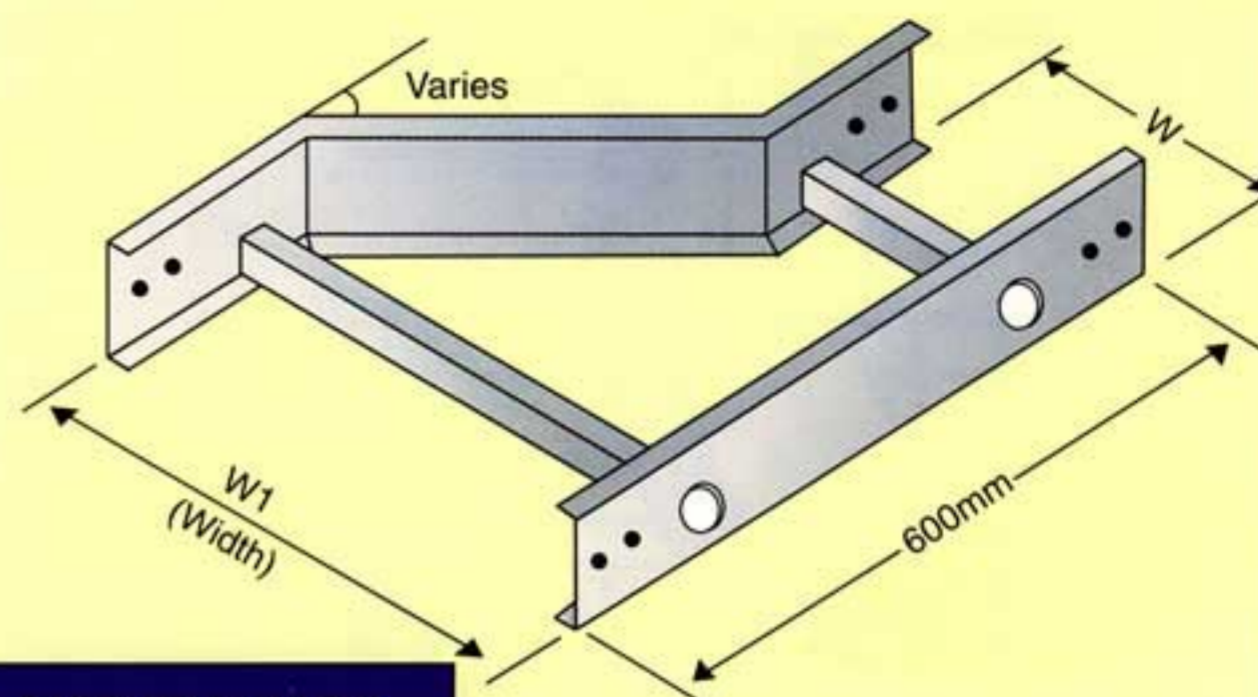
# CABLE LADDER ACCESSORIES...

**OFFSET REDUCER (LEFT-HAND)**



**PICTORIAL VIEW**

**OFFSET REDUCER (RIGHT HAND)**



**PICTORIAL VIEW**

**OFFSET REDUCER (LEFT HAND) IN FRP FINISH**

ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	W	W1
<b>PART NUMBERS</b>	FOR-12-1530WL	FOR-16-1530WL	FOR-20-1530WL	150mm	300mm
	FOR-12-1545WL	FOR-16-1545WL	FOR-20-1545WL	150mm	450mm
	FOR-12-1560WL	FOR-16-1560WL	FOR-20-1560WL	150mm	600mm
	FOR-12-1576WL	FOR-16-1576WL	FOR-20-1576WL	150mm	760mm
	FOR-12-1590WL	FOR-16-1590WL	FOR-20-1590WL	150mm	900mm
	FOR-12-3045WL	FOR-16-3045WL	FOR-20-3045WL	300mm	450mm
	FOR-12-3060WL	FOR-16-3060WL	FOR-20-3060WL	300mm	600mm
	FOR-12-3076WL	FOR-16-3076WL	FOR-20-3076WL	300mm	760mm
	FOR-12-3090WL	FOR-16-3090WL	FOR-20-3090WL	300mm	900mm
	FOR-12-4560WL	FOR-16-4560WL	FOR-20-4560WL	450mm	600mm
	FOR-12-4576WL	FOR-16-4576WL	FOR-20-4576WL	450mm	760mm
	FOR-12-4590WL	FOR-16-4590WL	FOR-20-4590WL	450mm	900mm
	FOR-12-6076WL	FOR-16-6076WL	FOR-20-6076WL	600mm	760mm
	FOR-12-6090WL	FOR-16-6090WL	FOR-20-6090WL	600mm	900mm
	FOR-12-7690WL	FOR-16-7690WL	FOR-20-7690WL	760mm	900mm

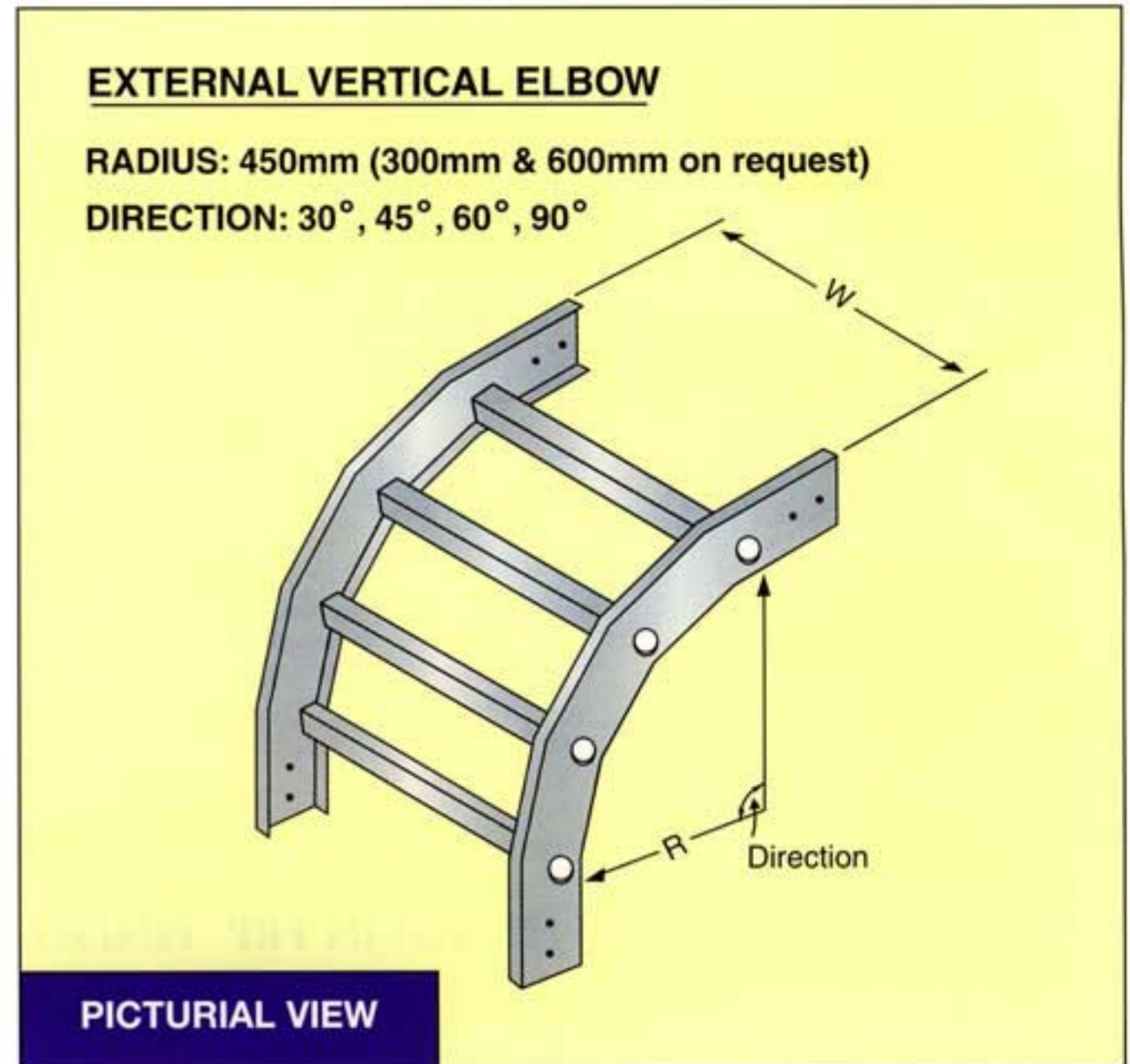
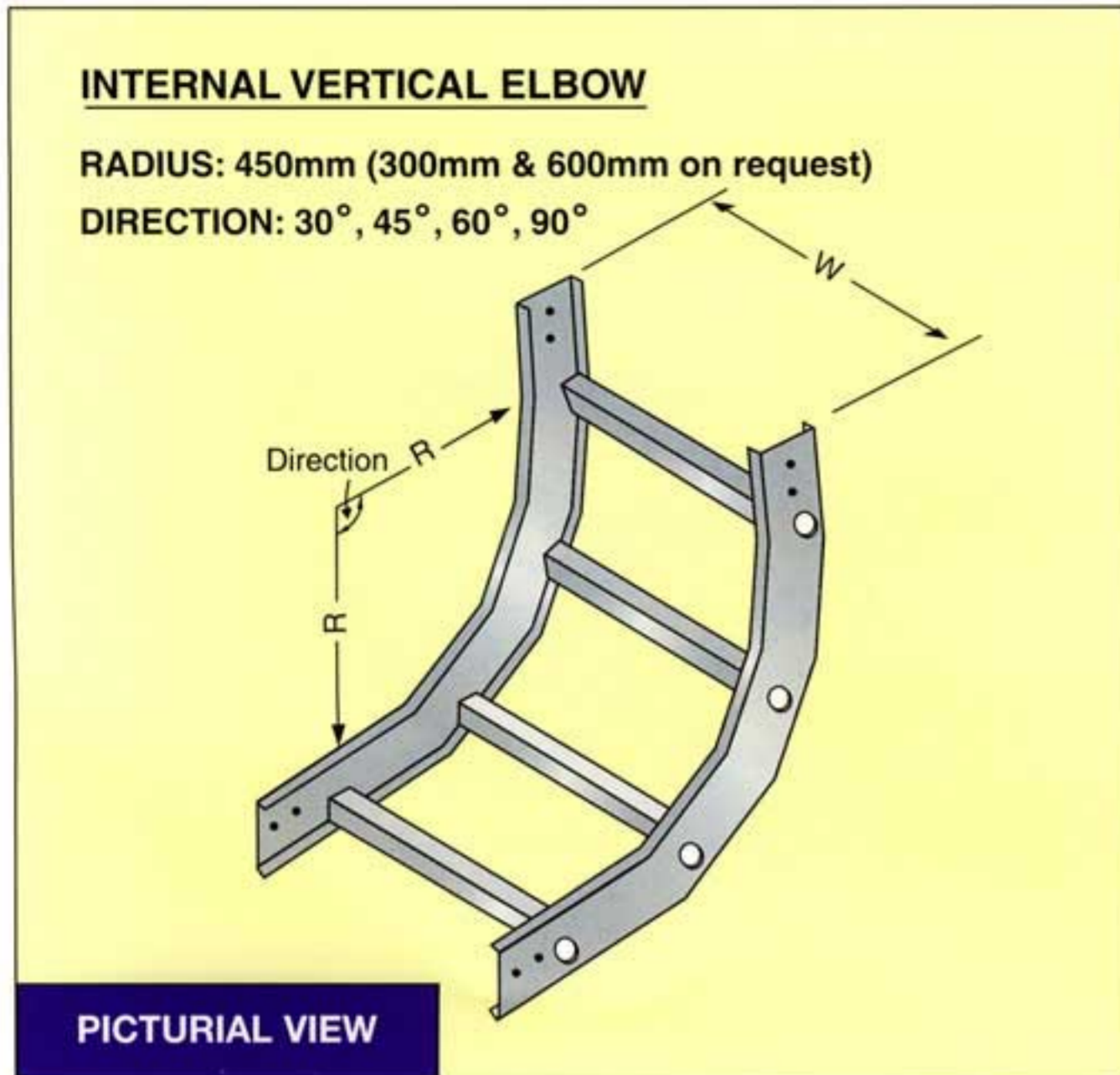
**OFFSET REDUCER (RIGHT HAND) IN FRP FINISH**

ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	W	W1
<b>PART NUMBERS</b>	FOR-12-1530WR	FOR-16-1530WR	FOR-20-1530WR	150mm	300mm
	FOR-12-1545WR	FOR-16-1545WR	FOR-20-1545WR	150mm	450mm
	FOR-12-1560WR	FOR-16-1560WR	FOR-20-1560WR	150mm	600mm
	FOR-12-1576WR	FOR-16-1576WR	FOR-20-1576WR	150mm	760mm
	FOR-12-1590WR	FOR-16-1590WR	FOR-20-1590WR	150mm	900mm
	FOR-12-3045WR	FOR-16-3045WR	FOR-20-3045WR	300mm	450mm
	FOR-12-3060WR	FOR-16-3060WR	FOR-20-3060WR	300mm	600mm
	FOR-12-3076WR	FOR-16-3076WR	FOR-20-3076WR	300mm	760mm
	FOR-12-3090WR	FOR-16-3090WR	FOR-20-3090WR	300mm	900mm
	FOR-12-4560WR	FOR-16-4560WR	FOR-20-4560WR	450mm	600mm
	FOR-12-4576WR	FOR-16-4576WR	FOR-20-4576WR	450mm	760mm
	FOR-12-4590WR	FOR-16-4590WR	FOR-20-4590WR	450mm	900mm
	FOR-12-6076WR	FOR-16-6076WR	FOR-20-6076WR	600mm	760mm
	FOR-12-6090WR	FOR-16-6090WR	FOR-20-6090WR	600mm	900mm
	FOR-12-7690WR	FOR-16-7690WR	FOR-20-7690WR	760mm	900mm



# CABLE LADDER ACCESSORIES...



## INTERNAL VERTICAL ELBOW IN FRP FINISH

### ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	Direction	Width
<b>PART NUMBERS</b>	FIVE-12-15W-450R	FIVE-16-15W-450R	FIVE-20-15W-450R	Usually supplied in 90° with 450mm radius. Optional direction: 30°, 45°, 60° Optional radii: 300mm, 600mm	150mm
	FIVE-12-30W-450R	FIVE-16-30W-450R	FIVE-20-30W-450R		300mm
	FIVE-12-45W-450R	FIVE-16-45W-450R	FIVE-20-45W-450R		450mm
	FIVE-12-60W-450R	FIVE-16-60W-450R	FIVE-20-60W-450R		600mm
	FIVE-12-76W-450R	FIVE-16-76W-450R	FIVE-20-76W-450R		760mm
	FIVE-12-90W-450R	FIVE-16-90W-450R	FIVE-20-90W-450R		900mm

## EXTERNAL VERTICAL ELBOW IN FRP FINISH

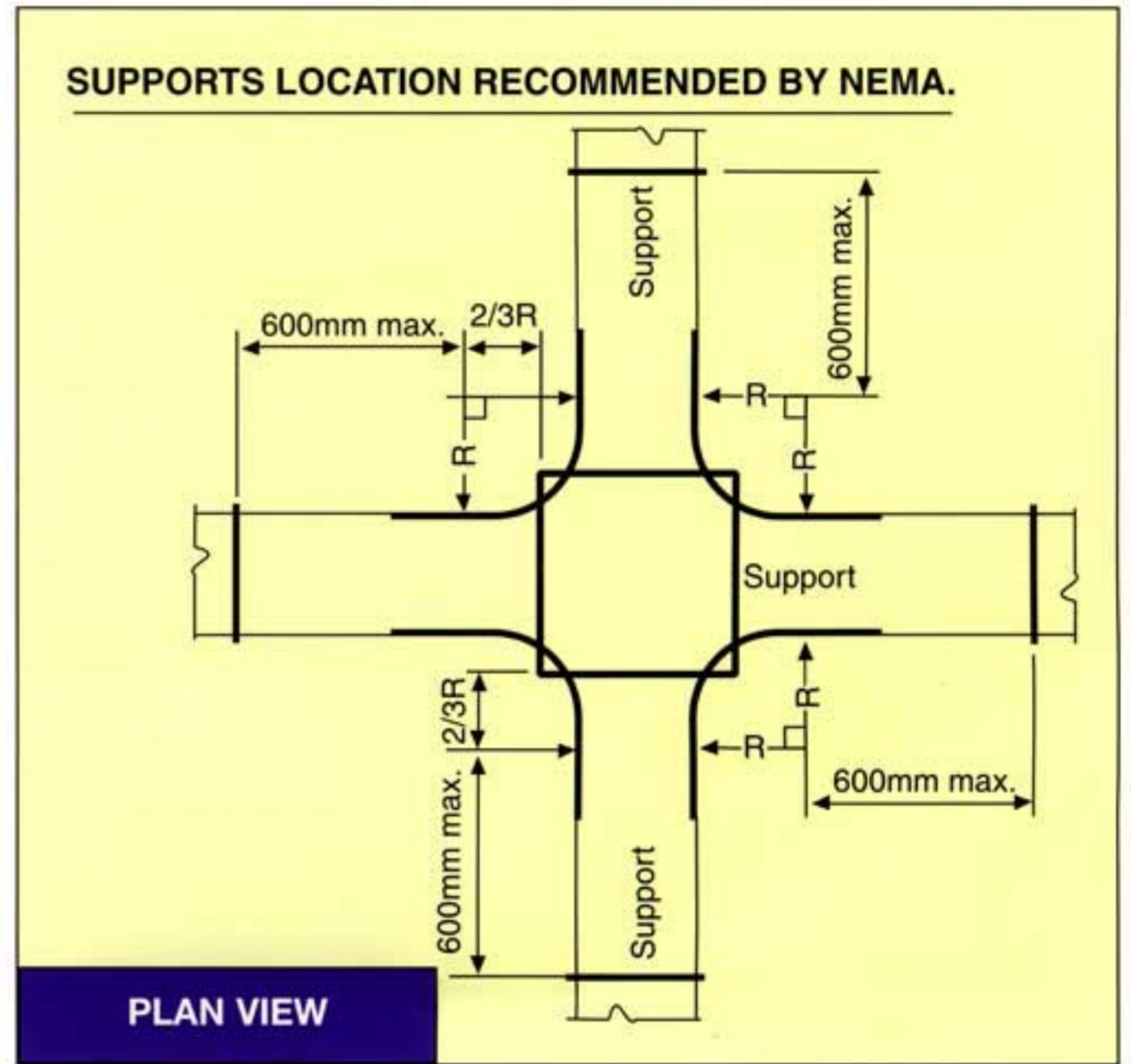
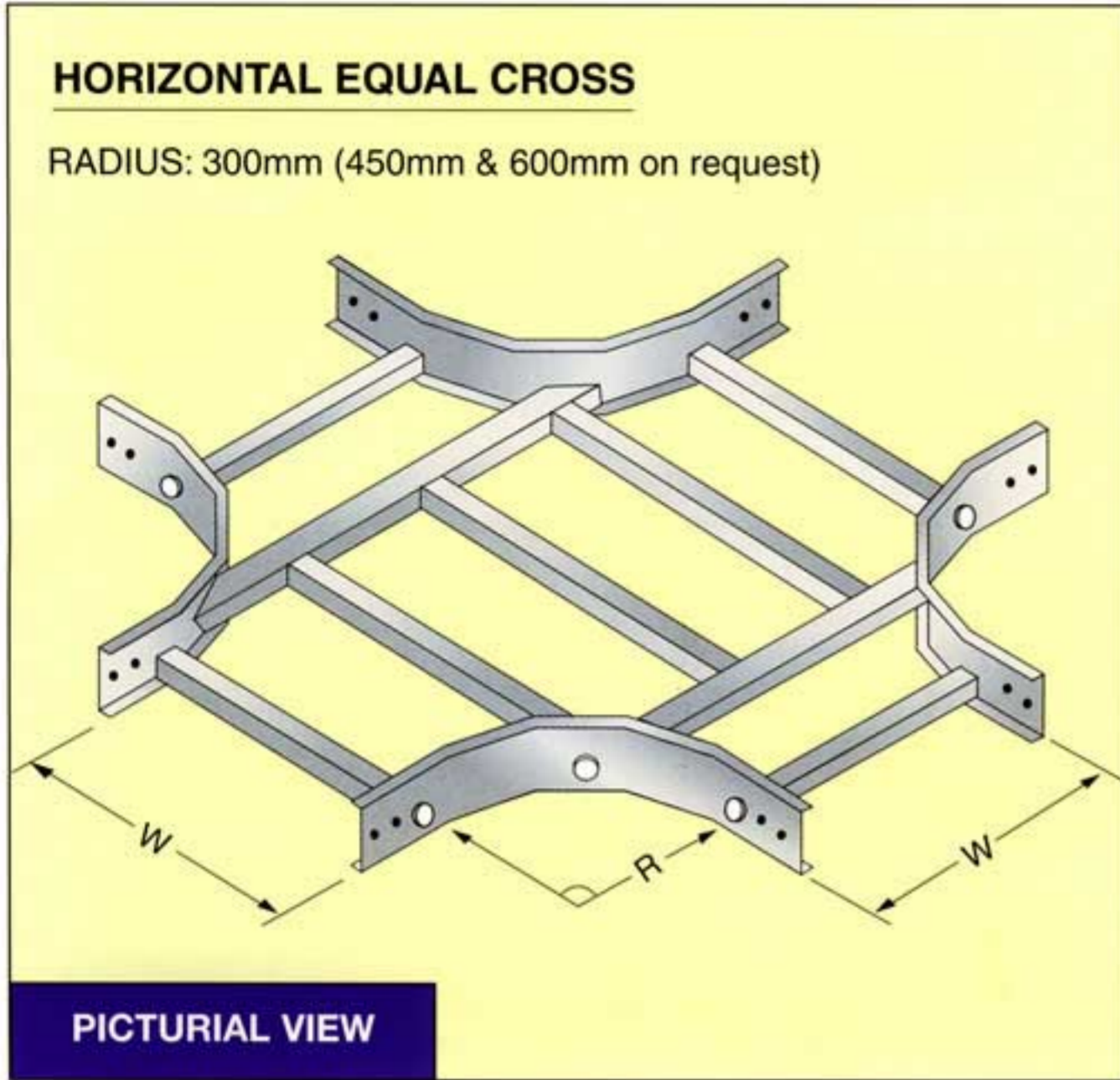
### ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	Direction	Width
<b>PART NUMBERS</b>	FEVE-12-15W-450R	FEVE-16-15W-450R	FEVE-20-15W-450R	Usually supplied in 90° with 450mm radius. Optional direction: 30°, 45°, 60° Optional radii: 300mm, 600mm	150mm
	FEVE-12-30W-450R	FEVE-16-30W-450R	FEVE-20-30W-450R		300mm
	FEVE-12-45W-450R	FEVE-16-45W-450R	FEVE-20-45W-450R		450mm
	FEVE-12-60W-450R	FEVE-16-60W-450R	FEVE-20-60W-450R		600mm
	FEVE-12-76W-450R	FEVE-16-76W-450R	FEVE-20-76W-450R		760mm
	FEVE-12-90W-450R	FEVE-16-90W-450R	FEVE-20-90W-450R		900mm

<b>USE OF PART NUMBERS</b>	Example: Internal Vertical Elbow	Example: External Vertical Elbow
	Type : 12 Series Radius : 450mm Width : 300mm Direction : 30° Part No : FIVE-12-30W-30D-450R	Type : 20 Series Radius : 600mm Width : 900mm Direction : 45° Part No : FEVE-20-90W-45D-600R



# CABLE LADDER ACCESSORIES...



## HORIZONTAL EQUAL CROSS IN FRP FINISH

### ORDERING PART NUMBERS

TYPES	BES-12 Series	BES-16 Series	BES-20 Series	Direction	Width
<b>PART NUMBERS</b>	FHX-12-15W-300R	FHX-16-15W-300R	FHX-20-15W-300R	90°	150mm
	FHX-12-30W-300R	FHX-16-30W-300R	FHX-20-30W-300R		300mm
	FHX-12-45W-300R	FHX-16-45W-300R	FHX-20-45W-300R		450mm
	FHX-12-60W-300R	FHX-16-60W-300R	FHX-20-60W-300R		600mm
	FHX-12-76W-300R	FHX-16-76W-300R	FHX-20-76W-300R		760mm
	FHX-12-90W-300R	FHX-16-90W-300R	FHX-20-90W-300R		900mm