

Ordering Guide for FIST Blue Label Racks (FIST-GR3)

This document provides assistance with the selection of racks for use in FIST applications. It includes the following sections:

1 Product description	2
2 Ordering information	3
2.1 Blue Label rack	3
2.2 Accessories	4
Cable installation	4
Pigtail Management	4
Other accessories	5
3 Product guide	6
3.1 Rack description	6
3.1.1 Layout of different rack configurations	8
3.1.2 Doors	9
3.1.3 Locks	10
3.2 Rack dimensions and capacity	10
3.2.1 Height occupancy of FIST systems:	10
3.2.2 Pigtail capacity of side ducts, base duct and pigtail management shelves	10
3.3 Accessories description	11
3.3.1 Cable installation	11
3.3.2 Pigtail management	12
3.3.3 Other accessories	13

1 Product description

The FIST Blue Label Rack, FIST-GR3, is an all-purpose metal rack designed to accommodate FIST shelves.

FIST-GR3 complies with metric ETSI specifications.

FIST-GR3 is built around 2 side ducts with a height of 2.2 m that can be combined to create different lay-outs. Two side duct widths are available (150 mm and 300 mm) to accommodate different patch cord and cable densities.



Loaded FIST-GR3-1200-2

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2 Ordering information

2.1 Blue Label rack

Refer to Section 3 for full product descriptions.

BASIC RACK

FIST-GR3-900-2	Rack of 2200 mm high, 900mm wide 150-600-150
FIST-GR3-1050-2	Rack of 2200 mm high, 1050mm wide 300-600-150 or 150-600-300
FIST-GR3-1200-2	Rack of 2200 mm high, 1200mm wide 300-600-300

ACCESSORY RACK KITS

Door kits

FIST-GR3-150-DOORKIT-2	2 x 150 mm side duct doors
FIST-GR3-300-DOORKIT-2	2 x 300 mm side duct doors
FIST-GR3-900-DOORKIT-2	2 x 150 mm side duct door + 600 mm central door
FIST-GR3-1200-DOORKIT-2	2 x 300 mm side duct door + 600 mm central door

Other accessory kits: see section 2.2

Basic rack kit content

- 2 side ducts with integrated ETSI mounting profiles
- Mounting styles with ETSI distance (1 with TE logo)
- Base duct (for middle section and side ducts)
- Loose drums (10 for 900mm; 15 for 1050mm; 15 for 1200mm racks)
- Drum plates enlargers integrated in side duct
- Cable attachment plates integrated in side duct
- Wall connection kit
- Back-to-back connection kit
- Earthing facility (connection of the metal parts to each other and a connection point to the building earthing)
- Adjustable feet (loose in kit) + Allen key
- Installation instruction
- Packed in a reinforced flat box

Depending on the configuration, the items listed below are included.

Check the drawings in section 3.1.1 for layout and quantities.

- Loose drums (10 for 900mm, 15 for 1200mm racks)
- 2 loose drum plates enlargers
- 1 loose Cable attachment plate
(CAP 150 for 5 cables \varnothing 12-16 mm, CAP 300 for 10 cables \varnothing 12-16 mm).
- Tools:
 - Allen key for back mounting of the shelves and drums
 - Cage nut tool to install the cage nuts in the rack

2.2 Accessories

Accessories are ordered in addition to the basic rack to suit specific applications. Refer to section 3.3 for a complete product description and pictures.

Cable installation

Name	Qty/Pck	Description
Cable attachment accessories		Cable attachment accessories are not included in the standard rack kit. Cable attachment accessories for different cable diameters are listed in section 3.3.1. They include a cable clamp (single, double or triple) and according strength member connector quantities.
FIST-GR2-CEMT-I	1 pc	19" cable element management tray
FIST-GS-FLEX-17-50-S5027	50 m	Flexible tubing (ID 17 mm)
FIST-GS-FLEX-17-10	10 m	Flexible tubing (ID 17 mm)
FIST-GS-FLEX-12-50	50 m	Flexible tubing (ID 12 mm)
FIST-GS-FLEX-10-50-S5027	50 m	Flexible tubing (ID 10 mm)
FISTV-FTC	10 pcs	Clip-on flexible tubing clamps
FISTV-TW-NN-188	100 pcs	Tie wrap, standard, not re-openable, 188 mm long.

Note:

- Standard racks are equipped for loose-tube cable constructions.
- Cable termination kits are available for other cable constructions (e.g. central core cable, ribbon fiber cable types) - See FIST-GSS2 and FIST-GMS2 ordering guide.

Pigtail Management

Name	Qty/Pck	Description
FIST-GR2-HPM-I	1 pc	19" HPM (Horizontal Pigtail Management) with 6 drums and mounting bracket adapters for symmetrical mounting between ETSI profiles
FIST-GR2-HPS-I	1 pc	19" HPS (Horizontal Pigtail Storage) with 5 drums and mounting bracket adapters for symmetrical mounting between ETSI profiles
FIST-GR2-POM-I	1 pc	19" POM (Pigtail Orientation Module) with mounting bracket adapters for symmetrical mounting between ETSI profiles
FIST-GR2-DRM	10 pcs	Bag of drums + mounting screws

Panel kits

Name	Qty/Pck	Description
FIST-GR3-PANELKIT-2	1 pc	2 panels for side- or backmounting, including mounting accessories and installation instruction
FIST-GR3-TOP-150	1 pc	2 roof plates of 150 x 300 mm
FIST-GR3-TOP-300	1 pc	2 roof plates of 300 x 300 mm
FIST-GR3-TOP-600	1 pc	1 roof plate of 600 x 300 mm

Depth extension kits (300mm -> 400mm)

Name	Qty/Pck	Description
FIST-GR3-DEPTHEXT-900	1 pc	Depth extension kit for FIST-GR3-900-2 rack
FIST-GR3-DEPTHEXT-1050	1 pc	Depth extension kit for FIST-GR3-1050-2 rack
FIST-GR3-DEPTHEXT-1200	1 pc	Depth extension kit for FIST-GR3-1200-2 rack
FIST-GR3-SIDECOVER400-2	1 pc	2 sidepanels 400mm (only for extended GR3)
FIST-GR3-TOP400-150	1 pc	2 roof plates of 150 x 400 mm
FIST-GR3-TOP400-300	1 pc	2 roof plates of 300 x 400 mm
FIST-GR3-TOP400-600	1 pc	1 roof plate of 600 x 400 mm

Front mounting kits

Name	Qty/Pck	Description
FIST-GR3-FRMNT-ETSI	1 pc	Front mounting styles for front mounting shelves with ETSI profiles
FIST-GR3-FRMNT-19	1 pc	Front mounting styles for front mounting shelves with 19" profiles

Transparent door kit

Name	Qty/Pck	Description
FIST-GR3-600-TRSDRKIT-2	1 pc	1 x 600 mm left hinging transparent central door

Other accessories

Name	Qty/Pck	Description
FIST-GR2-DL3	1 pc	1 door lock for the central door and 2 for the side duct doors using the same key + 2 keys Lock with standard TE key number
FIST-GR3-ST5	1 pc	This kit provides the accessories to mount a FIST-GR3 rack side-to-side with another FIST-GR3 rack.
FISTV-E7187-6316	25 m	Velcro roll

3 Product guide

3.1 Rack description

A rack consists of 2 side ducts and 4 connection brackets (front top & bottom, back top & bottom). For rack layouts see section 3.1.1.

Color RAL 7035, with TE logo and ETSI mounting profiles for shelf back.

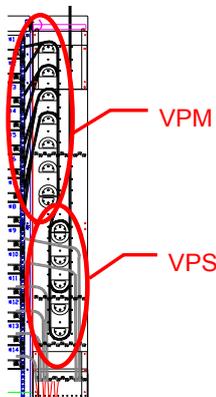
Side ducts

A side duct consists of a bottom, a top and a drum plate which includes cable attachment features (for doors see section 3.1.2).

The side ducts shall be attached to each other by using the 4 connection brackets.

They are used to manage and house cables, pigtailed and patch cords that are routed from the rack entry points to the shelves.

Side and back panels are available as options for FIST-GR3 rack.



Drum plate

The drum plate is designed for patch cord routing. (for position of drums in std rack layouts: see section 3.1.1).

Drums are included in the basic FIST-GR3 kit content and delivered as a loose item.

- The VPM (Vertical Pigtail Management system) allows for functional overlength storage of patch cords, in order to be able to reach all adapter positions without the need to take the patch cord out of the base duct.
- The VPS (Vertical Pigtail Storage) allows for random overlength storage inside the rack (to absorb jumper overlength between ODF and electronics).

Packing

The rack is shipped in a reinforced cardboard box, strapped horizontally on a wooden pallet.

Weight and dimensions (without pallet)

Kit	KG	mm
GR3-900-2	64	410x250x2310
GR3-1050-2	72	410x390x2310
GR3-1200-2	80	410x390x2310
GR3-900-DOORKIT-2	34	690x170x2260
GR3-1200-DOORKIT-2	41	690x170x2260
GR3-150-DOORKIT-2	10	230x145x2240
GR3-300-DOORKIT-2	17	380x145x2240

Wall connection kit

This kit is included to attach the rack to the wall.





Rack connection kit Side-To-Side
FIST-GR3-ST5

This kit provides the accessories to mount a FIST-GR3 rack side-to-side with another FIST-GR3 rack.



Base duct

The bottom of the base frame contains a pigtail duct system that is used to carry patch cords from one rack side to the other or from one rack to another in a back-to-back or side-to-side configuration.

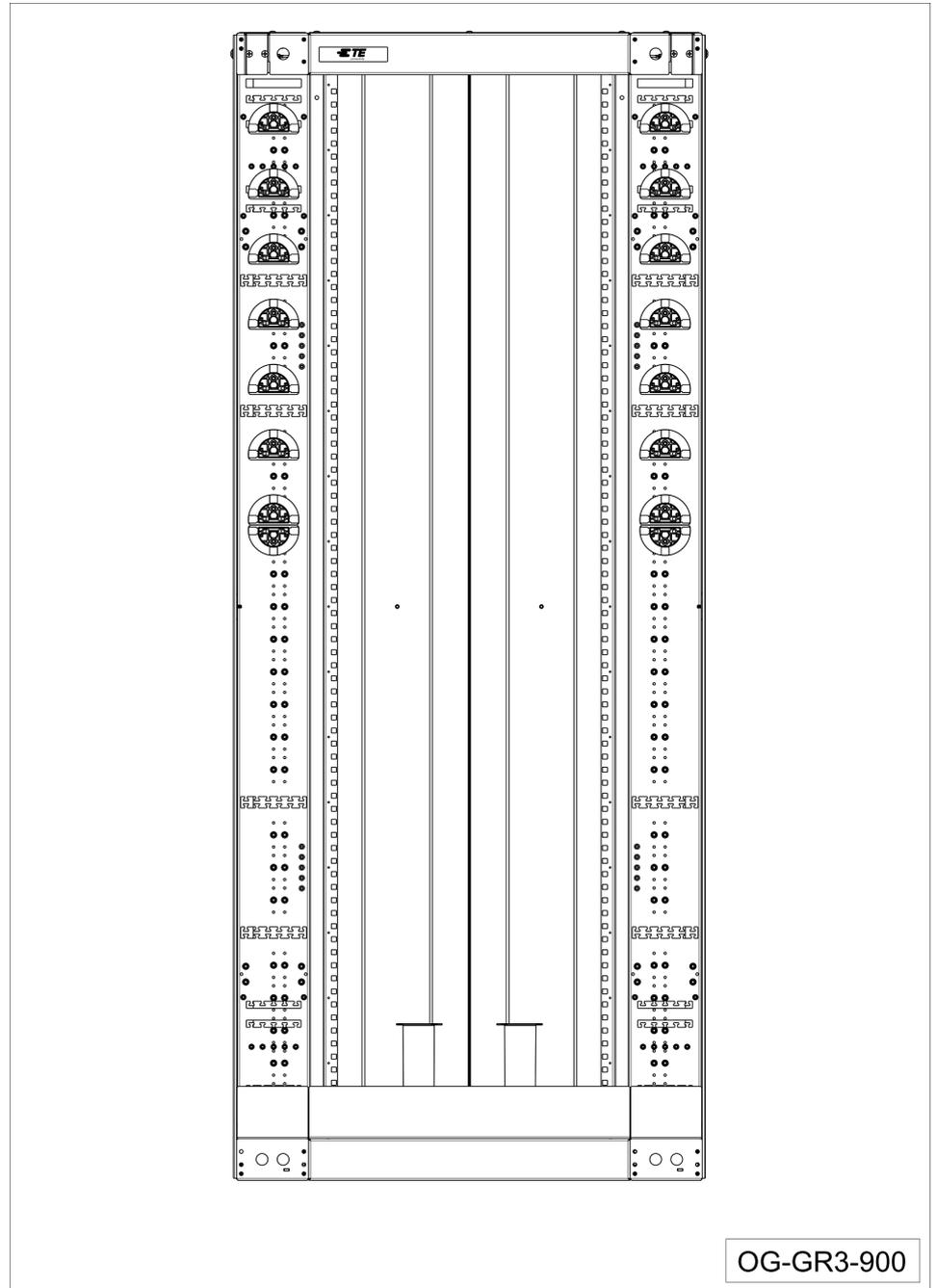
Height occupancy: 8 ETSI HU

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3.1.1 Layout of different rack configurations

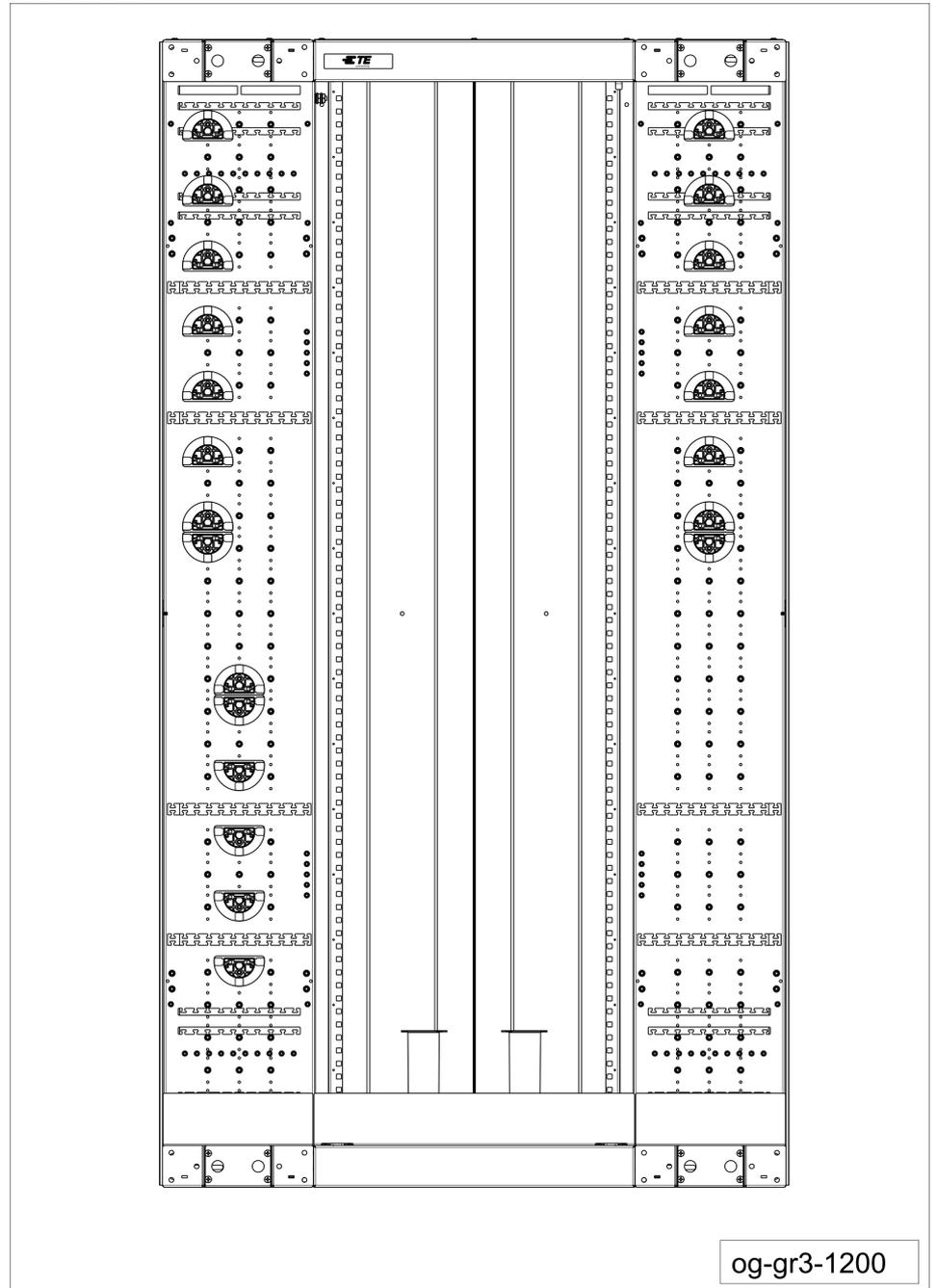
Drawings of possible layouts of the 2.2 m racks are presented underneath.

FISTGR3-900



OG-GR3-900

FIST-GR3-1200



3.1.2 Doors

The front of the middle section and the side ducts can be covered with metal doors or a 3mm transparent polycarbonate door.

Following door kits can be ordered separately: 2 x 150 mm, 2 x 300 mm, 2 x 150 mm + 1 x 600 mm and 2 x 300 mm + 1 x 600 mm.

The central door is a left hinging version.

Mounting gear, magnets and an installation instruction are included in the DOORKIT versions.0

3.1.3 Locks



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Lock(s) and 2 keys for door(s)
FIST-GR3-DL3 (central door + 2 side doors)
All kits include 2 identical keys.

3.2 Rack dimensions and capacity

FIST-GR3	
Dimensions	
Height	2.2 m
Depth	300 mm
Capacity (in ETSI HU's)	
Total available ETSI HU's (25 mm pitch) (base duct occupies 8 HU's and is standard included in the rack)	80-8=72
Capacity (in # FIST 3 HU shelves)	14

3.2.1 Height occupancy of FIST systems:

FIST System	Height occupancy (ETSI HU's)	Max # shelves in	
		72 units	80 units (*)
Base duct	8		
CEMT with cover	5		
HPM, HPS	7		
POM	5		
standard 167mm shelves	7	10	11
standard 125mm shelves	5	14	16
standard 88 mm high shelves	4	18	20
standard 44 mm high shelves	2	36	40

* with certain restrictions

3.2.2 Pigtail capacity of side ducts, base duct and pigtail management shelves

Component	Maximum capacity	
	Ø 1.8 mm	Ø 2.4 mm
FIST-GR2-POM-I	500 fibers	250 fibers
FIST-GR2-HPS-I	1000m	500m
FIST-GR2-HPM-I	6 x 144 fibers	6 x 72 fibers

For side and base duct capacities, see also the FIST-GR2 capacity guide.

3.3 Accessories description

3.3.1 Cable installation



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Cable attachment accessories with single cable clamps

FIST-GR2-CAA-1-XX/XX

XX/XX = cable Ø range in mm
(12/16, 16/22, 22/28 or 28/34)

Kit includes 1 single clamp + 1 CSM (central strength member) fixation + 1 mini Allen key (not shown).



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Cable attachment accessories with double cable clamps

FIST-GR2-CAA-2-XX/XX

XX/XX = cable Ø range in mm
(12/16, 16/22, 22/28 or 28/34)

Kit includes 1 double cable clamp and 2 CSM (central strength member) fixations + 1 mini Allen key (not shown).



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Cable attachment accessories with triple cable clamps

FIST-GR2-CAA-3-XX/XX

XX/XX = cable Ø range in mm (12/16, 16/22, 22/28 or 28/34).

Kit includes 1 triple cable clamp and 3 CSM (central strength member) fixations + 1 mini Allen key (not shown).



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Cable element management tray

FIST-GR2-CEMT-I (19")

A cable element management tray can be put in the bottom of the rack above the base duct. It facilitates the routing of cable elements to the shelves.

A cover is included.

Height occupancy: 5 ETSI HU

A 19" CEMT with mounting bracket adapters for installation on ETSI mounting profiles.



RA11.JPG

Flexible tubing

FIST-GS-FLEX-17-50-S5027

When guiding loose tubes from the cable termination in the rack to the entrance of the shelf, flexible tubing is used to protect the loose tubes and to control the bend radius.

The flexible tubing has a minimum inner diameter of 17 mm and a capacity of up to 8 loose tubes. Use with FIST-GPS3 or GSS3. Other lengths and dimensions are available.

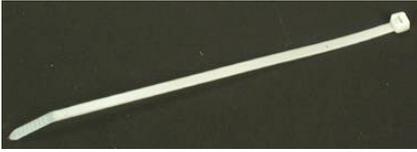


Flexible tube clamps

FISTV-FTC

A set of 10 plastic clamps to be used instead of tie-wraps to secure flexible tubes onto the cable element management tray or other locations. Suits FIST-GS-FLEX-17-50-S5027

(Screws are included in the kit).

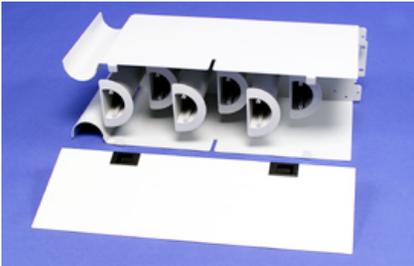


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Tie wraps
FISTV-TW-NN-188

188 mm long tie wraps are used for fixing the cable and flexible tubing to the rack.

3.3.2 Pigtail management



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Horizontal pigtail management
FIST-GR2-HPM-I (19")

Height occupancy: 175 mm (7 ETSI HU)

Pigtail capacity: see section 3.2.2

A horizontal pigtail management system can be fitted to store functional overlength of patch cords for patching within the same rack (though VPM has higher capacity).

Six half round drums are used to guide patch cords entering from the left or from the right side duct. The system can be fitted in the rack for either left or right patch cord entrance by simply turning it upside down.

Mounting bracket adapters for symmetrical installation between ETSI mounting profiles are included.



7N3K1091.jpg

Horizontal pigtail storage
FIST-GR2-HPS-I (19")

Height occupancy: 175 mm (7 ETSI HU)

Pigtail capacity: see section 3.2.2

A horizontal pigtail storage system can be fitted to store random patch cord overlengths in a controlled way (though VPS has higher capacity). The system contains 5 drums and can be fitted in the rack for either left or right patch cord entrance by simply turning it upside down.

Mounting bracket adapters for symmetrical installation on ETSI mounting profiles are included.



7N3K1093.jpg

Pigtail orientation module
FIST-GR2-POM-I (19")

Height occupancy: 5 ETSI HU (125 mm)

Pigtail capacity: see section 3.2.2

This module can be inserted in a rack to redirect or branch a pigtail bundle. It can be fitted in the rack for either left or right patch cord entrance by simply turning it upside down. Make sure that the drum at the patch cord entrance is always in the correct position (i.e. guiding the patch cords that are entering the shelf).

Mounting bracket adapters for symmetrical installation on ETSI mounting profiles are included.



RACA045.jpg

Bag of drums
FIST-GR2-DRM

Kit of 10 drums with screws to fix them to a drum plate.

3.3.3 Other accessories



FRWR044.jpg

Velcro roll

FISTV-E7187-6316

Velcro to segment or secure pigtails. Supplied on a roll 25 m long (width 25 mm) to be cut to length as required.