tyco Electronics

FIST-CAB2

INSTALLATION INSTRUCTION

Outdoor Cabinet

TELECOM OUTSIDE PLANT

Contents

1 Introduction

The FIST Street Cabinet, FIST-CAB2, is an all-purpose metal outdoor cabinet designed to accommodate the FIST generic shelf family (ETSI and 19").
It offers dust-proof, environmental and mechanical protection for the fiber management functions of splicing, patching and passive component integration.
It can accommodate up to 7 FIST shelves.

Use the Application Guide to work out the required configuration.

2 General

2.1 Kit content of the FIST Cabinet (FIST-CAB2-01)

- Aluminum dual wall housing
- 2 front doors with swing handle and 3 position locking system
- Half cylinder lock with 2 keys
- 2 ETSI mounting profiles, including the drum plates
- 4 blank cable inlet plates
- 4 eyebolts to unload cabinet from truck
- 4 security screws to close the eyebolt holes after installation
- 1 flexclip mounting plate
- 20 pcs nuts, bolts and washers
- 1 bag with T-nuts (to mount accessories)
- 4 loop holder brackets to store uncut loose tubes

2.2 Consumables

FIST-GS-FLEX-17-50	1rl	Flexible tubing (ID 17 mm)
FISTV-TW-NN-188	100 pcs	Tie-wrap, standard, not re-openable, 188mm long
FISTV-E7187-6313	25m	Velcro roll

2.3 Tools

- Philips screwdriver
- Flat screwdriver
- Wrench size 19
- FIST-LCIT — Looped tube insertion tool for oval outlet
- FACC-ALLEN-KEY-5-350 — Allen key, size 5mm, length 350mm, for easy mounting of shelves and drums in the cabinet
- FACC-CAGE-NUT-TOOL — for installation of cage nuts in the cabinet

2.4 Accessories

2.4.1 Kit contents of the FIST cabinet accessories kit (FIST-CAB2-A-X-XXXX).

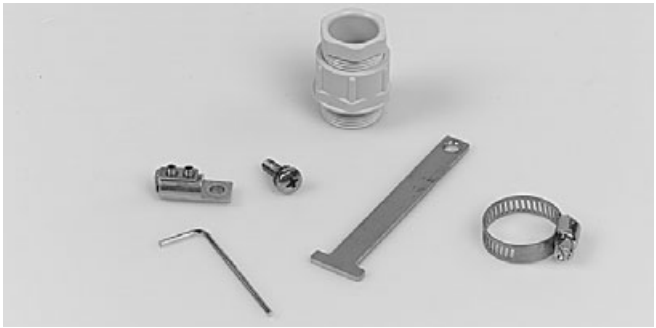
This accessories kit is required for the initial installation of the FIST cabinet and can contain following items (depending on the ordered namestring). For product description see updated Ordering Guide.

Some examples

- Extra plate for flex-tube fixation
- Vertical pigtail management drums
- Cable inlet plate with dummy plugs for 2 x PG29 (cable diameter 15-26mm)
- Cable inlet plate with dummy plugs for 4 x PG21 (cable diameter 9-18mm)
- Cable inlet plate with dummy plugs for 6 x PG16 (cable diameter 6-14mm)
- Cable inlet plate with oval port seal for looped cable

2.4.2 Cable installation accessories

Different kits have to be ordered separately to terminate and seal the cable. Description depending on the cable size.



Example

FIST-CAB2-RSK-LTS-01

- Cable gland
- Metal bracket
- Cable clamp
- Strength member termination + screw
- Small Allen key

FIST-CAB2-SCK
Side connection frame

FIST-CAB2-BCK
Back connection frame

FIST-CAB2-AFK
Anchor frame with anchor hooks-kit

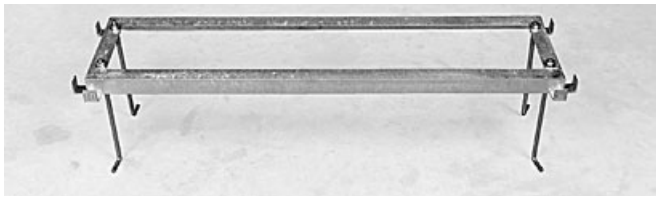
FIST-CAB2-PCK
Pedestal connection kit

FIST-CAB2-AHK
Anchor hooks-kit

3 Preparing the pedestal

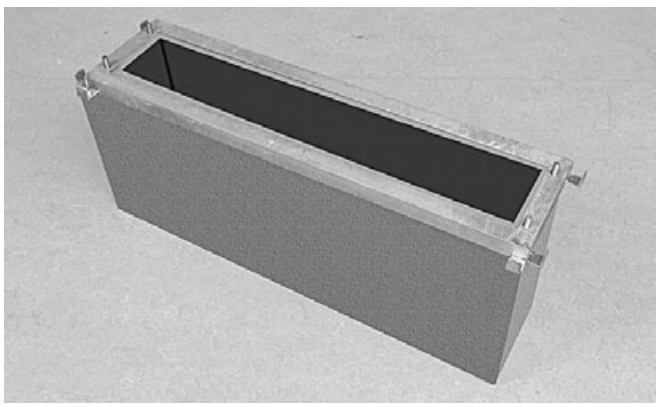
2 possible solutions
- A concrete foundation
- A glass fiber reinforced pedestal

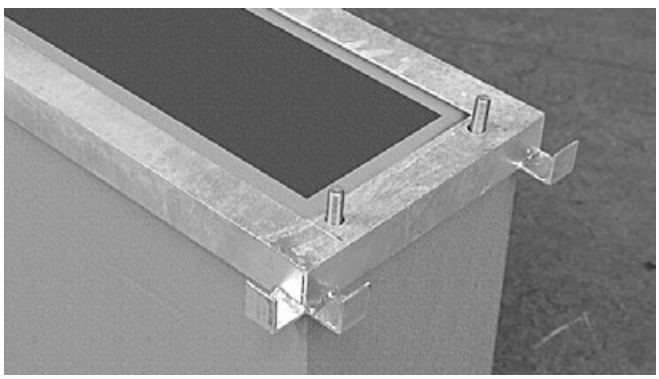
3.1 Concrete foundation



3.1.1 This anchor frame is made out of galvanized steel and has 4 anchor hooks, which have to be imbedded into the uncured concrete. **FIST-CAB2-AFK.** Make sure the anchor frame is level.

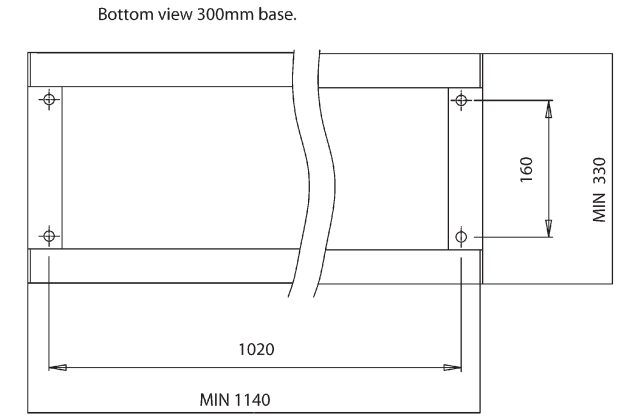
3.1.2 It is important, once the concrete has hardened, to install a pedestal between the cabinet and the anchor frame / concrete foundation. This pedestal provides the necessary access to feed the cables into the bottom of the cabinet. The pedestal is 300 mm high and has a front cover for easy cable access. **FIST-CAB2-SOKL-300. Note**: the anchor frame can also be placed on top of an existing foot.

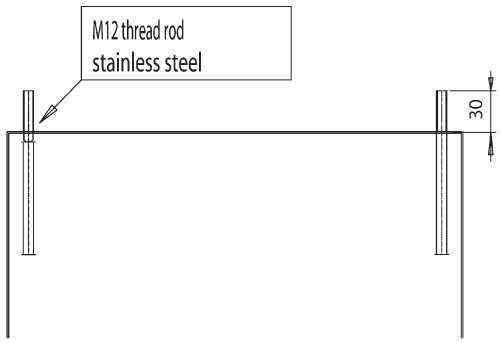


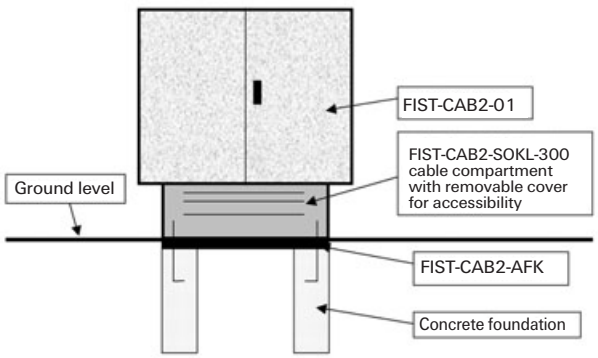


3.1.3 Place the frame on the foot an fix it whit some uncured concrete, but place first the bolts in the frame.

Concrete foundation footprint







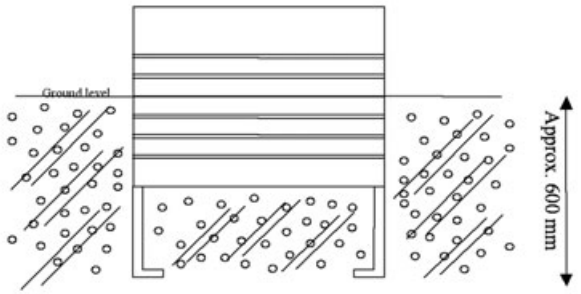
3.2 Glass fiber reinforced pedestal

* FIST-CAB2-SOKL-900.
* FIST-CAB2-SOKL-1200.

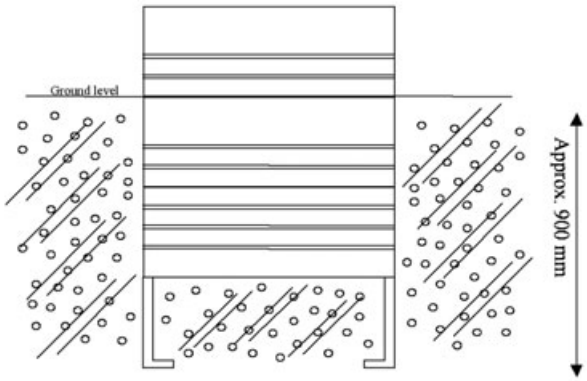
These pedestals can be direct buried.

3.2.1 Dig a hole of min. 400 x 1220 x 700 mm (WxLxD). D is 1000 mm in case of the 1200 mm base.

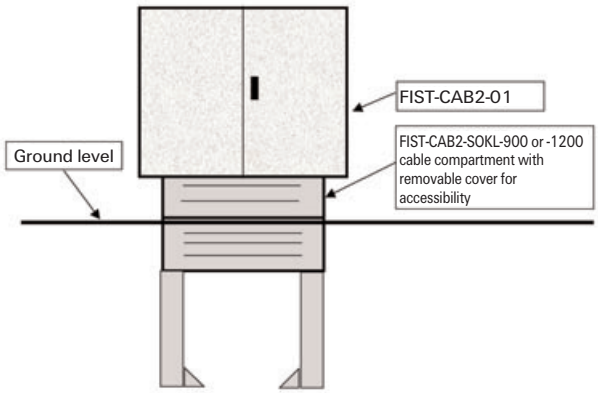
3.2.2 Put 2 concrete beams at the bottom of the hole. Dimensions of approximately 100 x 400 mm (WxL). Make sure the beams are level. Mount the pedestal on the beams.



FIST-CAB2-SOKL-900



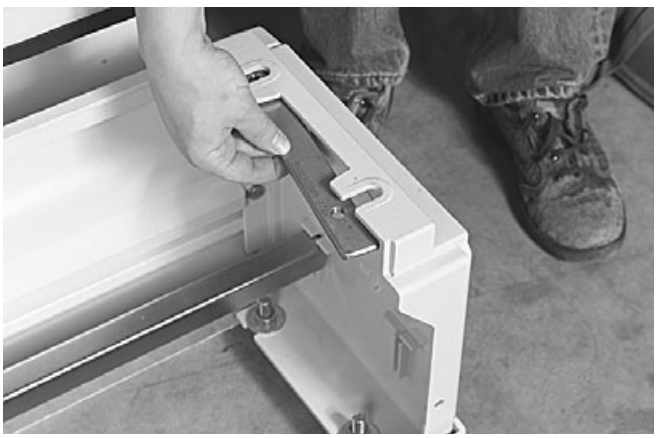
FIST-CAB2-SOKL-1200



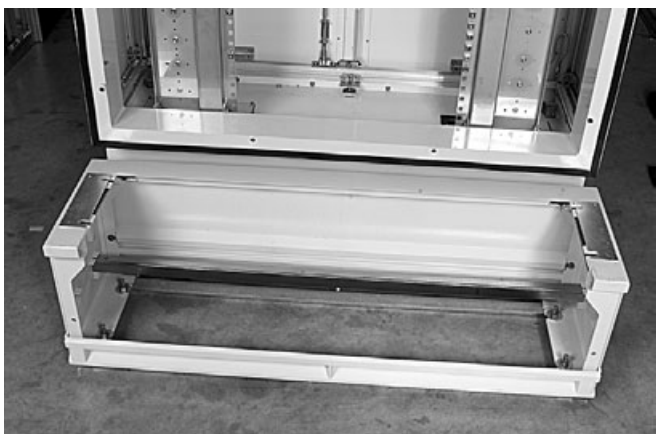
4 Preparing the cabinet

4.1 Installing accessories

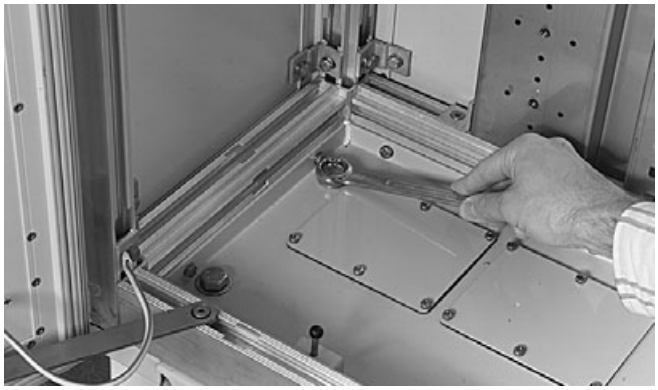
4.1.1 Transport the cabinet to the desired location using the pre-installed eye-bolts.



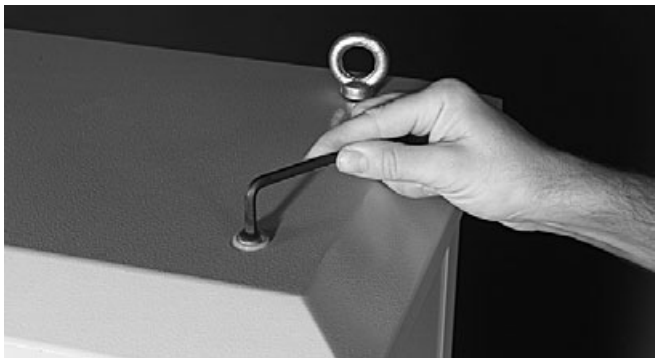
4.1.2 Remove the front cover of the pedestal. Position the plates on both sides.



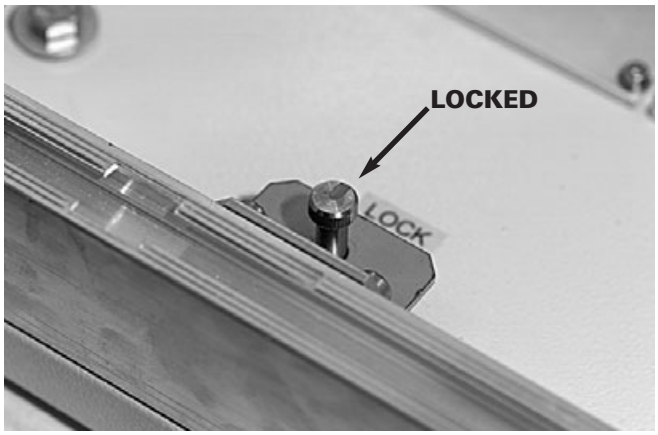
4.1.3 Put the frame on top of the pedestal.



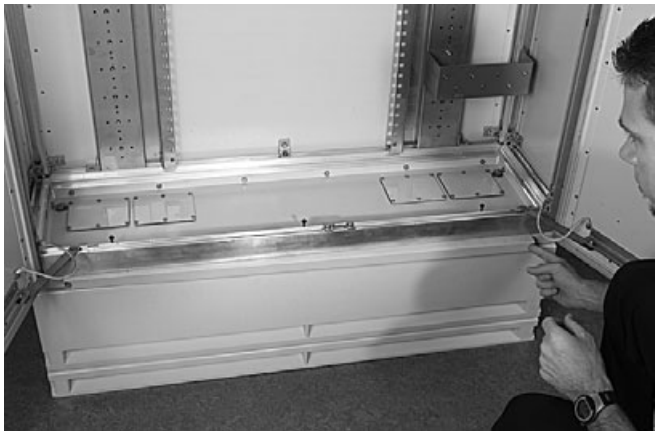
4.1.4 Mount the cabinet on the pedestal and fix with the bolts.



4.1.5 Remove the eye-bolts and replace with security screws.

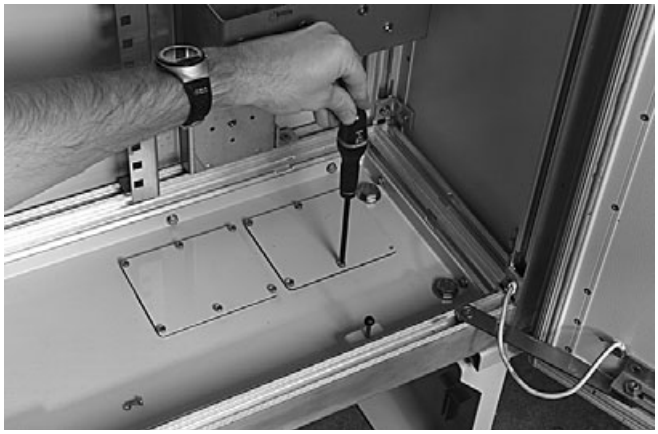


4.1.6 Open the pedestal. Rotate the plug 90 degrees and release it.

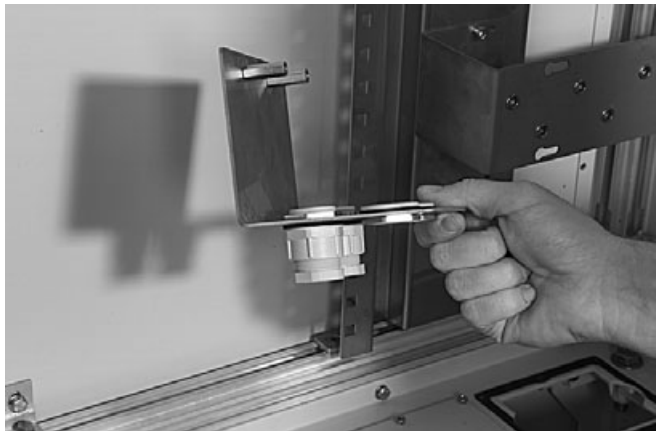


4.1.7 Remove the protection plate.

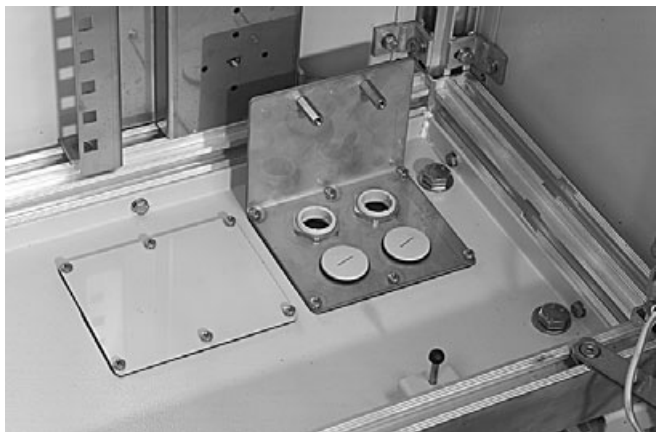
4.1.8 Loosen the screw and slide the screw inwards. Remove the cover of the pedestal.



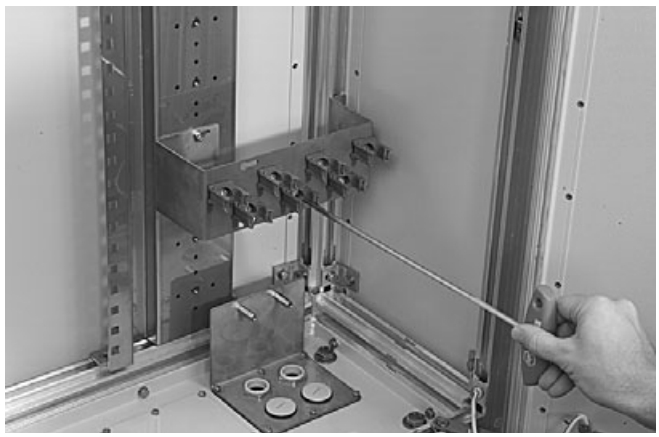
4.1.9 Remove the blind plate.



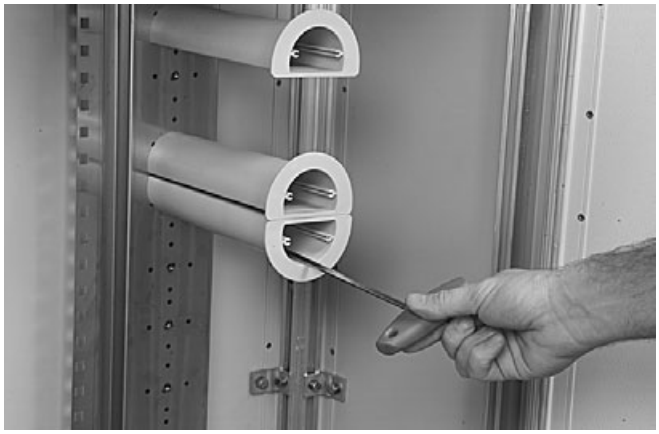
4.1.10 Mount the cable seal, the spacers and the plugs.



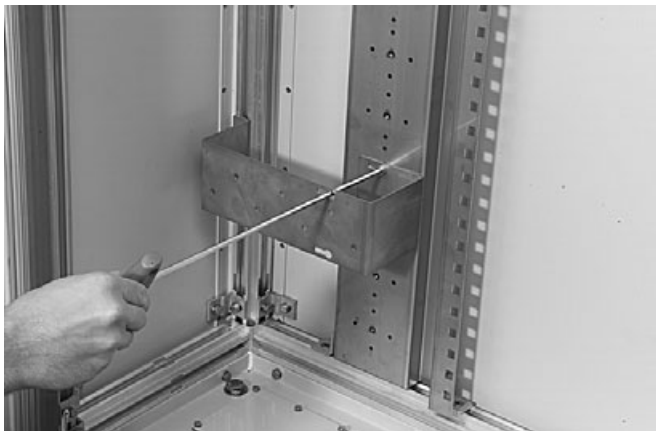
4.1.11 Mount the cable plate in the cabinet.



4.1.12 Mount the flex tube holders.



4.1.13 Mount the drums in the correct position, depending on the configuration. The picture shows interconnection. Use the long Allen Key. Refer to chapter 6 for the correct locations of the drums.

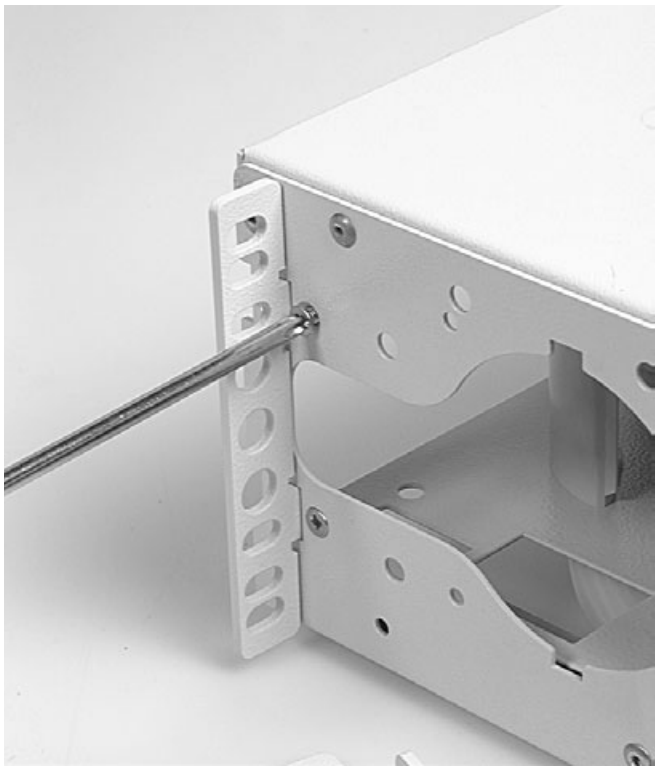


4.1.14 If necessary an extra mounting plate for the flex tube holder can be mounted.

4.2 Installing shelves

4.2.1 Mount the cage nuts at the correct locations, using the cage nut tool.

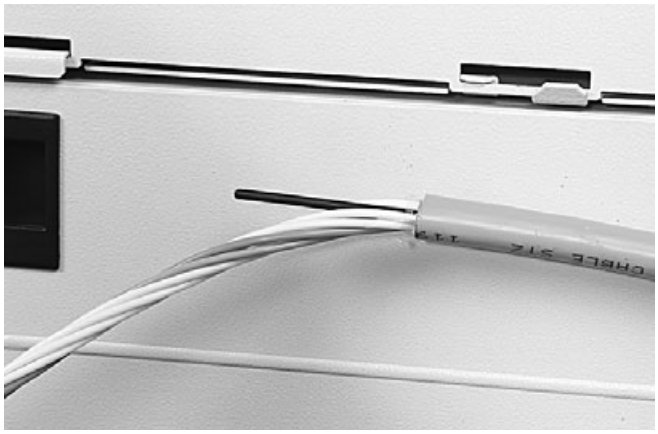
4.2.2 Mount the POM (Pigtail Orientation Module) at the correct location (depending on the configuration).



4.2.3 Mount the shelves. Follow instructions of the shelves (GSS2, GPS2,...) for more details.
Important: mount the brackets at the correct position as shown on the picture.

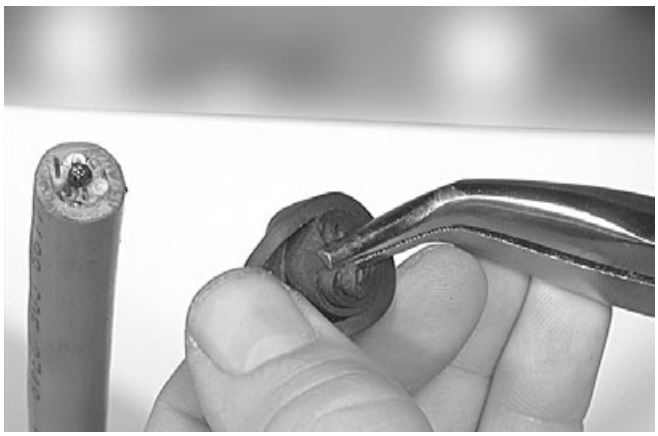
5 Cable termination

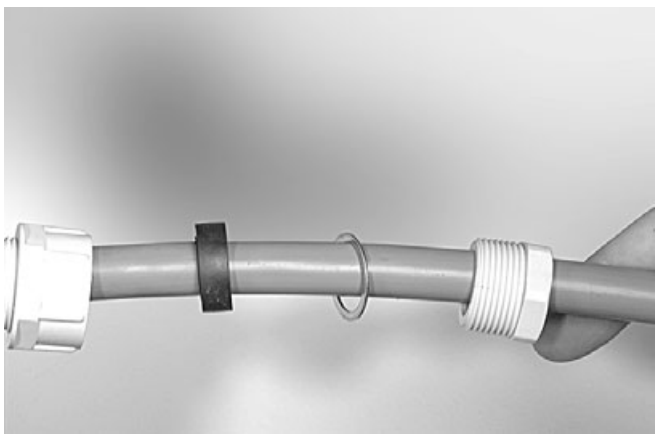
5.1 Stripping of the cable



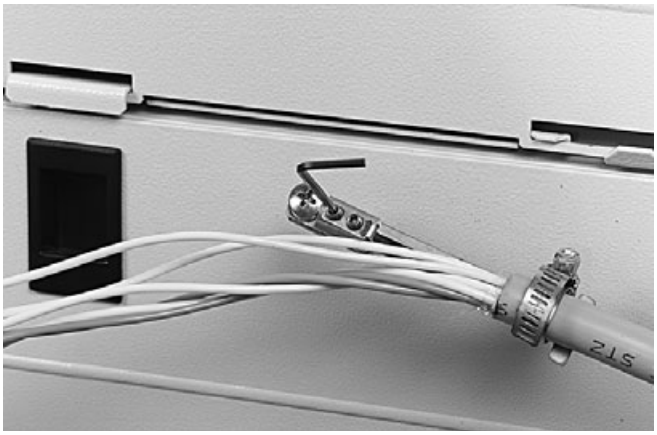
5.1.1 Strip the cable at the following length:
For GSS2: 3,2m + distance from the cabinet entrance to the shelve
For GPS2: 2m + distance from the cabinet entrance to the shelve
Cut the strength member at 50 mm.

5.2 Sealing/strength member mounting

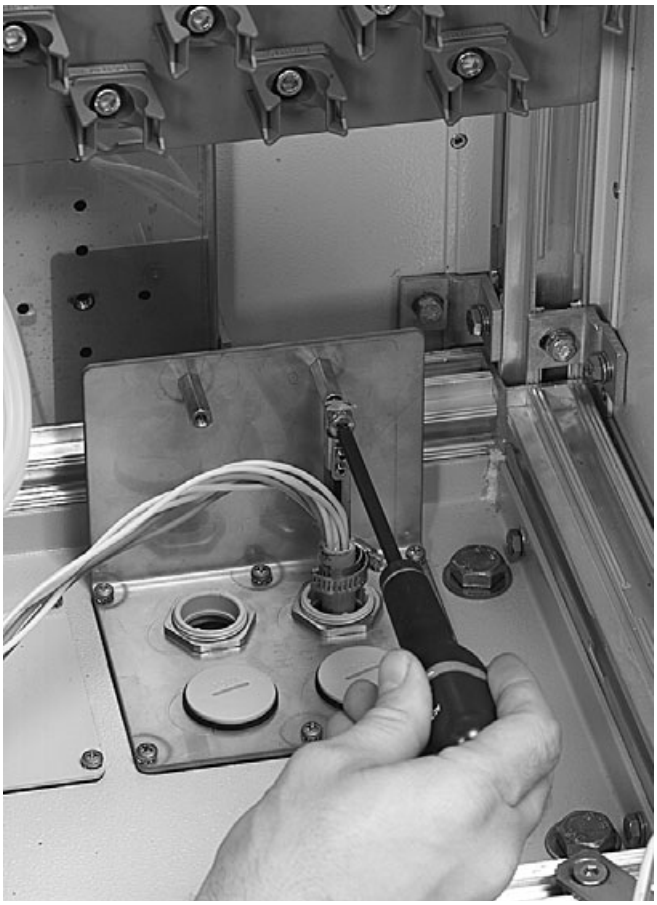




5.2.1 Feed the cable trough the appropriate gland. In case the cable diameter does not match with the diameter of the gland seal: remove some rubber rings up to the right diameter.

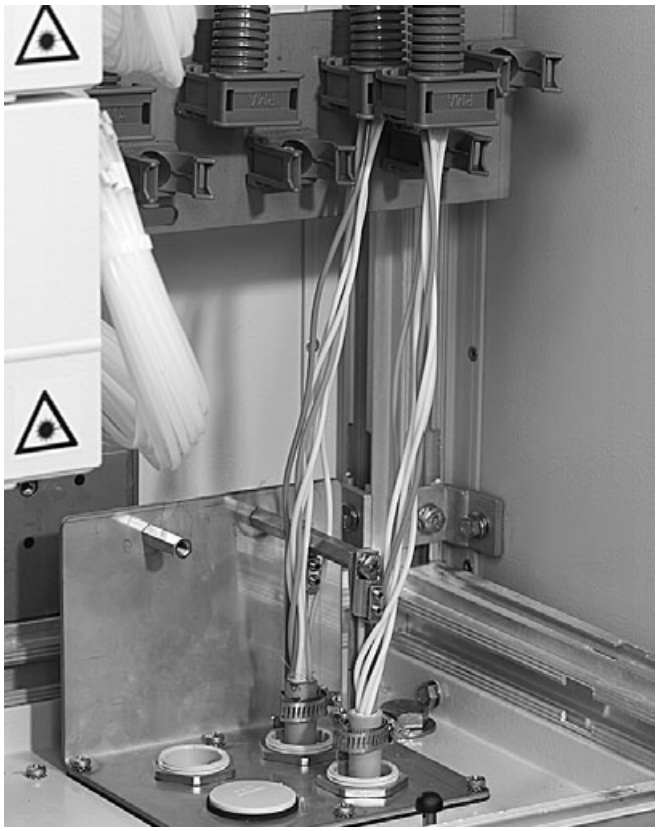


5.2.2 Fix the cable on the bracket using a cable clamp. Don't squeeze the cable. Fasten the strength member termination with the small Allen key.



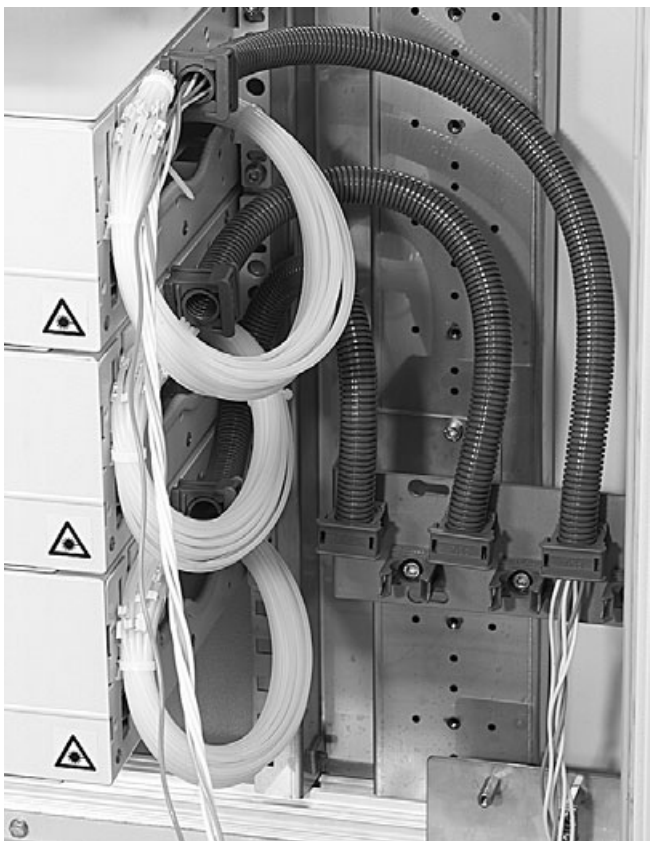
5.2.3 Attach the cable termination on the plate.

5.2.4 Fasten the seal and fix the cable on the metal bar using 2 tie-wraps.



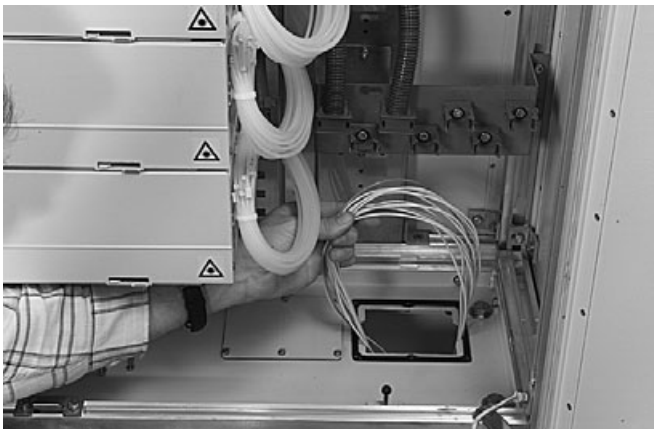
5.3.2 In case of more cables: mount the spacers and use the add-on clips.

5.3 Cable routing



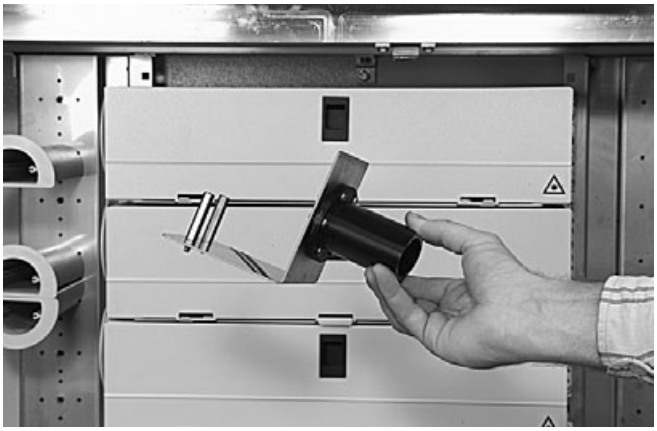
5.3.1 Cut a flexible tubing to length and feed the loose tubes through. Wrap PVC tape around the end of the loose tubes to make feeding easier. Mount the cover on the flex tube holder. Continue with the steps described in the appropriate instruction of the shelves.

5.3.3 In case of feeding a cable to a GPS2: guide the flex straight to the shelf, allow some slack for sliding the tray.



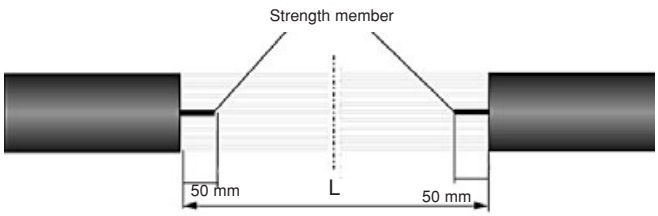
5.4.2 Feed the cable through the bottom of the cabinet.

5.3.4 In case of cables coming from the left: route the flexible tubes under the bottom shelve (preferably) or over the top shelve.



5.4.3 Assemble the components on the plate as shown. Use the seal between the plastic and the metal part.

5.4 Looped cable

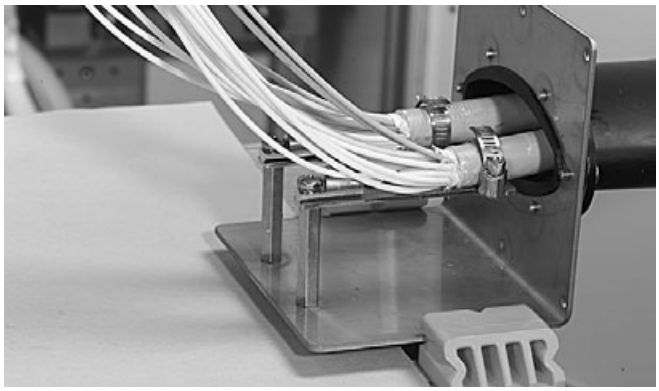


5.4.1 Make a window cut of the following length to have access to all shelves when loops are cut at a later stage.

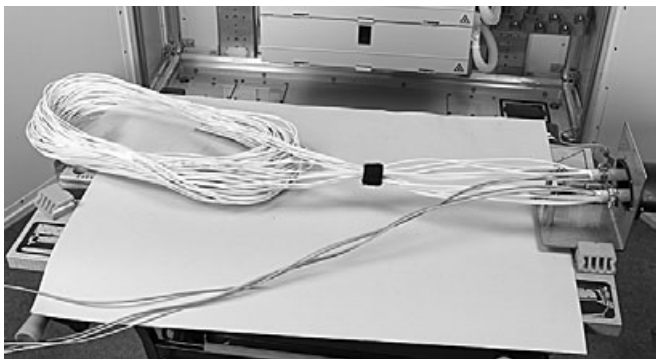
L: • For GSS2: 8,5 m
• For GPS2: 6m

Cut the strength member to 50mm.

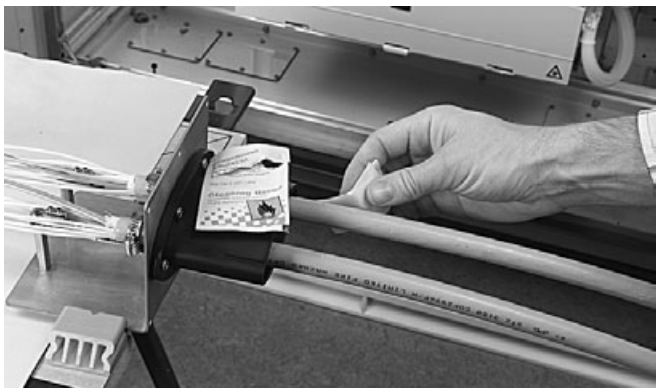
5.4.4 Take the looped cable installation tool (LCIT, to avoid kinking of the loose tubes) and place it in the middle of the window cut. Bend the loose tubes around the tool and slide it inside the heat shrink tube and the oval port. Protect the inside with the PE bag to avoid dirt and grease coming in contact with the hot melt inside the sleeve.
The printed arrow on the sleeve should point towards the outlet flange!



5.4.5 Attach the cable on the cable bracket as described earlier and mount it on the plate.

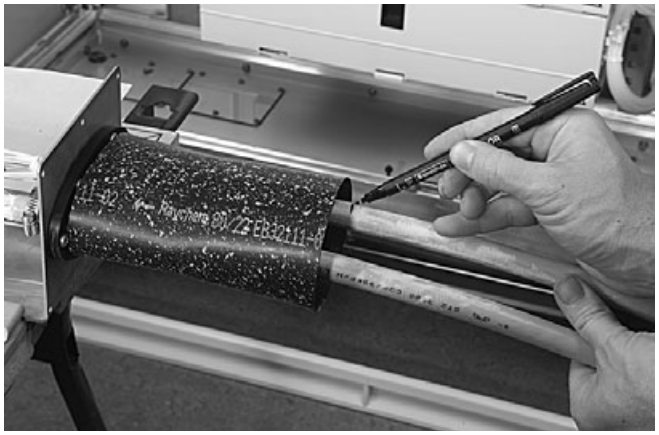


5.4.6 Make some loops and bundle them with the plastic bag and the Velcro strips. Separate the cut tubes from the loops.

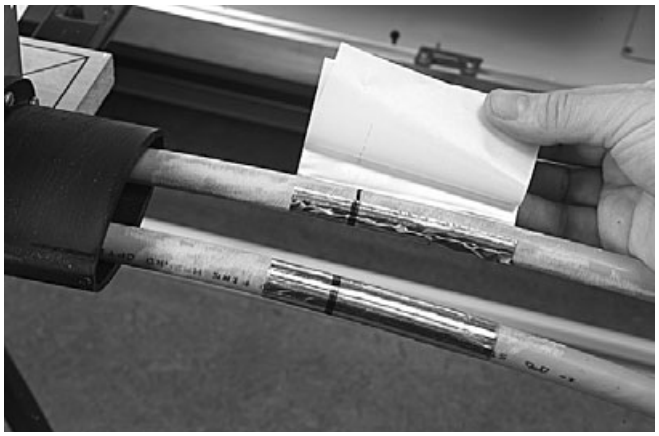


5.4.7 First clean the oval port and the cable over a distance of 150mm from the end of the port.

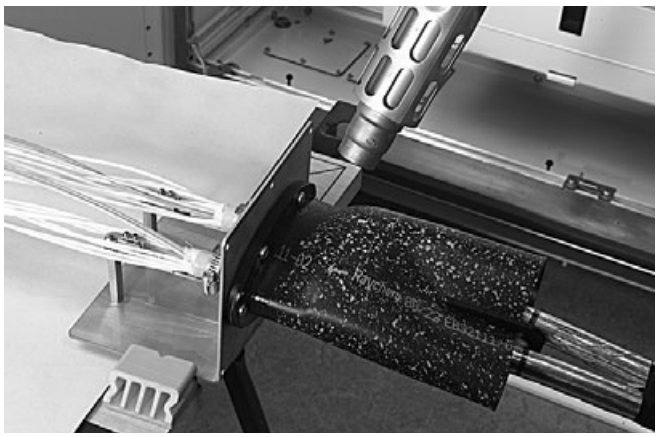
5.4.8 Abrade the oval port and the cable over a distance of 150mm from the end of the port.



5.4.9 Slide the heat shrink sleeve over the outlet up to the flange of the oval port. Note the correct direction of the arrow. Mark the edge of the sleeve on the cable.



5.4.10 Install the aluminum cable protection tape around the cables matching the blue line with the marks on the cables.

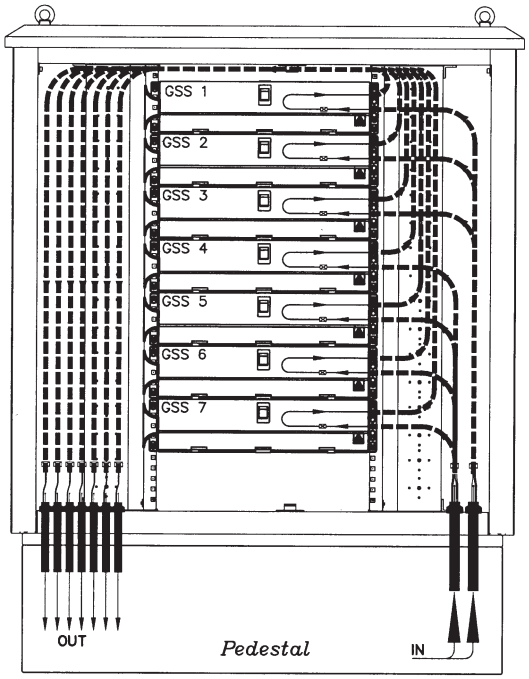


5.4.11 Slide the branch-off clip between the cables and tape the cables together. Shrink the sleeve with the hot air gun. Start shrinking on the oval outlet. Wait 1 minute before continuing to shrink with spiral movements downwards to the cable.

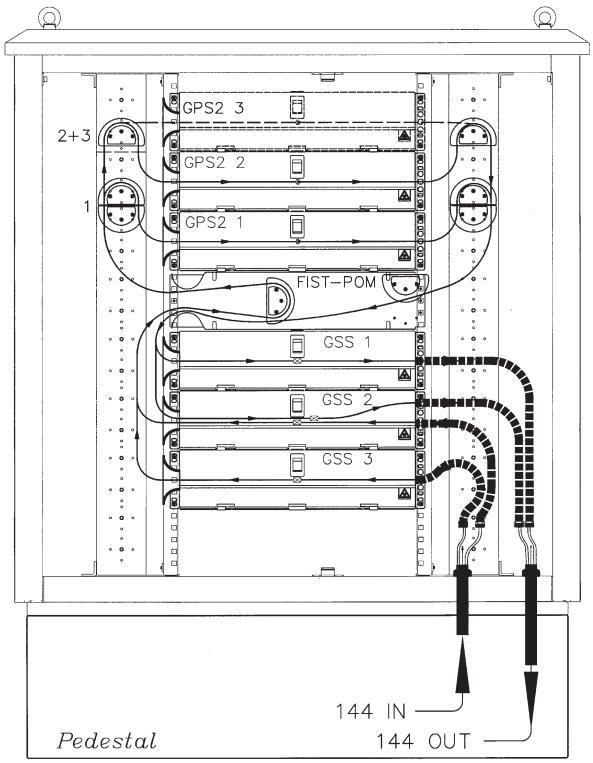
5.4.12 Heat until the green thermo-indicating paint has changed to black and the hot melt adhesive (yellow) in the clip area is mixed with the sleeve adhesive (red).

5.4.13 Mount the cable and plate in the cabinet. Secure the loop behind the metal bars using the Velcro strips.

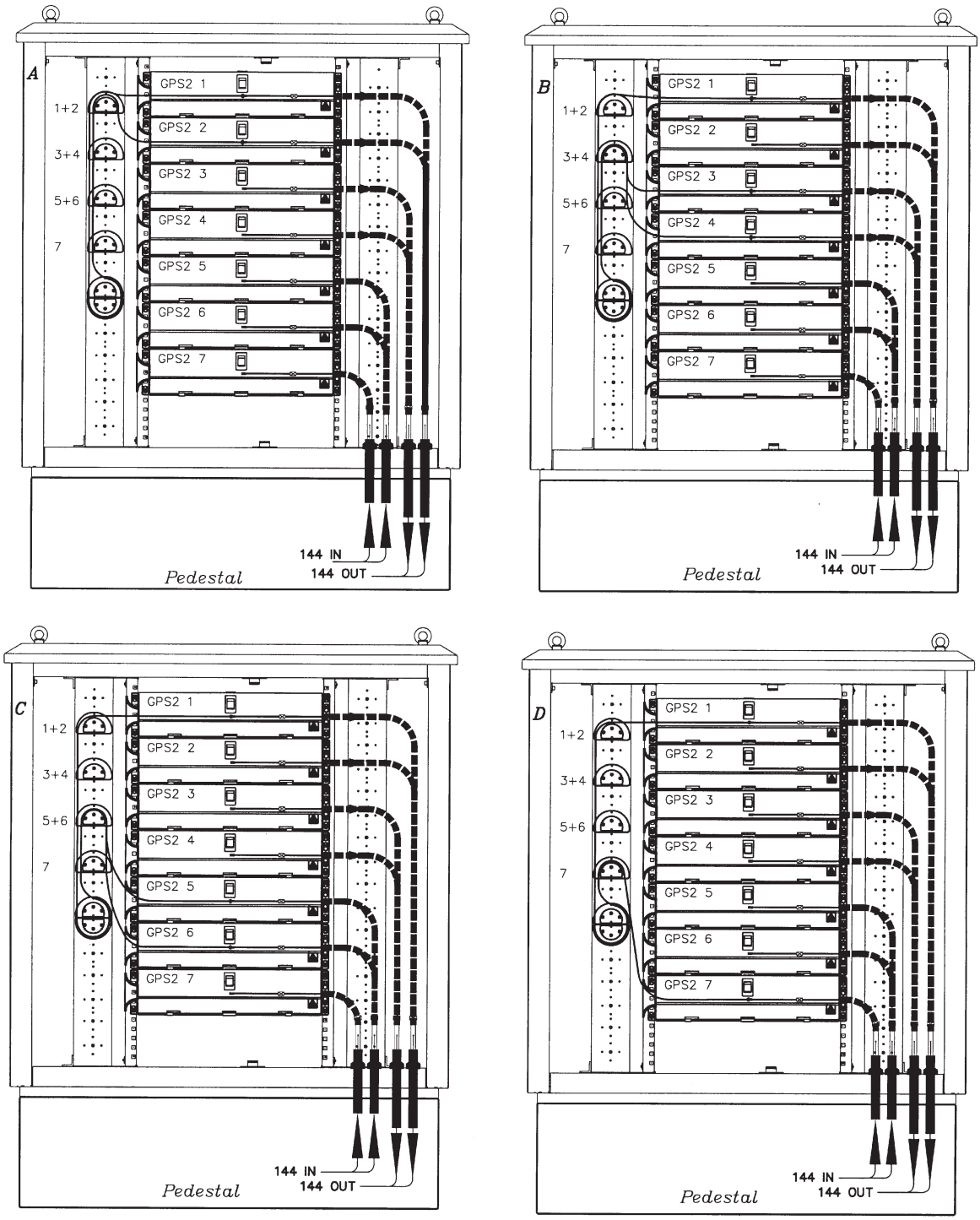
6 Configurations



6.1 Distribution point

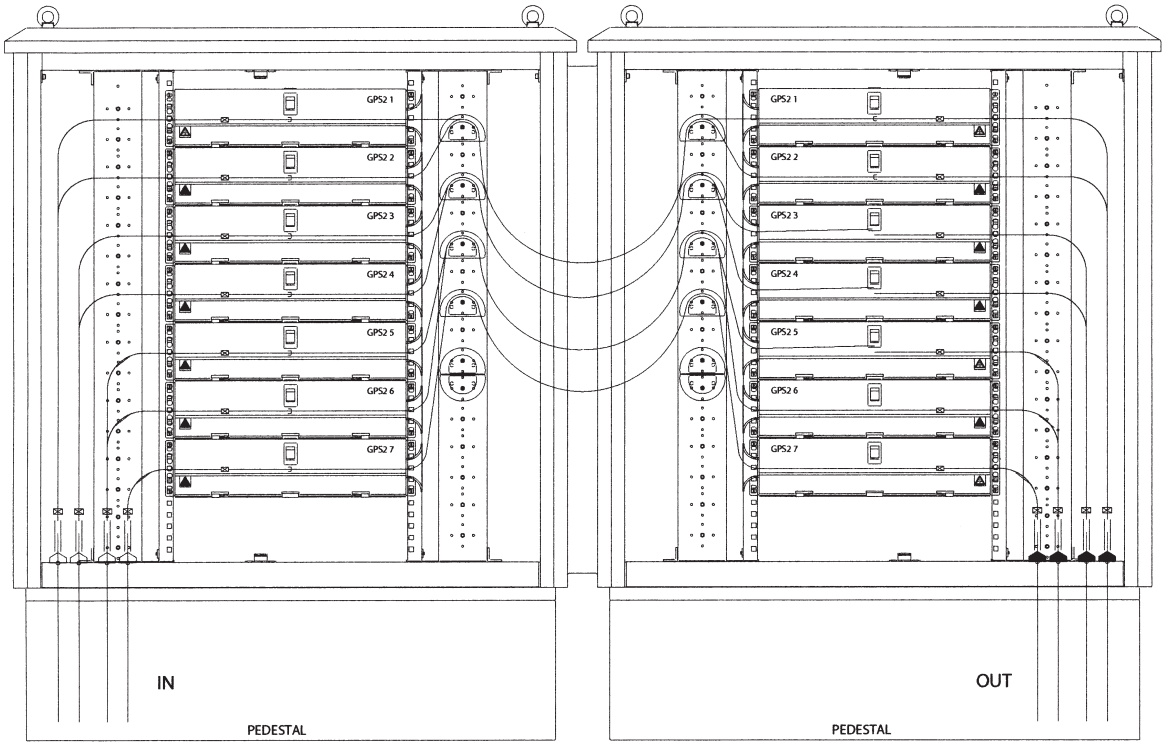


6.2 Inter-connection



6.3 **Cross-connection**

Jumpers of 3,3 m long



6.4 **Side to Side**
Jumpers of 3,3 m long
and
Back to Back
Jumpers of 3,3 m long

7 Pigtail routing

Follow the routing as described in the routing schemes. Bundle the pigtails with Velcro.

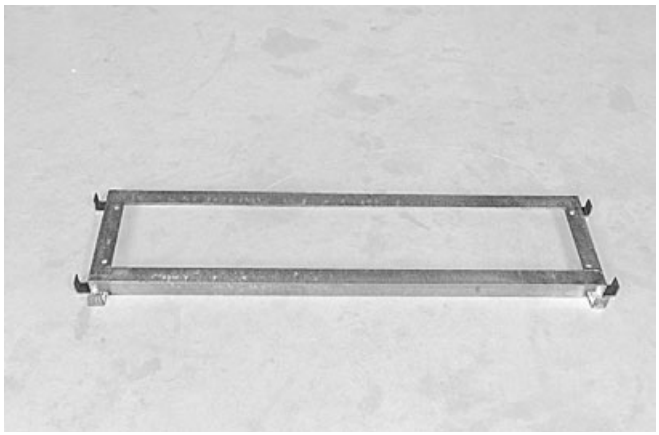
8 Important steps

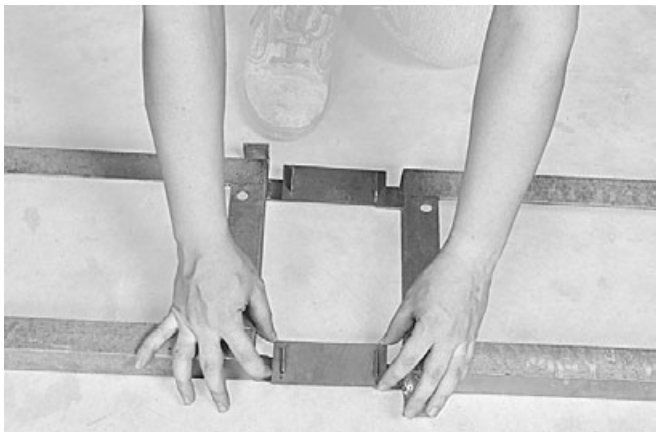
- Cable lengths: to GSS2: 3,2m + distance from cabinet entrance to shelf
  to GPS2: 2m + distance from cabinet entrance to shelf.
- Cable length for window cut: for access to GSS2:max 8,5 m, for access to GPS2: max 6 m.
- Allow some slack to make re-patching possible.
- Bundle pigtails/patchcord with Velcro.

9 Side to side

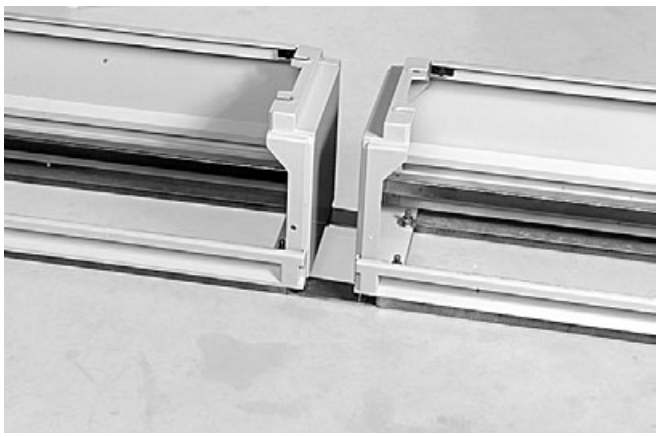
9.1 Preparation of the pedestal

A In case of size 300

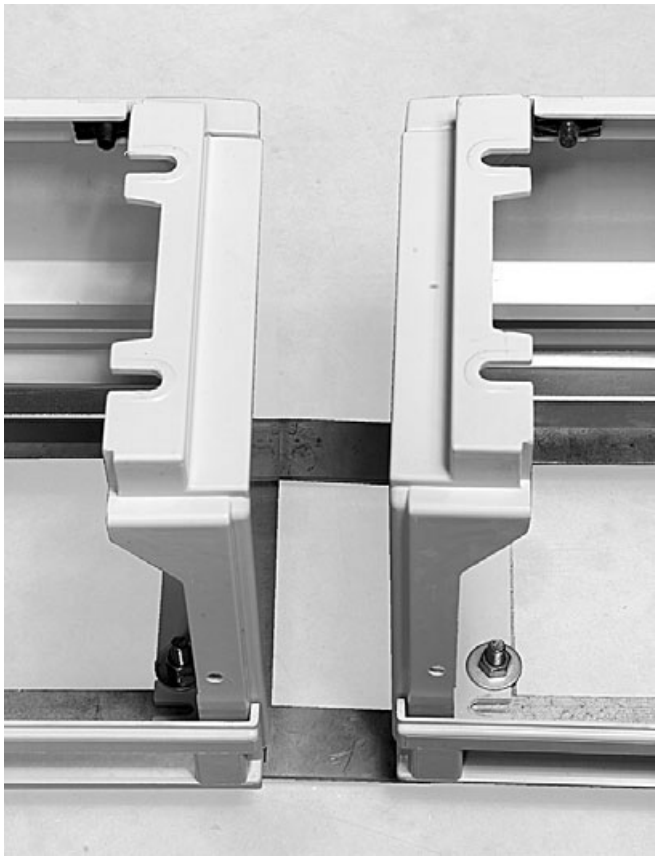




9.1.1 Connect the two frames with the two plates.

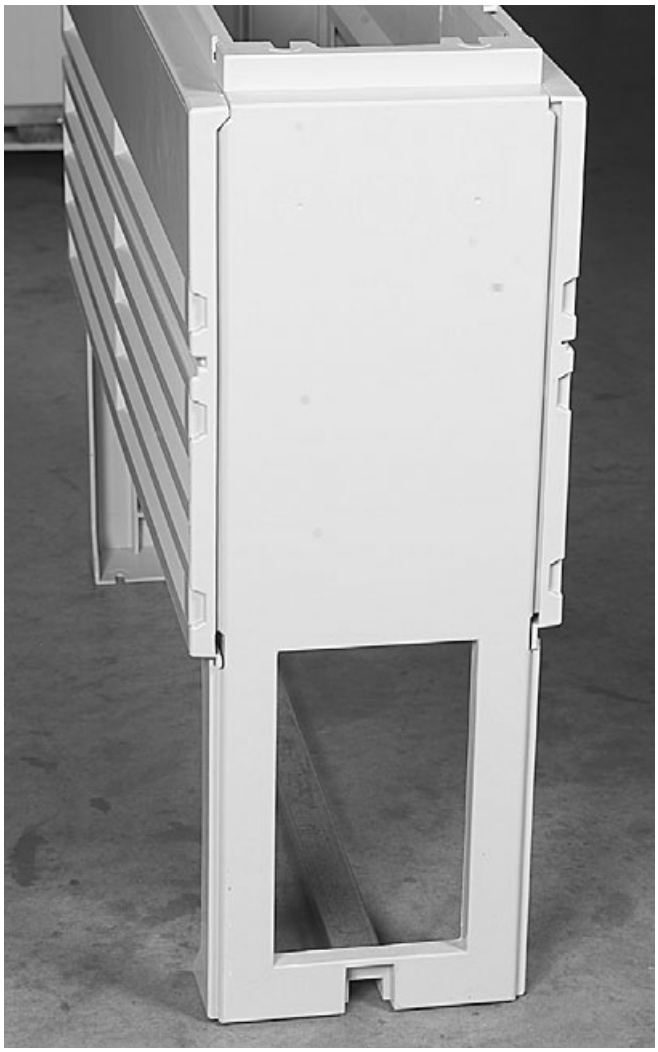


9.1.2 Install the two pedestals on the frames.



9.1.3 Insert the screws from the bottom and tighten the nuts.

b In case of size 900 and 1200



9.1.4 Mark the side of the pedestal in the middle.

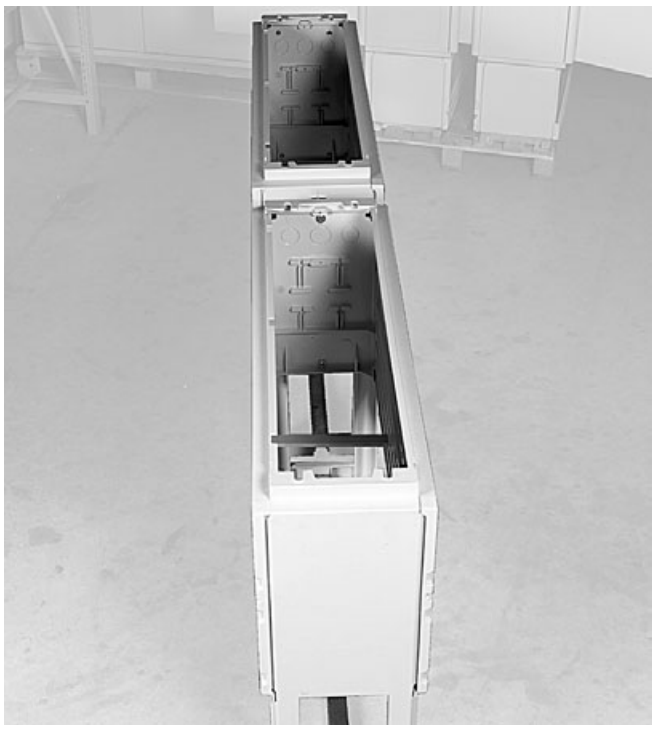
9.1.5 Draw a line in the middle.

9.1.6 Start at the bottom, first mark at 15 mm, second at 450 mm.

9.1.7 Drill the two holes (Ø 8.5 mm).

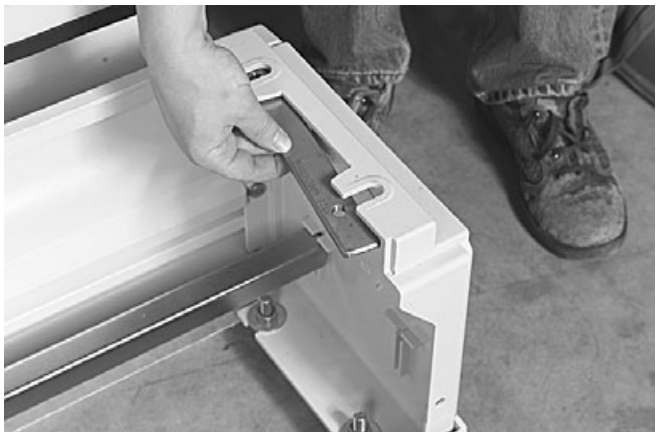
9.1.8 Install the connection kit and tighten the nuts (20-25 Nm).

9.1.9 Prepare the second pedestal, same procedure as the first one (see 9.1.4 until 9.1.8).



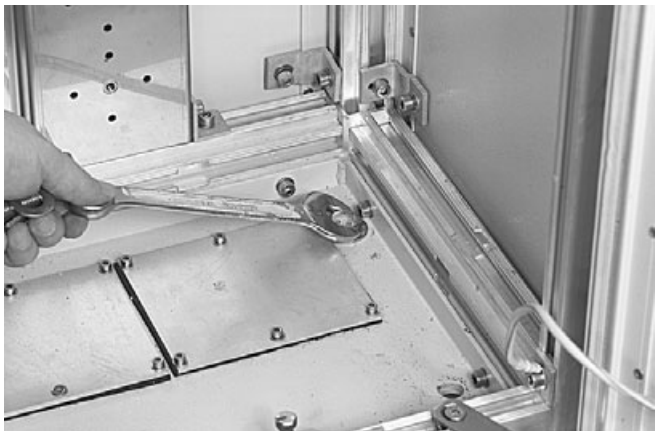
9.1.10 Align the two pedestals and tighten the nuts of the second pedestal.

9.2 Installation of the cabinet on the Pedestal

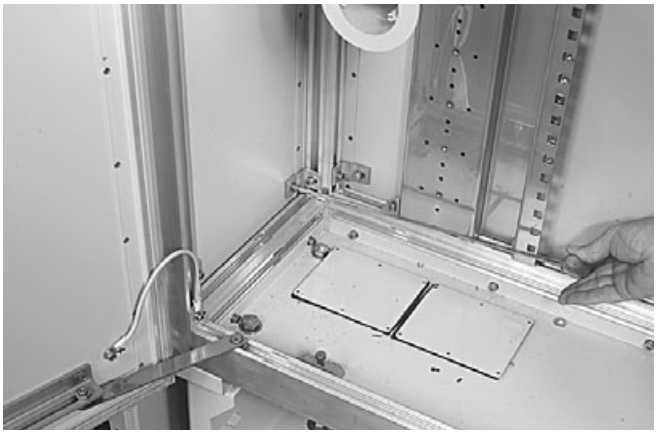


9.2.1 Remove the front cover of the pedestal. Position the plates on both sides.

9.2.2 Put the frame on top of the pedestal.



9.2.3 Fix the cabinet to the pedestal and tighten the screws.

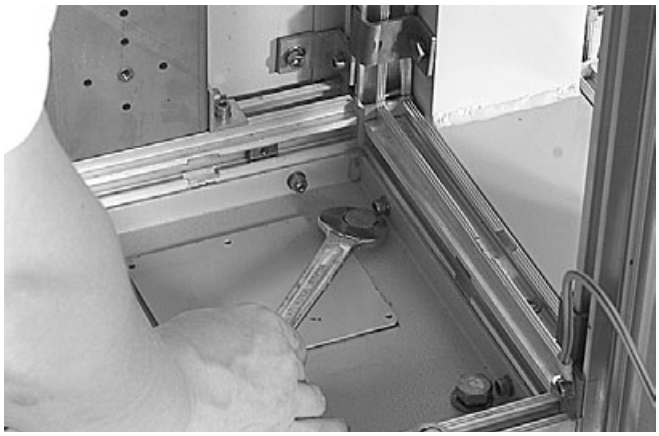


9.2.4 Remove the side panel of the cabinet.

9.2.5 Position the connection frame on the cabinet.

9.2.6 Fix the connection frame temporary with the bracket.

9.2.9 Place the cover on the pedestal.



9.2.7 Fix the second cabinet on the frame temporary. Don't tighten the screws to allow some movement.

9.2.10 Place the protection plate back.

9.2.8 Fix the two cabinets with the connection frame in between. Tighten the screws between cabinet and pedestal (20-25 Nm).

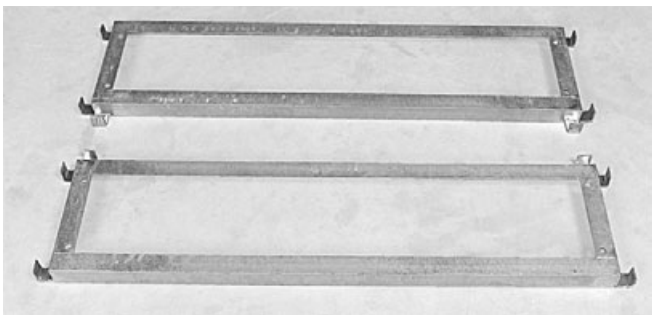
9.2.11 Lock the protection plate

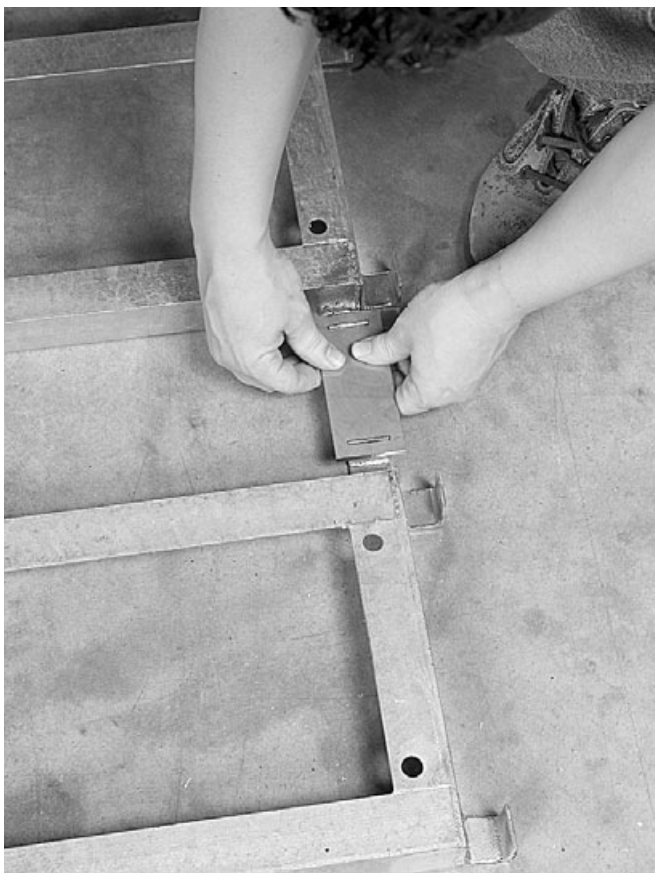
9.2.12 View from the front.

10 Back to back

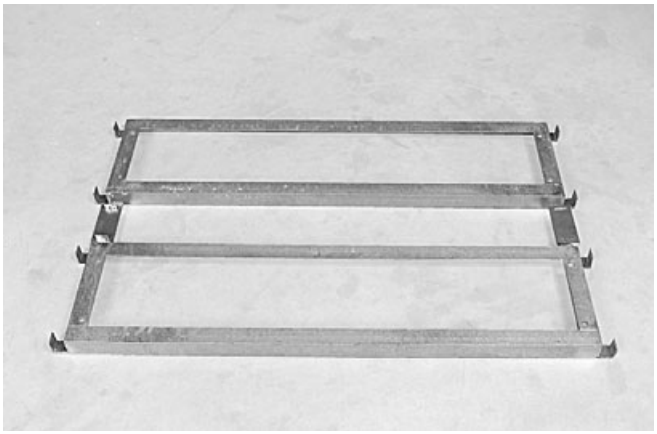
10.1 Preparation of the pedestal

A In case of size 300





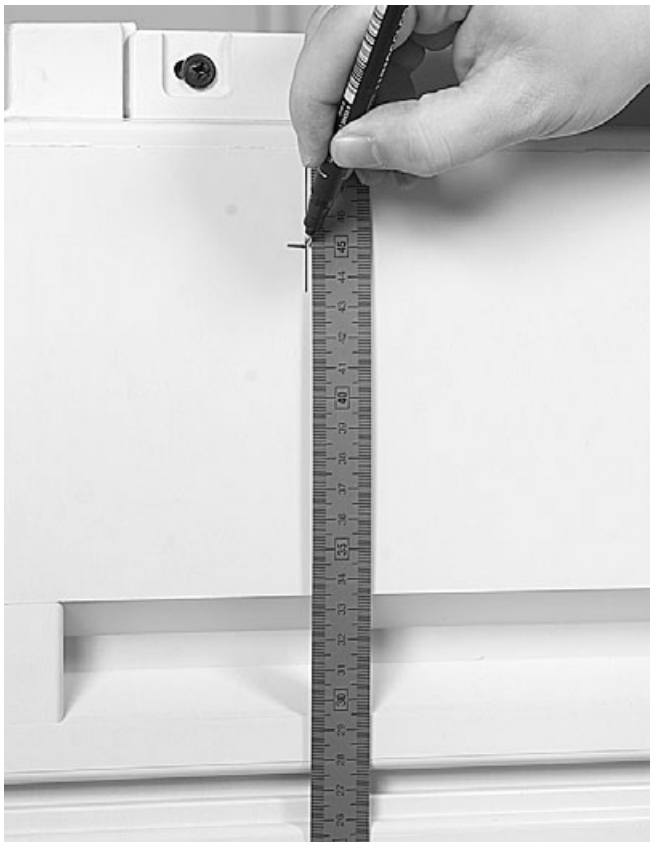
10.1.1 Connect the frames with the two plates.



10.1.2 Fix the pedestals on the frames.

B In case of 900 and 1200

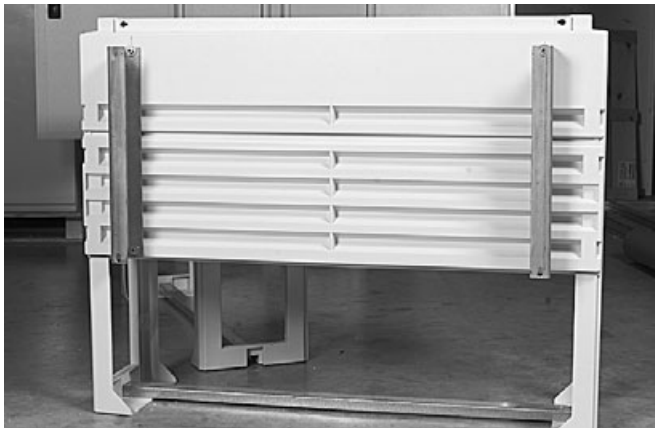
10.1.3 Mark at 120 mm starting from the side.



10.1.4 Start at the bottom, first mark at 15 mm, second at 450 mm.

10.1.5 Drill the two holes (Ø 8.5 mm).

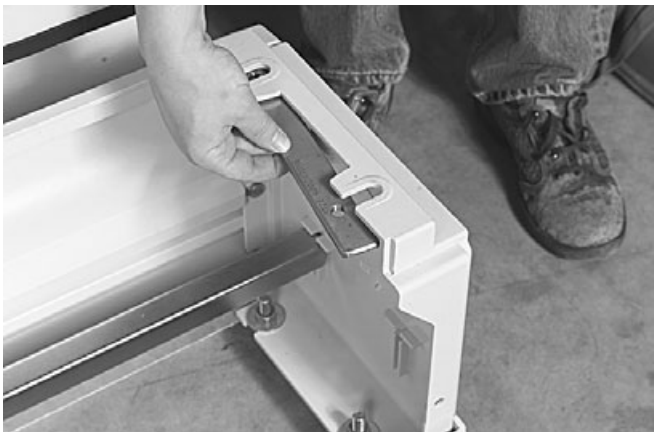
10.1.6 Install the connection kit and tighten the nuts (20-25 Nm).



10.1.7 Same preparation on the other side of the pedestal (see 10.1.3 until 10.1.6). In case of back to back, order 2 times FIST-CAB2-PCK !!

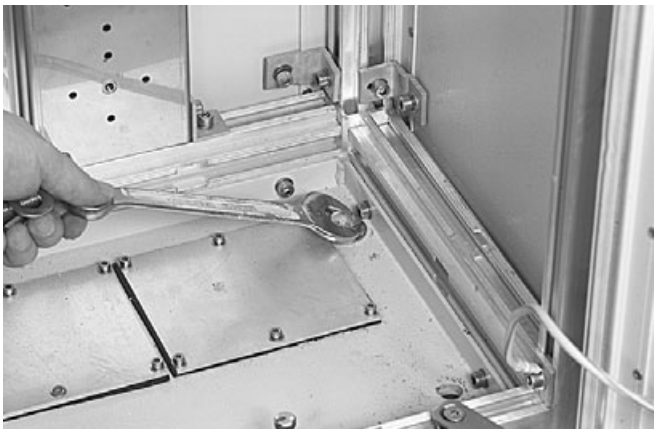
10.1.8 Align the two pedestals, and tighten the nuts of the second pedestal (20-25 Nm).

10.2 Installation of the cabinet on the pedestal



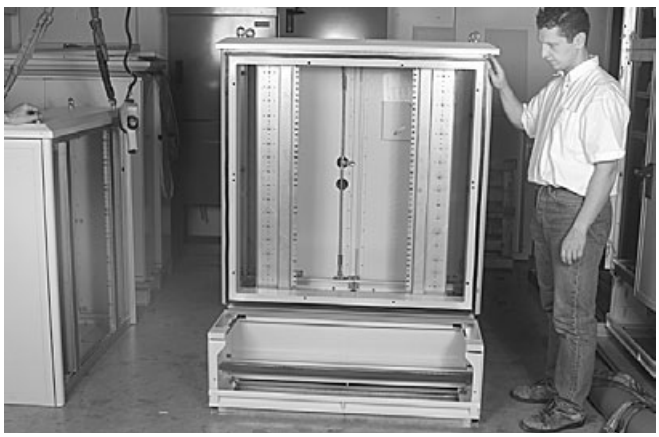
10.2.1 Remove the front cover of the pedestal. Position the plates on both sides.

10.2.2 Put the frame on top of the pedestal.



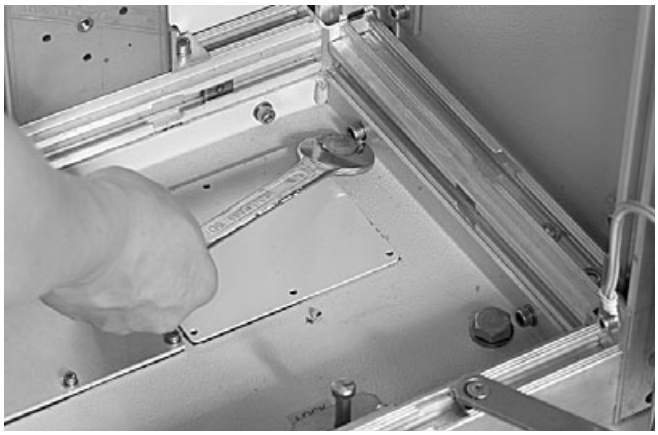
10.2.3 Fix the cabinet to the pedestal.

10.2.4 Remove the back panel of the cabinet.



10.2.5 Place the connection frame to the cabinet.

10.2.6 Fix the connection frame temporary with the bracket.



10.2.7 Fix the second cabinet on the frame temporary. Don't tighten the screws to allow some movement.
Note : remove first the back panel before installing on the pedestal.

10.2.8 Fix the two cabinets with the connection frame in between. Tighten the screws between cabinet and pedestal (20-25 Nm).

10.2.9 Place the cover on the pedestal.

10.2.10 Place the protection plate back.

10.2.11To lock the protection plate.

10.2.12 View from the front and the side.

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