

3M

4200 JSP, KSP, LSP and MSP Cabinets

Instructions

May 1995

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1.0 General

- 1.01 These instructions provide the information necessary for the installation of 3M™ 4200 JSP, 4200 KSP, 4200 LSP and 4200 MSP Cabinets. Included are slab preparation, cabinet mounting, cable preparation, splicing and jumper management.
- 1.02 3M 4200 JSP, 4200 KSP, 4200 LSP and 4200 MSP Cabinets are designed for **sealed plant** applications and utilize the 3M Self-Strip Cross Connect System. Cabinets come from the factory loaded to full pair capacity and with block tails compound sealed from the back of the frame up to the splice chamber.
- 1.03 The following tools are needed for the Cabinet installation:
- 3/8" drive ratchet with 7/16" and 9/16" sockets
 - 3" extension for 3/8" drive ratchet
 - 1/2" drive ratchet with 3/4" socket
 - bubble level
 - standard Module splicing tools
 - standard hand tools
- 1.04 The following additional materials are needed for the 4200 JSP, KSP, LSP, MSP Cabinet installation:
(Choose one of these types of mounting)
- Manufactured precast or fabricated pad
 - 3M 4256 J/K Mounting Ring with 1/2-13 UNC Anchor Inserts
 - 3M 4256 L/M Mounting Ring with 1/2-13 UNC Anchor Inserts
 - 1/2-13 UNC Anchor Inserts (4)
 - Reenterable Encapsulant Compound

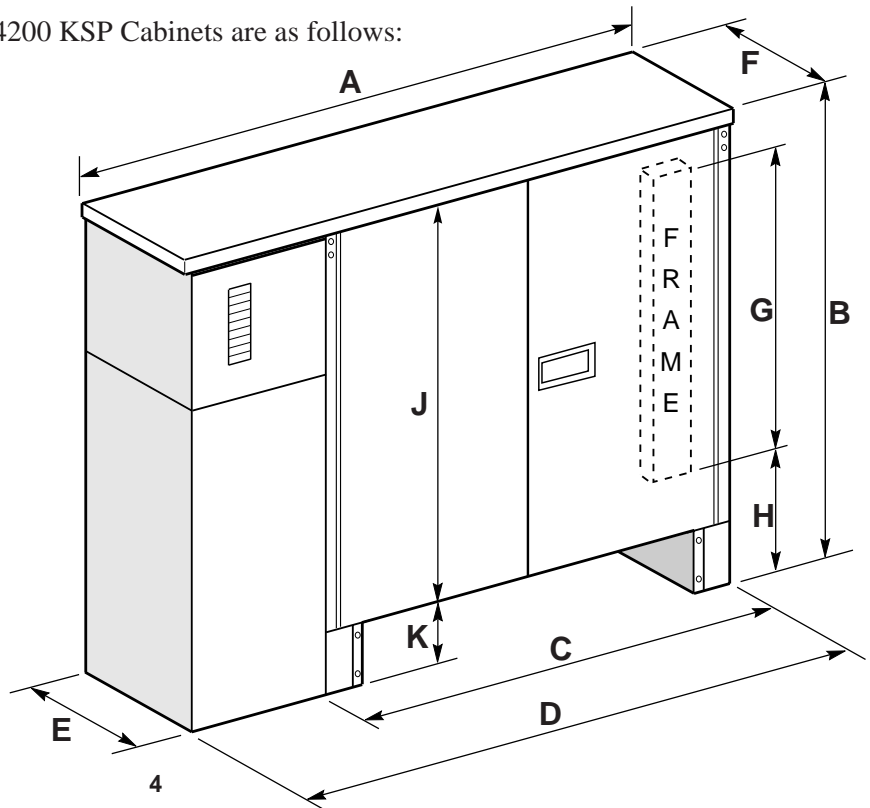
2.0 Description of Cabinets

2.01 Cabinet Pair Count, Module Options and US West Product Identification Numbers are shown below:

PID #	MODEL	PAIRS/SIDE-TOTAL PAIRS	MODULE
2265694	4200 JSP-3600/710	1800-----3600	ATT 710 Connector
2265702	4200 JSP-3600/MS ² ™	1800-----3600	3M MS ² 4000D Module
2265710	4200 KSP-5400/710	2700-----5400	ATT 710 Connector
2265728	4200 KSP-5400/MS ²	2700-----5400	3M MS ² 4000D Module
n/a	4200 LSP-1800-710	900-----1800	ATT 710 Connector
n/a	4200 LSP-1800-MS ²	900-----1800	3M MS ² 4000D Module
n/a	4200 MSP-2700-710	1350-----2700	ATT 710 Connector
n/a	4200 MSP-2700-MS ²	1350-----2700	3M MS ² 4000D Module

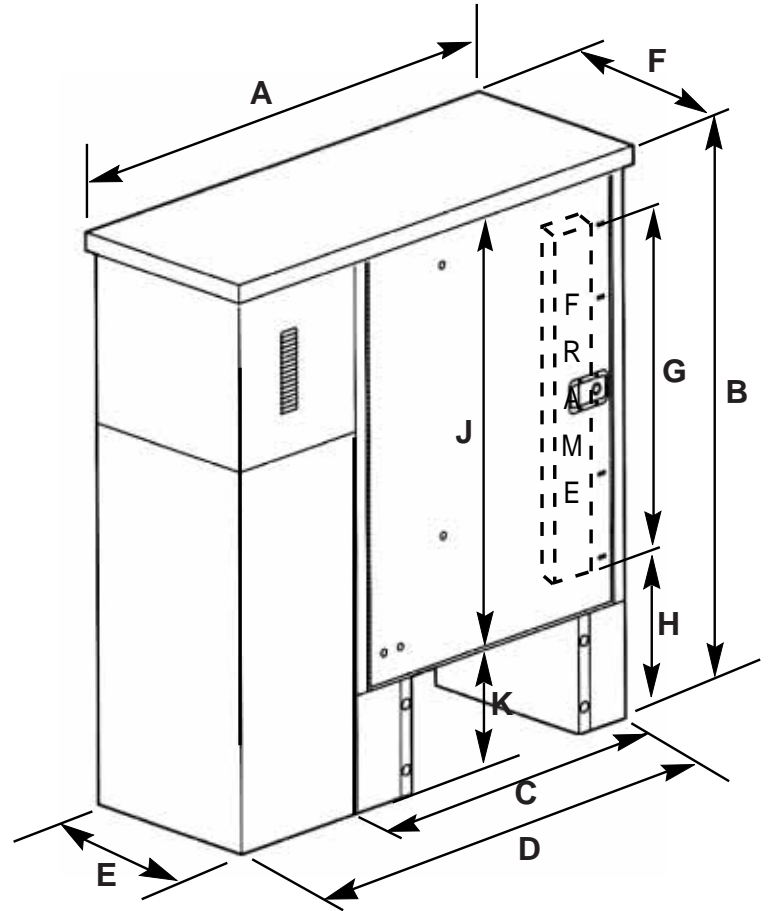
2.02 The dimensions of the 4200 JSP and 4200 KSP Cabinets are as follows:

	4200 JSP	4200 KSP
A	78 3/4" / 200cm	78 3/4" / 200cm
B	54 3/4" / 139.1cm	69 3/4" / 177.2cm
C	59 1/4" / 150.5cm	59 1/4" / 150.5cm
D	77 3/4" / 197.5cm	77 3/4" / 197.5cm
E	18 1/4" / 46.4cm	24 1/4" / 61.6cm
F	19 1/4" / 48.9cm	25 1/4" / 64.1cm
G	30" / 76.2cm	45" / 114.3cm
H	18" / 45.7cm	18" / 45.7cm
J	41" / 104.1cm	56" / 142.2cm
K	11 3/4" / 29.8cm	11 3/4" / 29.8cm



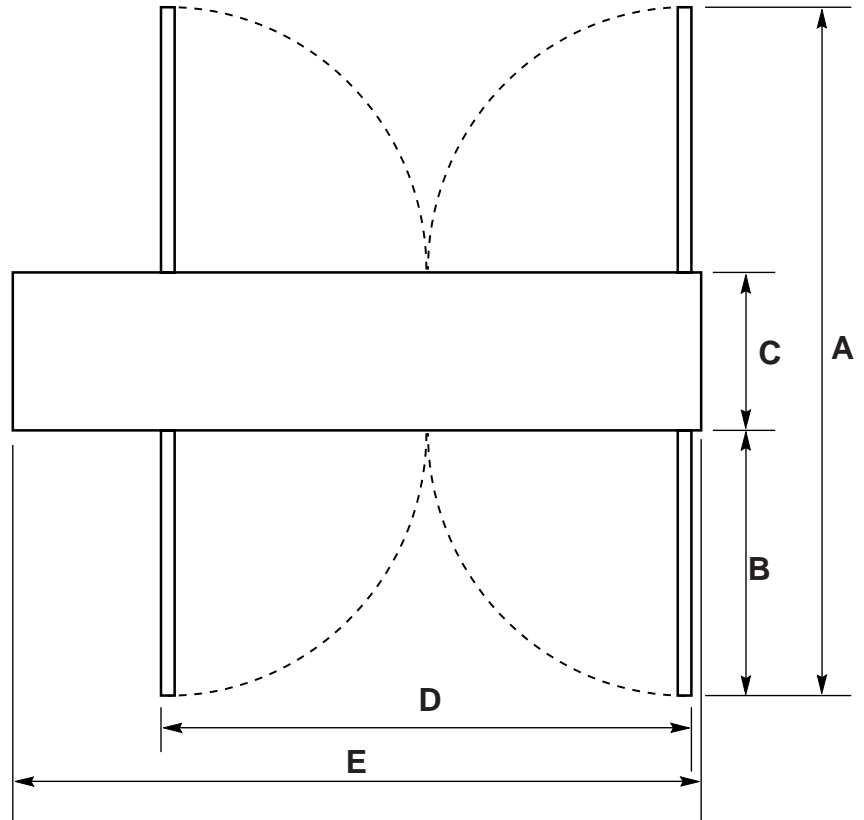
2.03 The dimensions of the 4200LSP and 4200MSP Cabinets are as follows:

	4200LSP	4200MSP
A	53" / 134.6cm	53" / 134.6cm
B	54 3/4" / 139.1cm	69 3/4" / 177.2cm
C	33 1/2" / 85.1cm	33 1/2" / 85.1cm
D	52" / 132.1cm	52" / 132.1cm
E	18 1/4" / 46.4cm	18 1/4" / 46.4cm
F	19 1/4" / 48.9cm	19 1/4" / 48.9cm
G	30" / 76.2cm	45" / 114.3cm
H	18" / 45.7cm	18" / 45.7cm
J	41" / 104.1cm	56" / 142.2cm
K	11 3/4" / 29.8cm	11 3/4" / 29.8cm



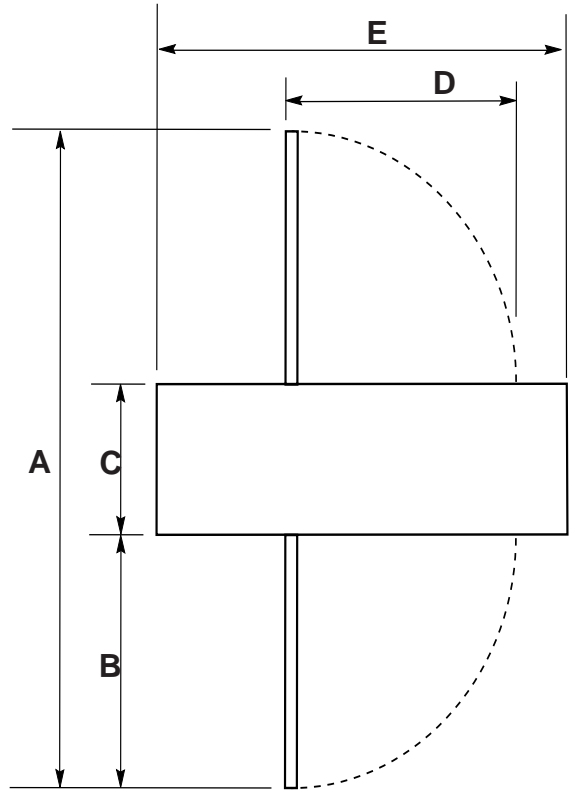
2.04 The clearance requirements of the 4200 JSP and 4200 KSP Cabinets are shown below:

	4200 JSP	4200 KSP
A	75 1/2" / 191.8cm	81 1/2" / 207.0cm
B	28 3/4" / 73.0cm	28 3/4" / 73.0cm
C	19 1/4" / 48.9cm	25 1/4" / 64.1cm
D	56" / 142.2cm	56" / 142.2cm
E	77 1/2" / 196.8cm	77 1/2" / 196.8cm



2.05 The clearance requirements of the 4200LSP and 4200MSP Cabinets are shown below:

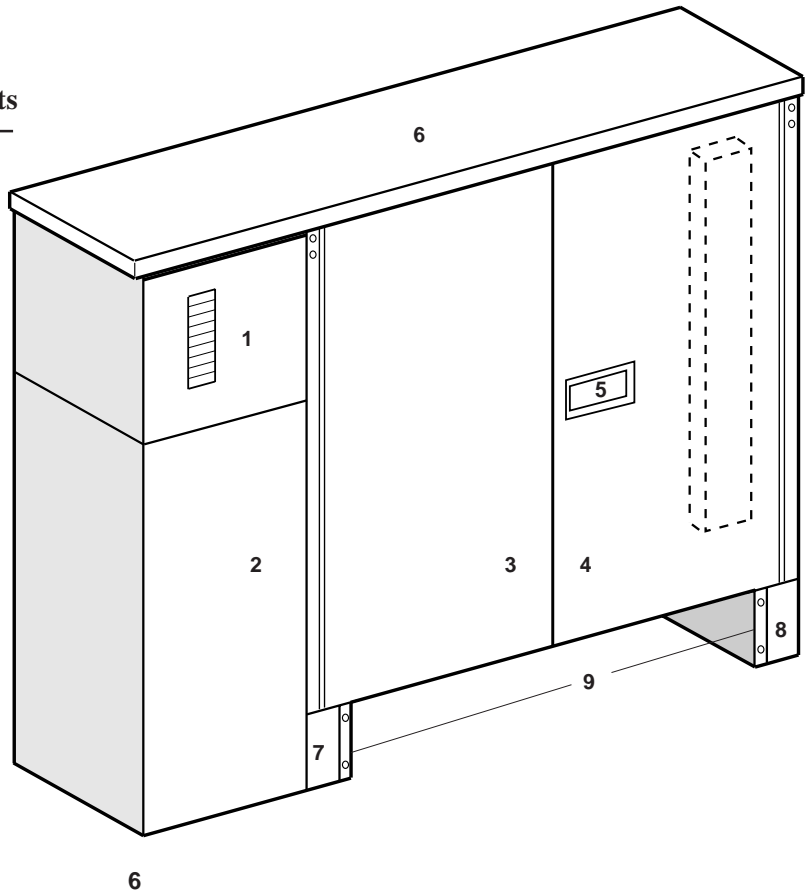
	4200LSP	4200MSP
A	86 1/5" / 218.9cm	86 1/5" / 218.9cm
B	33 1/2" / 85.1cm	33 1/2" / 85.1cm
C	19 1/5" / 48.8cm	19 1/5" / 48.8cm
D	32 1/3" / 82.0cm	32 1/3" / 82.0cm
E	52" / 132.1cm	52" / 132.1cm



2.06 Exterior cabinet parts of the 4200 JSP and 4200 KSP Cabinets are identified below:

4200 JSP/KSP Cabinet Exterior Parts

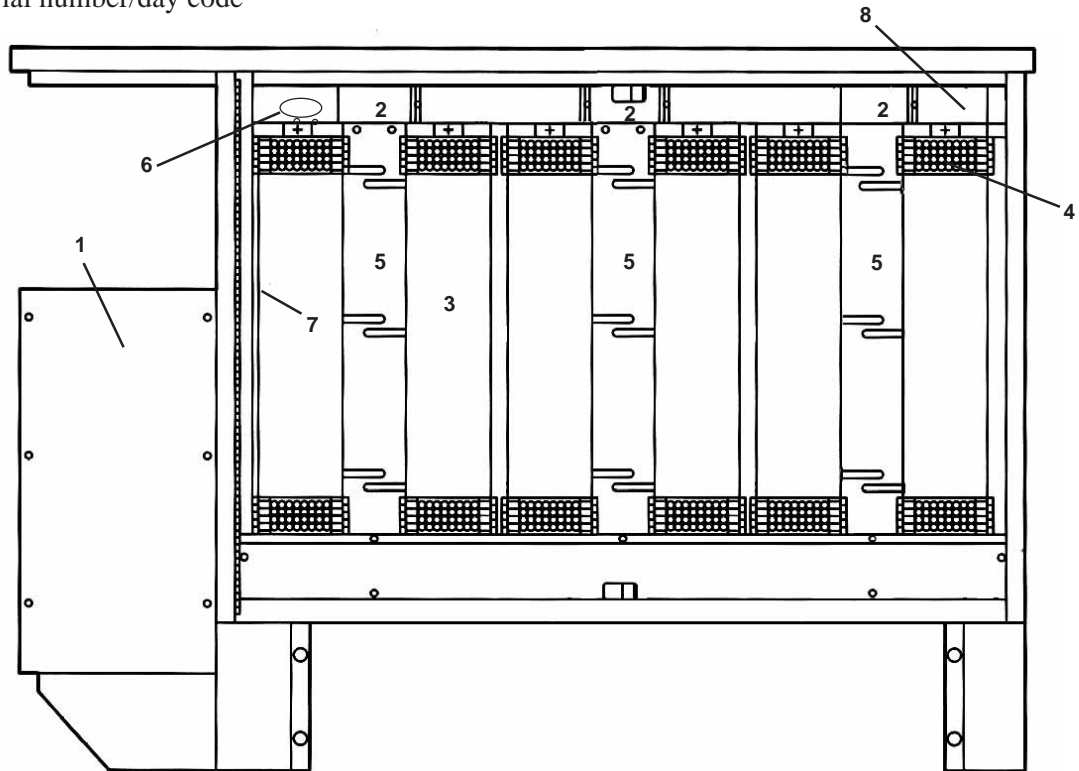
1. Side cover assembly - top
2. Side cover assembly - bottom
3. Left door assembly
4. Right door assembly
5. Recessed/lockable door latch
6. Cap assembly
7. Base - left
8. Base - right
9. Base - covers



2.07 Interior cabinet parts of the 4200 JSP and 4200 KSP Cabinets are identified below:

4200 JSP/KSP Cabinet Interior Parts

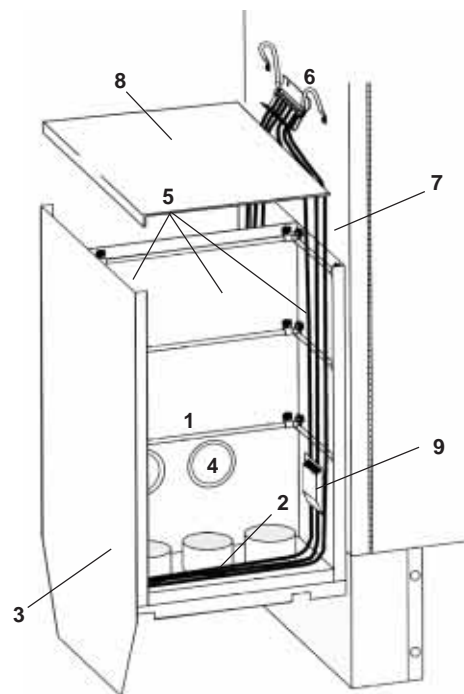
1. Splice chamber side cover
2. Pass through wire trough
3. Self Strip block frame
4. 3M Self Strip Block (25 pair)
5. Wire run vertical
6. Talk pair block
7. Ground/bond access point
8. Serial number/day code



2.08 Splice chamber parts of the 4200 JSP and 4200 KSP Cabinets are identified below:

4200 JSP/KSP Splice Chamber Parts

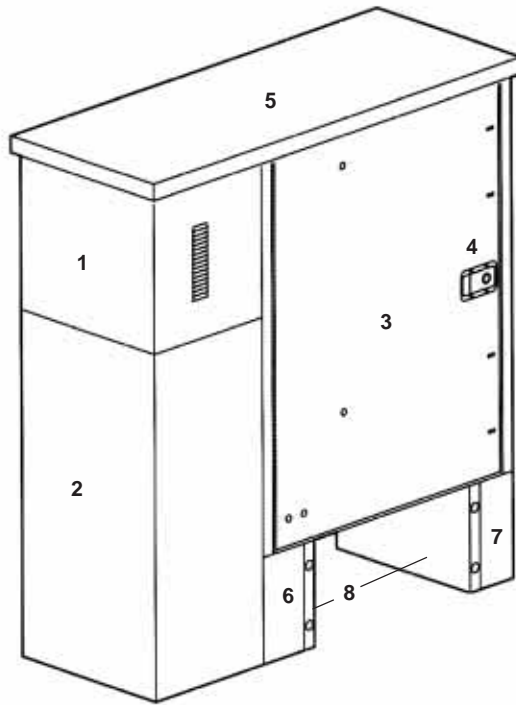
1. Cable tie bars
2. Port housing (split) with port plugs
3. End panel
4. Crossover holes with plugs
5. Panel spacer web (attached to splice chamber panels)
6. Ground/bond bus bar
7. Ground straps (6)
8. Splice chamber cover
9. Cross Connect stub through outlet



2.09 Exterior cabinet parts of the 4200 LSP and 4200 MSP Cabinets are identified below:

4200 LSP/MSP Cabinet Exterior Parts

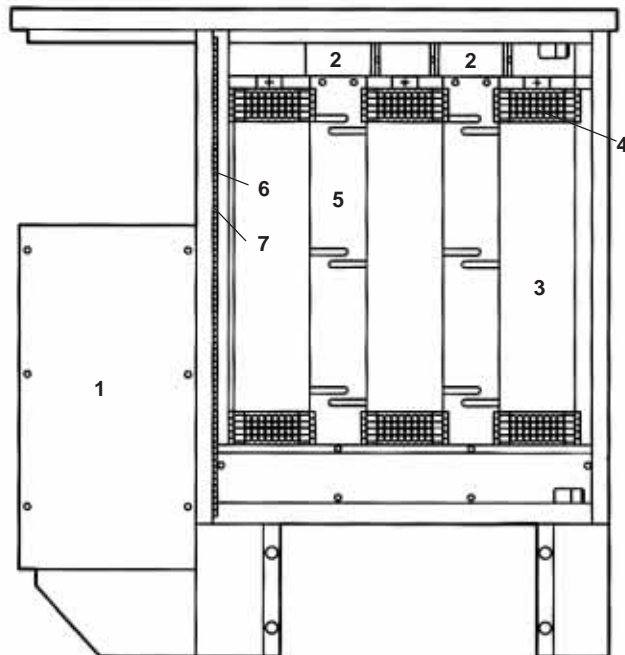
- 1. Side cover assembly - top
- 2. Side cover assembly - bottom
- 3. Left door assembly
- 4. Recessed/lockable door latch
- 5. Cap assembly
- 6. Base - left
- 7. Base - right
- 8. Base - covers



2.10 Interior cabinet parts of the 4200 LSP and 4200 MSP Cabinets are identified below:

4200 LSP/MSP Cabinet Interior Parts

- 1. Splice chamber side panel
- 2. Pass through wire trough
- 3. Self Strip block frame
- 4. 3M Self Strip Block (25 pair)
- 5. Wire run vertical
- 6. Talk block
- 7. Ground/bond access point



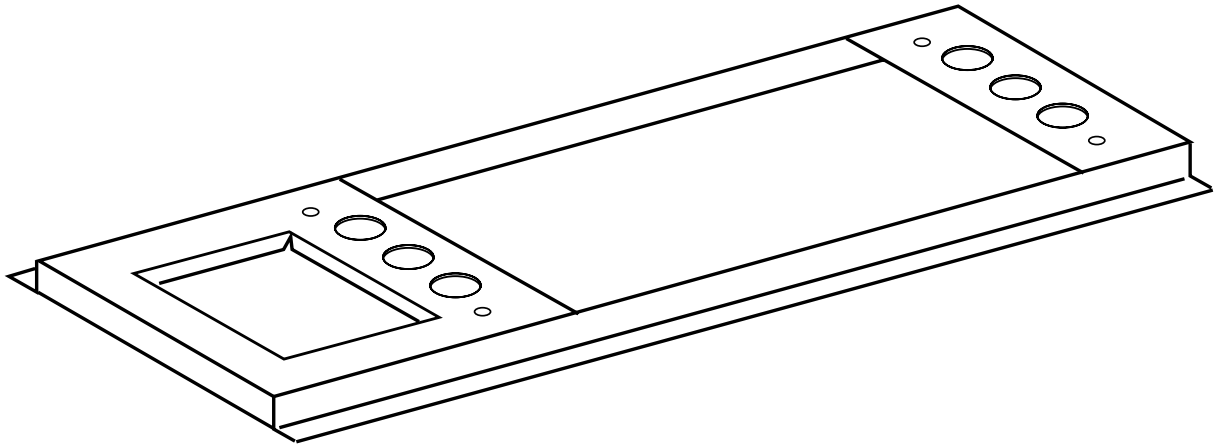
2.11 4200 LSP and 4200 MSP Splice Chamber

Note: Same as Splice Chamber Detail for 4200JSP and 4200KSP Section 2.08.

3.0 Accessories and Optional Cross Connect Test Probes

3.01 Accessories available for use with the 4200 JSP, 4200 KSP, 4200 LSP, and 4200 MSP Cabinets and the Self-Strip Cross Connect System are listed below, with their US West Product Identification Number:

- PID No. 2266288 - Cabinet, Ring, Mounting, 4256 J/K
- PID No. n/a - Cabinet, Ring, Mounting, 4256 L/M



- 3M No. 4268 - 800' (243m), 22AWG (0.6mm), violet/white Bell Specification jumper wire
- PID No. 2266320 - Cabinet, Cap, Priority 4324
- PID No. 2266338 - Cabinet, Cap, Replacement (100 tan and 100 orange)

3.02 Optional Cross Connect Test Probes are available for use with the 3M Self-Strip Cross Connect Blocks and are listed below, along with their US West Product Identification Number:

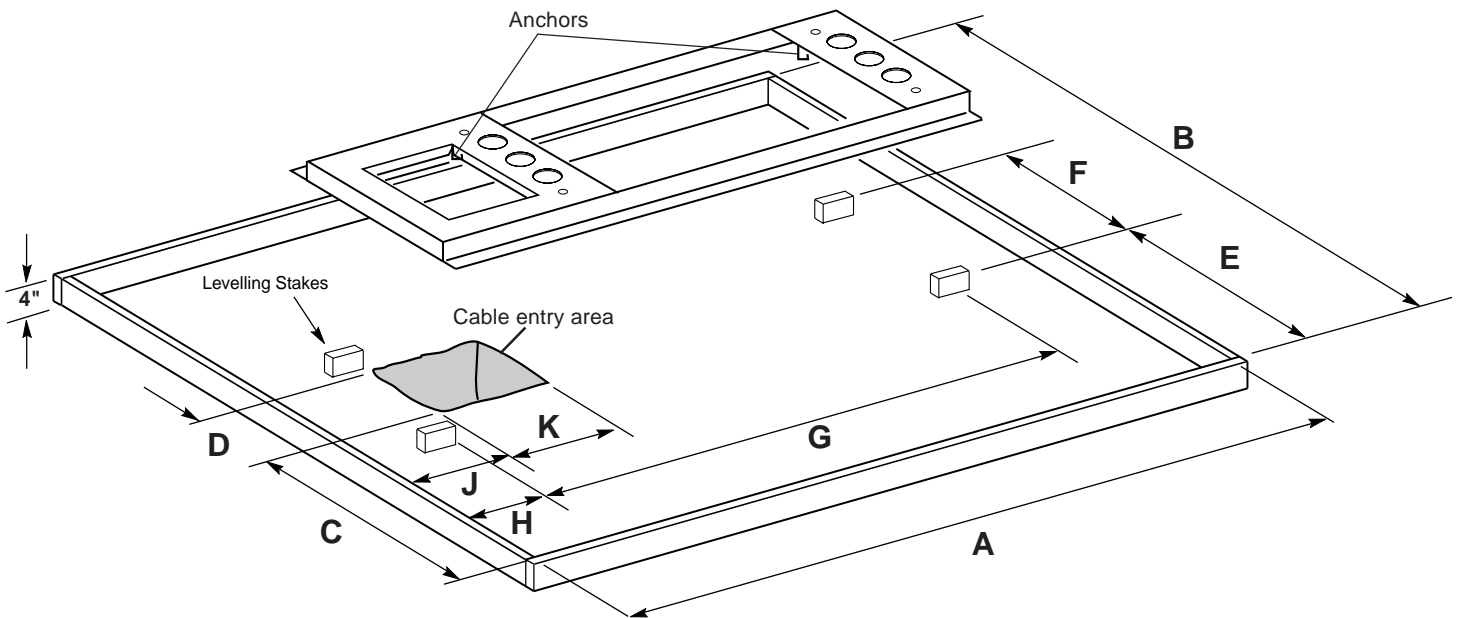
- PID No. 2266296 - Cabinet, Connector, 25 Pair Test, 4328 SS-25
- PID No. 2266304 - Cabinet, Probe, Test, Pocket 4329
- PID No. 2266312 - Cabinet, Test, w/Cord, 4327 (four included in cabinet)

4.0 Cabinet Mounting Pads

4.01 For cabinets using a Precast (fabricated) mounting pad, consult pad manufacturer for installation instructions.

4.02 For cabinets using a concrete pour in place pad with a 4256 J/K or a 4256 L/M Mounting Ring:

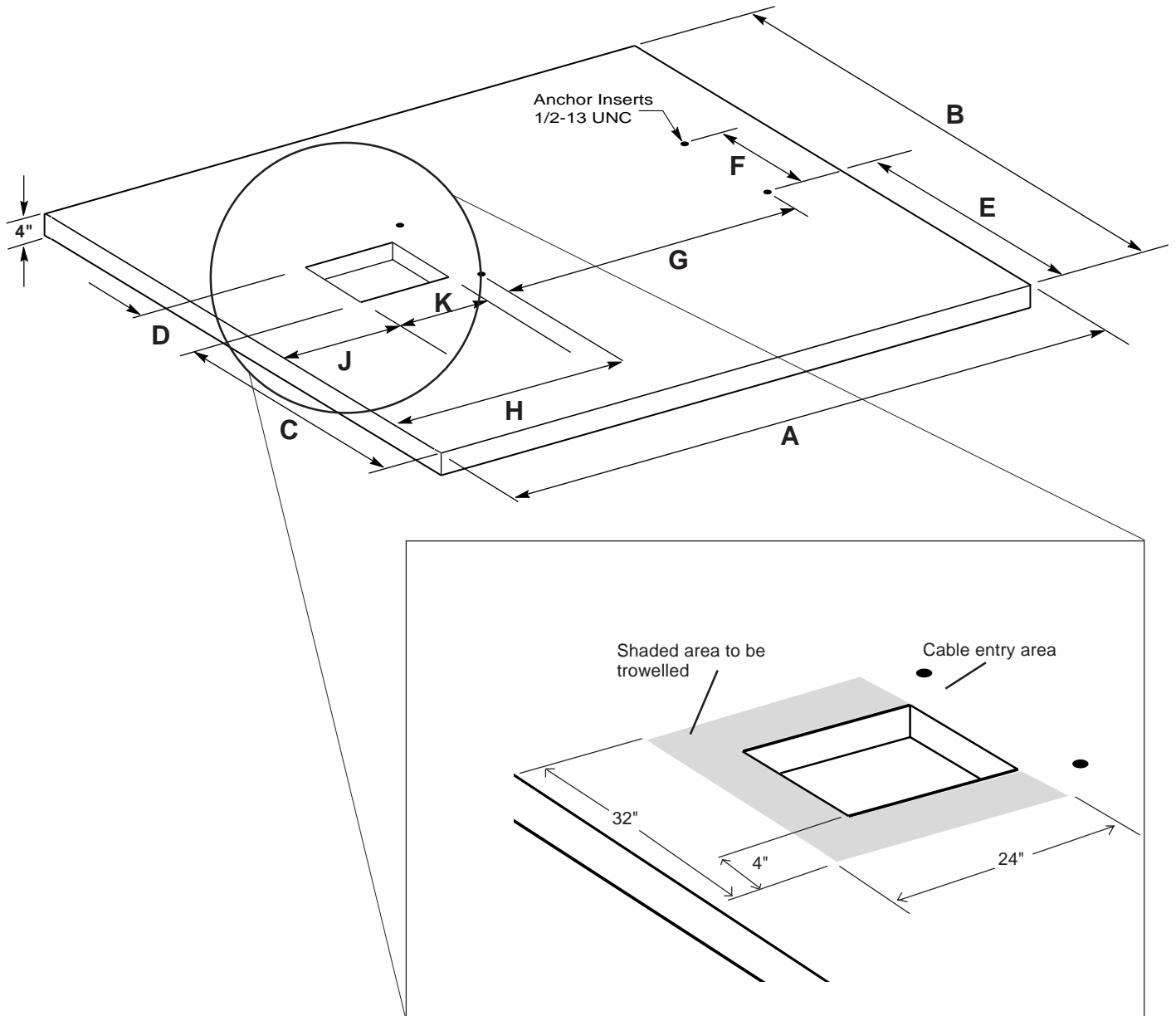
1. Prepare desired cabinet location ground surface and build pad form to the dimensions of the drawing.
2. Block off cable entry area of pad to keep clear of concrete.
3. Place leveling stakes per drawing dimensions. Make sure tops of stakes are level with each other and with the perimeter form.
4. Attach the anchors to the mounting ring with the bolts (anchors and bolts provided with ring.)
5. Set ring on leveling stakes. Make sure mounting ring is level. Pour concrete around mounting ring until concrete is level with top of ring. Inspect for good concrete coverage around anchors.



	A	B	C	D	E	F	G	H	J	K
JSP/KSP	120" 304.8cm	96" 243.8cm	39 ³ / ₄ " 100.7cm	16 ³ / ₄ " 42.4cm	36" 91.4cm	24" 61.0cm	75" 190.5cm	26 ¹ / ₂ " 76.2cm	27" 68.3cm	14 ¹ / ₂ " 37.2cm
LSP/MSP	94 ¹ / ₄ " 239.4cm	96" 243.8cm	39 ³ / ₄ " 100.7cm	16 ³ / ₄ " 42.4cm	36" 91.4cm	24" 61.0cm	49 ¹ / ₄ " 125.1cm	26 ¹ / ₂ " 76.2cm	27" 68.3cm	14 ¹ / ₂ " 37.2cm

4.03 For cabinets using a concrete pour-in-place pad with anchor inserts in the slab:

1. Prepare desired cabinet location ground surface and build pad form to the dimensions of the drawing.
2. Block off cable entry area of pad to keep clear of concrete.
3. Pour concrete, making sure surface is level.
4. Place Anchor Inserts at dimensions of drawing.
5. The finish surface around side cover area should be steel trowelled so it is smooth (see inset). This will ensure side covers engage properly into the cabinet. **Any irregular surface can prohibit side covers engaging and proper cabinet door operation.**



	A	B	C	D	E	F	G	H	J	K
JSP/KSP	120" 304.8cm	96" 243.8cm	39 ³ / ₄ " 100.7cm	16 ³ / ₄ " 42.4cm	40" 101.6cm	15 ³ / ₄ " 40.0cm	52 ¹ / ₄ " 132.7cm	47 ¹ / ₂ " 120.6cm	27" 68.3cm	14 ³ / ₄ " 37.2cm
LSP/MSP	94 ¹ / ₂ " 239.4cm	96" 243.8cm	39 ³ / ₄ " 100.7cm	16 ³ / ₄ " 42.4cm	40" 101.6cm	15 ³ / ₄ " 40.0cm	26 ¹ / ₂ " 67.3cm	47 ¹ / ₂ " 120.6cm	27" 68.3cm	14 ³ / ₄ " 37.2cm

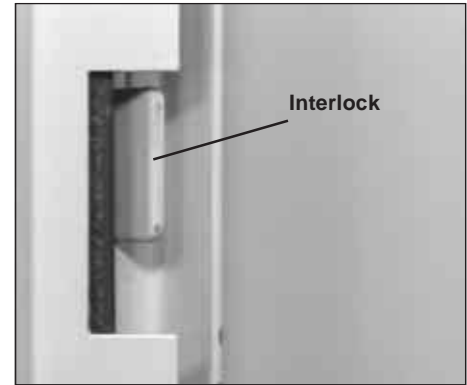
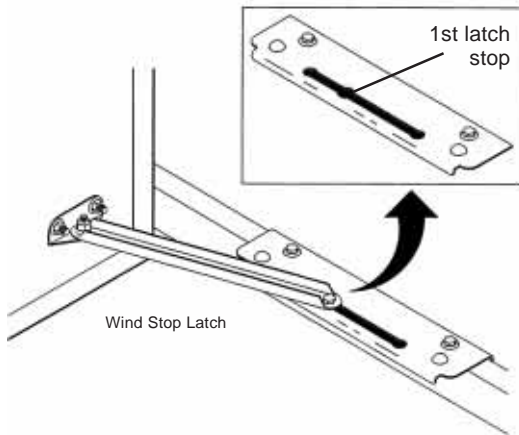
5.0 Mount Cabinet

Note: Minimum cable length needed from top of slab is 72" (183 cm).

Factory loaded, compound sealed frames must not be removed from cabinet during installation.

5.01 Before lifting the cabinet for placement on the slab, you must first remove the side covers, splice chamber covers and cable port housings as follows and retain all cabinet parts.

1. Open both front and rear cabinet doors to the first door stop latch. This releases door-side cover interlock.



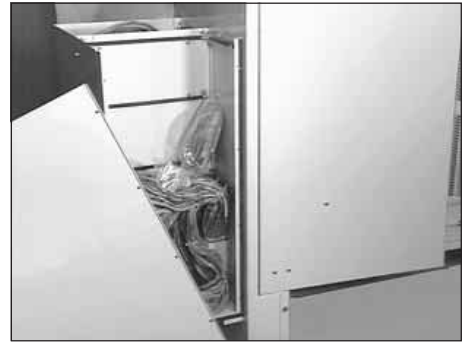
2. Remove top side cover by lifting it up, then pull it out.



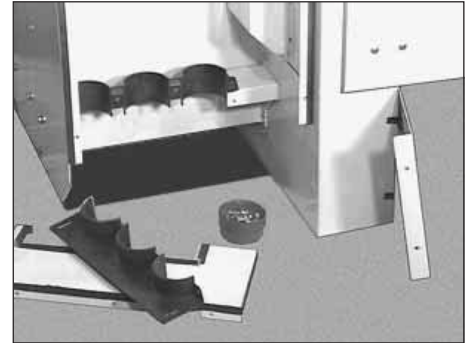
3. Remove bottom side cover by lifting it up, then pull it out.



4. Remove splice chamber and base covers for access to appropriate cable ports and cabinet mounting slots.



5. Remove outer half of cable port housings.
6. Disengage the door stop latch (see 5.01) on cabinet door(s). Close and lock door(s).



- 5.02 Using a boom truck, use the lifting straps to lift, position and align the cabinet on the slab.
- 5.03 Align the cabinet mounting slots to the slab holes and cable ports around the cables.
- 5.04 Level the cabinet using the shims provided. The front and back door gap should be even.
- 5.05 Once the cabinet is level and the slots and slab holes match, secure the cabinet to slab with the bolts provided.

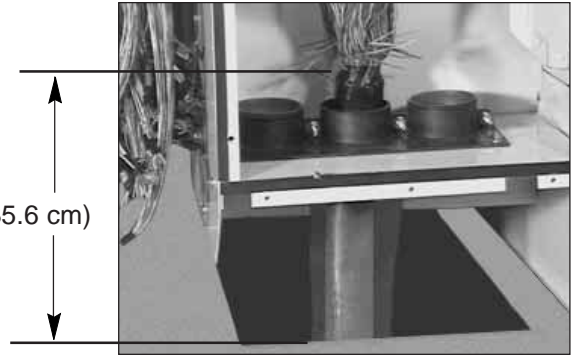
- 5.06 Remove the lifting straps and replace the bolts in the cabinet with the panhead of the bolt out.



6.0 Prepare Cable

- 6.01 If plastic sleeve port sealing option is used, slide sleeve over cable now.
- 6.02 Remove sheath and shield fourteen inches (35.6 cm) above top of slab.
- 6.03 Install shield bond connector per local practice.

14" (35.6 cm)



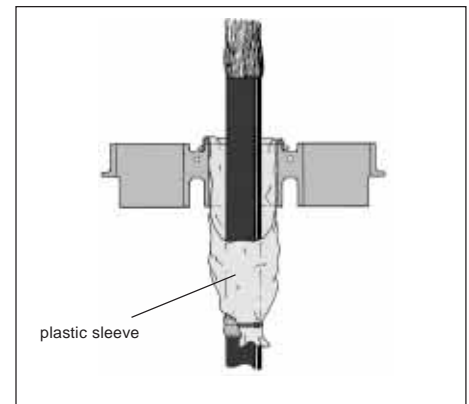
- 6.04 Install cabinet bond strap to cable connector. Identify bond locations on cable log to simplify reentry.



- 6.05 The cable ports can be sealed with the plastic sleeve provided with the cabinet or with sealing tape. Port seals are built in one of two options. See 6.06 and 6.07.

- 6.06 To use the plastic sleeve option:

- 1. Slide the sleeve over the cable sheath before opening cable.
- 2. Open cable per 6.02.
- 3. Replace the cable port housing. Secure to the cabinet.
- 4. Wrap $\frac{3}{4}$ " cut sealing tape around top lip of port then fold the sleeve end over the top of the port and secure it with a cable tie.
- 5. Wrap a sealing type tape around cable even with the bottom edge of sleeve and cable tie to seal
- 6. Balloon sleeve out and fill with approved reenterable compound



Note: Carefully follow safety, health and environmental information given on container label or Material Safety Data Sheet for compound being used.

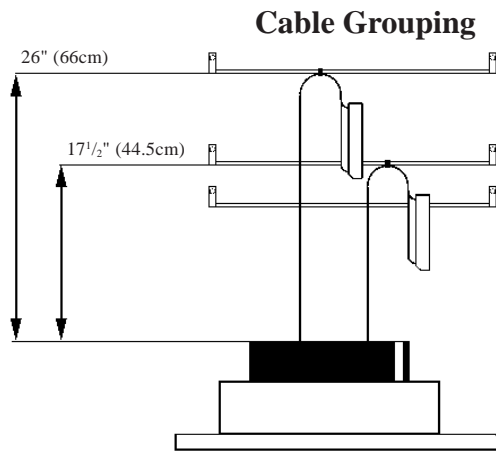
- 6.07 To use the sealing tape option:

- 1. Wrap the cable with sealing tape to build up the diameter of the cable to fill the port.
- 2. Replace the cable port housing over the sealed cable(s) and secure to the cabinet.



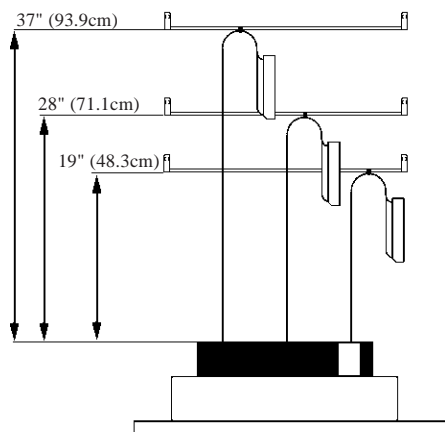
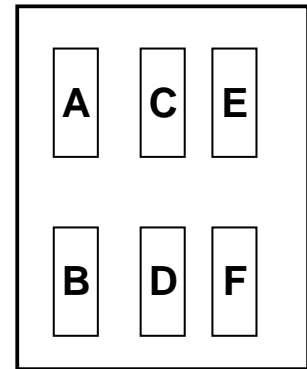
7.0 Splice Cable

7.01 For best housekeeping in the splice chamber, arrange the field conductors and completed connector groups according to the drawings. If more space is needed for splicing operation, the End Panel of the chamber can be temporarily removed.

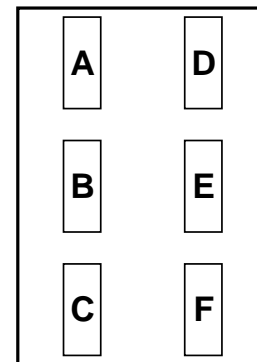


4200 JSP/LSP
4000 Modules / 710 Connectors

Splice Chamber Front View



4200 KSP/MSP
4000 Modules / 710 Connectors



7.02 Divide the field cable and frame stubs into groups according to the drawings.

7.03 Set up the splice heads and the support tube in the cabinet so the connectors can be spliced to the measurements of drawings.



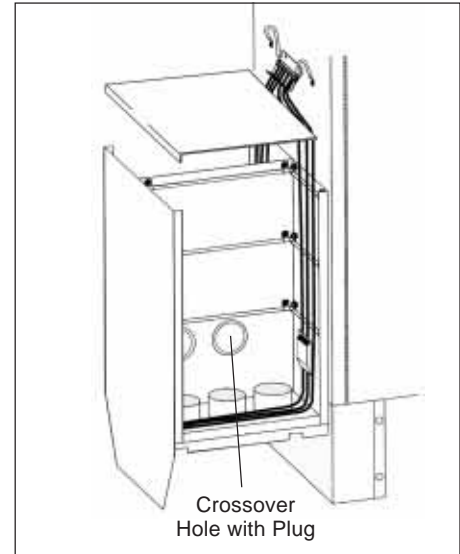
7.04 Splice all groups at the measurement configurations of the drawings per local practice (3M MS² Modules are shown in drawing). Tie wrap the spliced groups into proper position according to the drawings and dress the frame conductors accordingly with the field conductors.



7.05 If larger cable counts are placed, use crossover holes to route field cable groups between the front and rear splice chambers. For good housekeeping, choose a hole closest to the cable.

7.06 Using a sharp blade, slit the plug of this hole with an "X." Push/pull the cable groups to be spliced in the other chamber through this cut plug.

7.07 Splice conductors into the appropriate position for that chamber and tie-wrap the groups.



7.08 Continue splicing and tying off the conductor groups until the splice is completed.

7.09 Sealant boxes must be installed on the modules when using MS² System.

7.10 After splice is complete, inspect the gasketing material on splice chamber for damage from the splicing operation. If needed, apply silicone sealant over damaged area of gasket material.



7.11 Reassemble splice chamber except for cover.



8.0 Reenterable Encapsulating Compound Fill of Splice Chamber

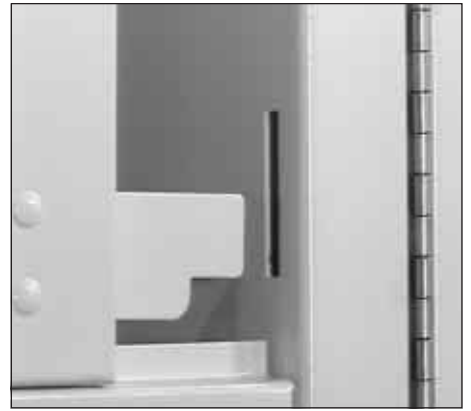
- 8.01 Visually inspect to ensure that the modules/connectors and conductors are a minimum of 1" (25.4 mm) below the top of the splice chamber.
- 8.02 Mix reenterable encapsulating compound according to manufacturer's instructions.
- 8.03 Pour compound into splice chamber until compound covers connectors and conductors at least 1/2" (12.7 mm).

Note: *Carefully follow safety, health and environmental information given on container label or Material Safety Data Sheet for compound being used.*

Note: *Amount of compound will vary depending on pair count of cable.*

Allow time for compound to settle and fill voids, add additional compound as needed.

- 8.04 Replace splice chamber cover
- 8.05 After compound filling is complete, reinstall top and bottom side covers of cabinet as follows:
 1. Open front and rear doors of the cabinet.
 2. Slide the side covers into position, mating the tabs with the slots. Lift and slide the cover until the tabs fully engage into the slots.
 3. Closing the front and rear doors interlocks the side covers to the cabinet.



9.0 Identify Cross Connect Block Counts

- 9.01 Remove tape from identification pads on the blocks in the cabinet.
- 9.02 Select proper sequence of labels (blue = distribution; green = feeder) and detach strip of 20 labels from sheet. Carefully remove protective backing from strip.



- 9.03 Align number 1-6-11, etc. with identification pads on left and press into place. Align numbers 5-10-15, etc. with right identification pads and press in place. Remove the outer liner as shown.
- 9.04 Fill in Binding Post Log on cabinet door.

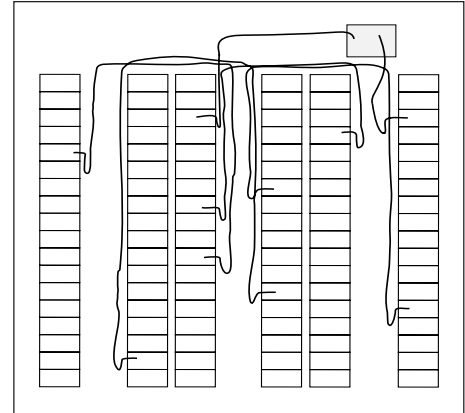


10.0 Run Jumpers

- 10.01 Self Strip instructions are on the cabinet doors.
- 10.02 Route jumpers between frames as shown in drawing.

Note: Allow for a slack loop of 3" (7.6 cm) at each end, total of 6" (15.2 cm), when running a jumper wire.

As you run each jumper, push wire back into jumper run to prevent buildup of wire at front of wire way.



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