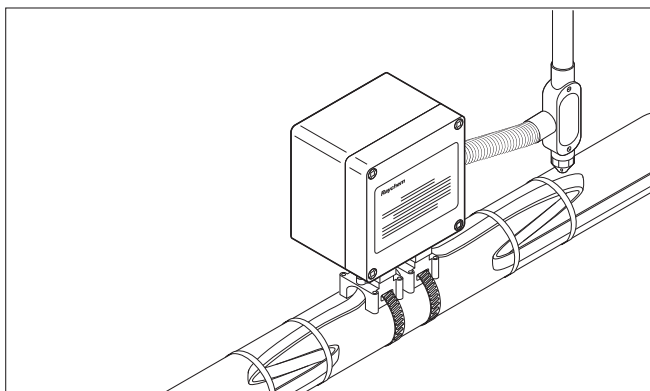




RAYCHEM

PMKG-J2LP

Polymatrix Powered Splice Kit Installation Instructions



APPROVALS

Hazardous Locations



Class I, Div. 2, Groups B, C, D
Class II, Div. 2, Groups F, G
Class III



Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
Class III



Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
For BTV and LBTV Heating Cable Systems Only

KIT CONTENTS

Item	Qty	Description
A	1	Junction box with lid
B	2	Bases
C	2	Red grommets
D	2	Core sealers
E	2	Tops (3/4 inch NPS thread)
F	2	Green/yellow heat-shrinkable tubes
G	2	Ring gaskets
H	2	Locknuts
I	1	Terminal block

WARNING:

This component is an electrical device which must be installed correctly to ensure proper operation and to prevent shock or fire. Read these important warnings and carefully follow all of the installation instructions.

- To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of nVent and the 1996 National Electrical Code, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.

- Component approvals and performance are based on the use of specified parts only. Do not use substitute parts or vinyl electrical tape.
- The black heating cable core and fibers are conductive and can short. They must be properly insulated and kept dry.
- Damaged bus wires can overheat or short. Do not break bus wire strands when scoring the jacket or core.
- Keep components and heating cable ends dry before and during installation.

DESCRIPTION

The PolyMatrix nVent RAYCHEM PMKG-J2LP is a NEMA 4X rated connection kit for use with nVent RAYCHEM BTV-CR, BTV-CT, QTVR-CT, XTV-CT, KTV-CT and LBTV2-CT self-regulating heating cables.

Materials for one powered splice are included in this kit.

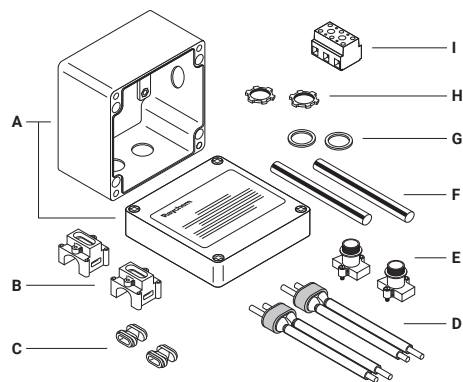
For technical support call nVent at (800) 545-6258.

TOOLS REQUIRED

- Screwdriver
- Wire cutters
- Adjustable pliers
- Heat gun or mini-torch (for LBTV2 only)
- Needle-nose pliers
- Utility knife

ADDITIONAL MATERIALS REQUIRED

- Pipe straps
- Tape
 - GT-66 Installation temperature above 40°F (5°C)
 - GS-54 Installation temperature above -40°F (-40°C)
- HCS-100-A (Required for LBTV2)
- Grommets (Required for KTV and LBTV2)



CAUTION:

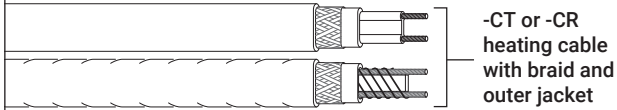
HEALTH HAZARD. Prolonged or repeated contact with the sealant in the core sealer may cause skin irritation. Wash hands thoroughly. Overheating or burning the sealant will produce fumes that may cause polymer fume fever. Avoid contamination of cigarettes or tobacco. Consult MSDS RAY/5510 for further information.

CHEMTREC 24-hour emergency telephone:
(800) 424-9300

Non-emergency health and safety information:
(800) 545-6258.

Identify Heating Cable Type

- This product is for use only with the following heating cables: BTV, QTVR, XTV, KTV and LBTv2 (-CR and -CT versions).
- Do not use with monitor wire or any other heating cables.
- Select correct grommet from chart on right.



- For LBTv2 a separate heat-shrink core sealer is required. Order two HCS-100-A heat-shrink core sealers.

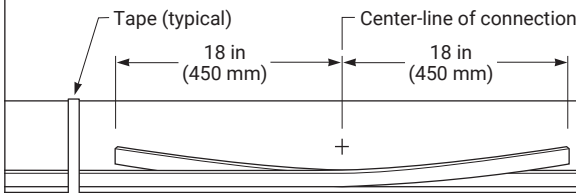
Heating Cable	Type	Grommet
BTV, QTVR, XTV	-CR or -CT	RED
KTV	-CT	P*
LBTv2	-CT	K*

* Order separately

WARNING: Use of the wrong grommet can result in leaks, cracked components, shock or fire, and will invalidate approvals and certifications.

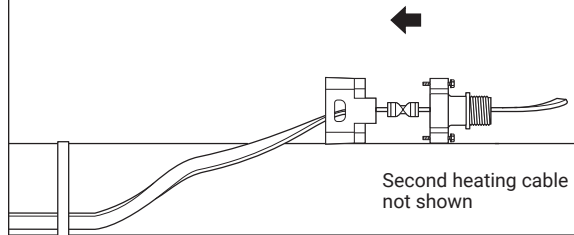
1

- Allow extra heating cable as shown.



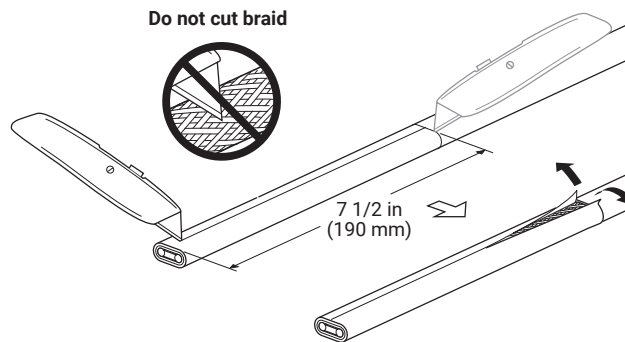
2

- Slide base, grommet and top onto heating cable.



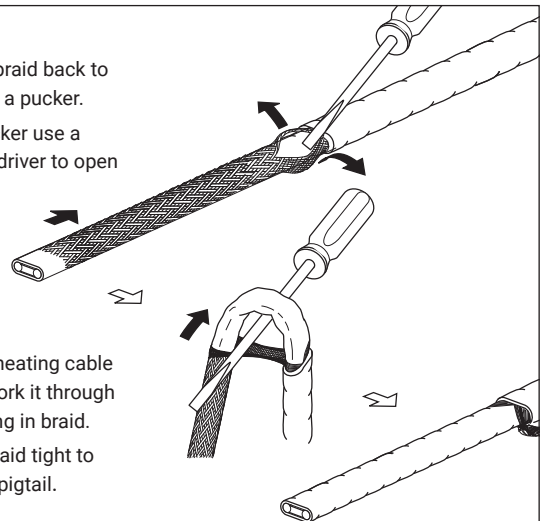
3

- Lightly score outer jacket around and down as shown.
- Bend heating cable to break jacket at score, then peel off jacket.



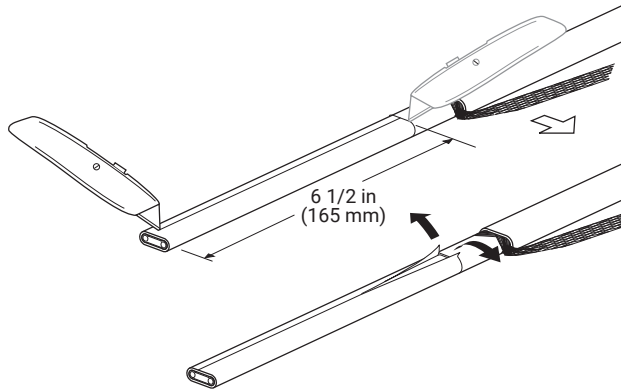
4

- Push braid back to create a pucker.
- At pucker use a screwdriver to open braid.
- Bend heating cable and work it through opening in braid.
- Pull braid tight to make pigtail.



5

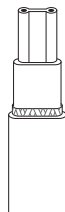
- Lightly score inner jacket around and down as shown.
- Peel off inner jacket.



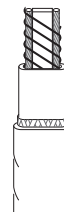
IMPORTANT: For LBTV2 heating cables omit Steps 6 through 12. Instead refer to installation instructions supplied with the HCS-100-A kit, then go to step 13.

6

- Determine heating cable type and continue as shown.



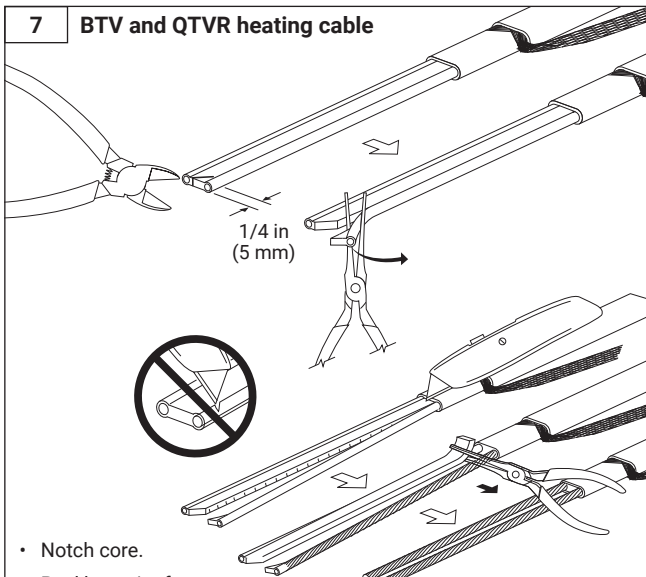
BTV-CR, BTV-CT and QTVR-CT heating cable



XTV-CT and KTV-CT heating cable

7

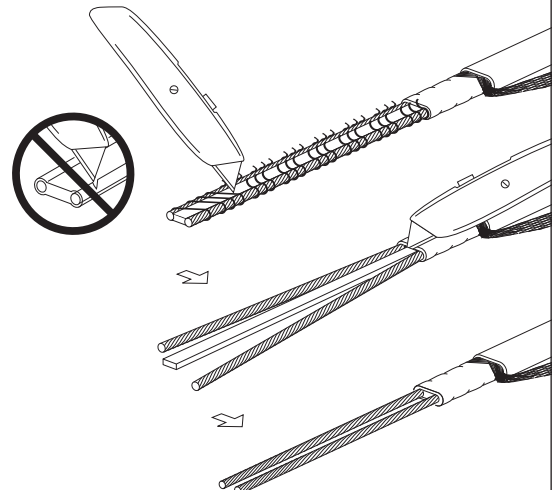
BTV and QTVR heating cable



- Notch core.
- Peel bus wire from core.
- Score core between bus wires at inner jacket.
- Bend and snap core.
- Peel core from bus wire.
- Remove any remaining core material from bus wires.

7

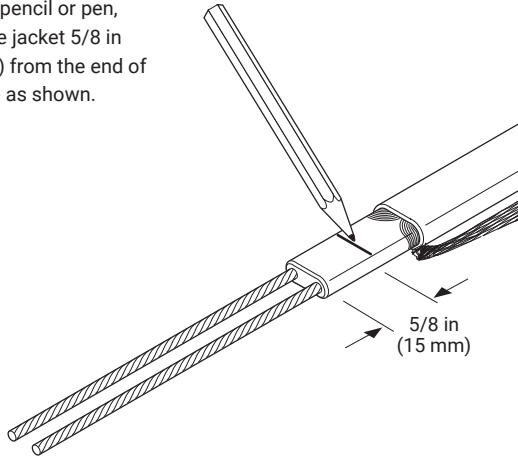
XTV and KTV heating cable



- Cut and remove all fiber strands.
- Score and remove center spacer.
- Remove any remaining core material from bus wires.

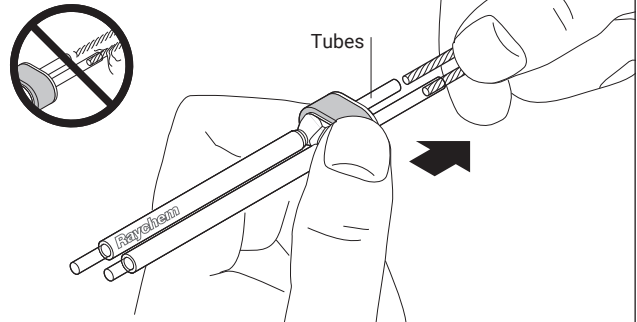
8

- Using a pencil or pen, mark the jacket 5/8 in (15 mm) from the end of the core as shown.



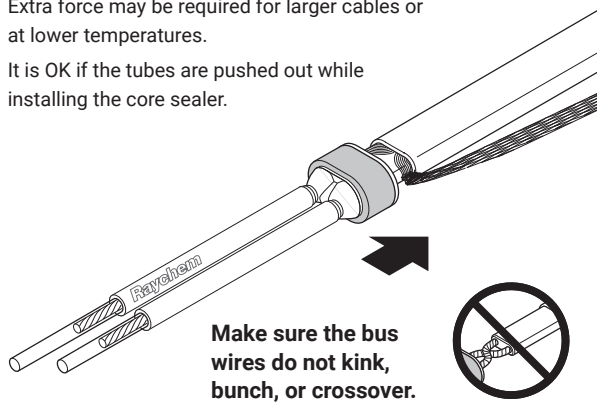
9

- Re-twist and straighten bus wires, then insert into the tubes as shown.
- Make sure all strands go into the tubes.



10

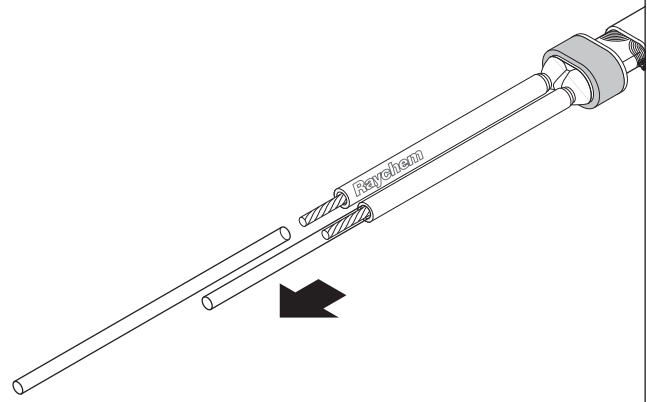
- Push core sealer onto the heating cable to the mark made in step 8.
- Extra force may be required for larger cables or at lower temperatures.
- It is OK if the tubes are pushed out while installing the core sealer.



Make sure the bus wires do not kink, bunch, or crossover.

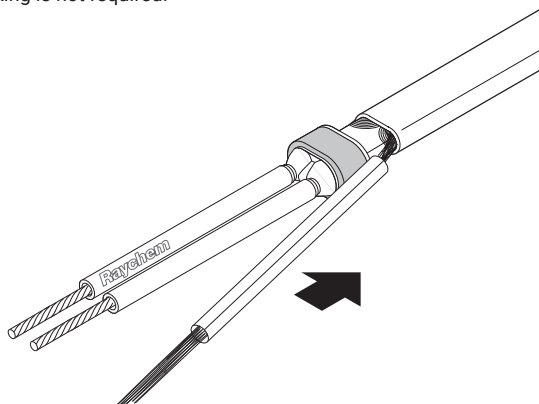
11

- Remove the tubes and dispose of them in core sealer plastic bag.



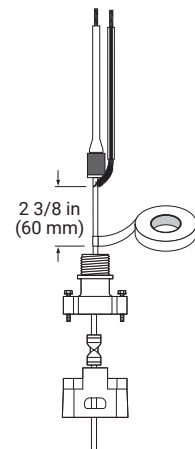
12

- Slip the green/yellow tube onto the braid. Heat-shrinking is not required.



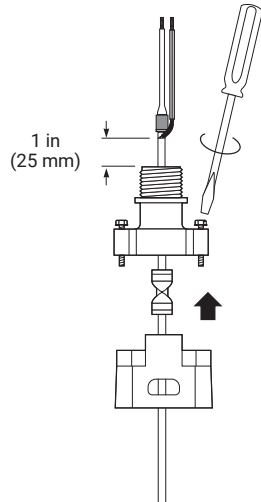
13

- Apply 3 wraps of glass tape (RAYCHEM GT-66 or GS-54).



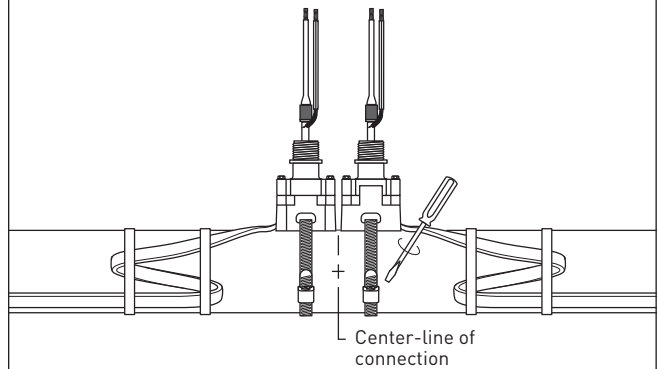
14

- Seat grommet and position parts so that 1 in (25 mm) of heating cable extends past top of threads.
- Tighten screws.
- Repeat steps 2 thru 14 for second heating cable.



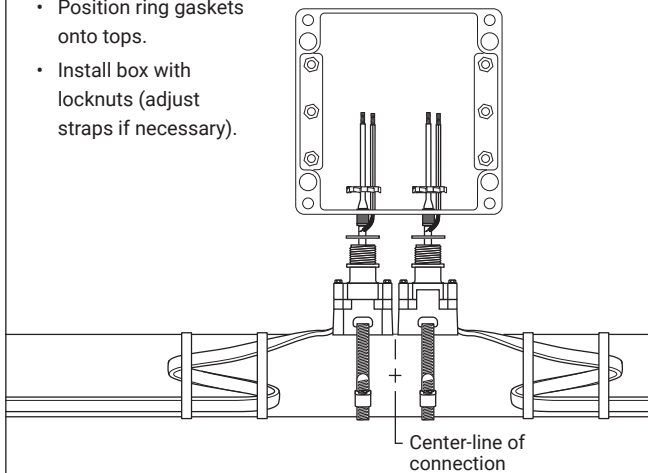
15

- Fasten bases to pipe with pipe straps. Do not pinch heating cables with straps.
- Loop and tape extra heating cable to pipe.



16

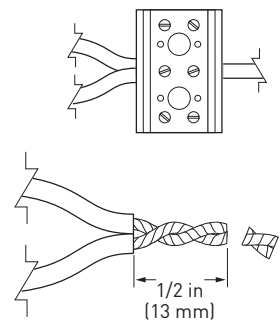
- Position ring gaskets onto tops.
- Install box with locknuts (adjust straps if necessary).



17

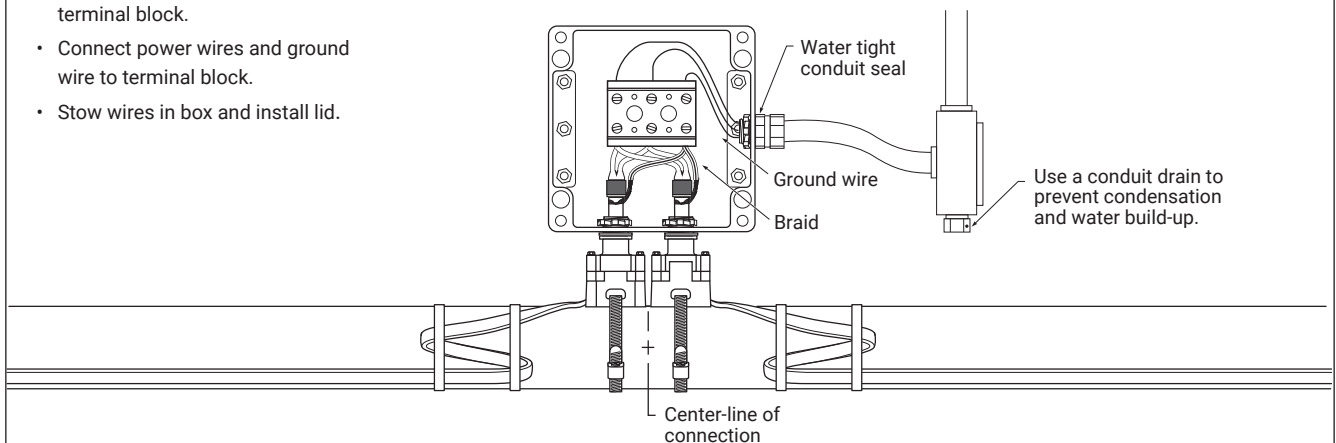
Note the following instructions on bus wire preparation:

- Twist appropriate wire pair together.
- Trim twisted wires to 1/2 in (13 mm).



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- Connect bus wires and braid to terminal block.
- Connect power wires and ground wire to terminal block.
- Stow wires in box and install lid.



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