
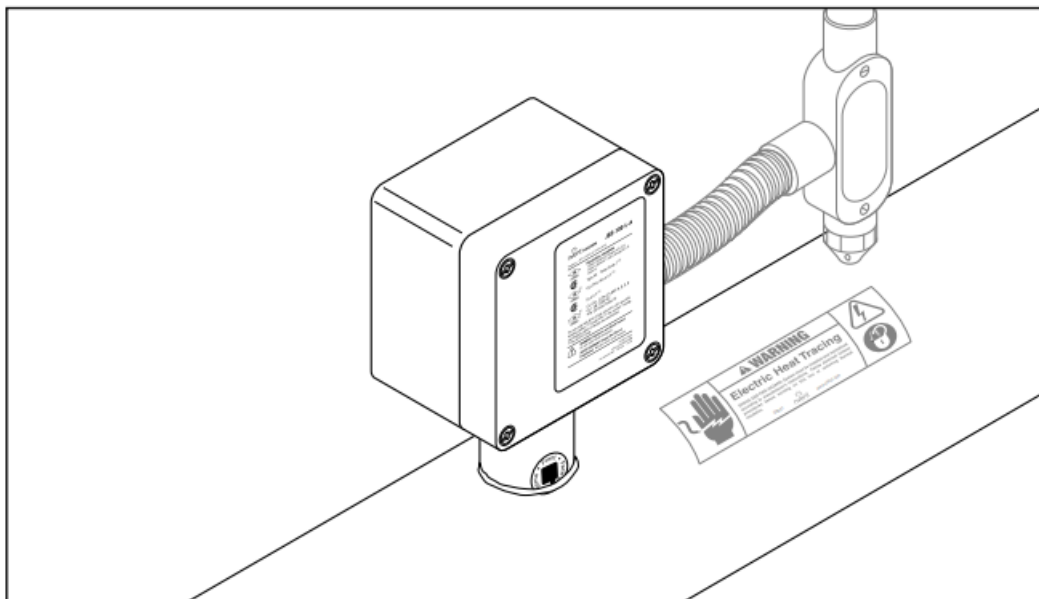




nVent RAYCHEM JBS-100-A Single Entry Power Connection with Junction Box Instruction Manual

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nVent RAYCHEM JBS-100-A Single Entry Power Connection with Junction Box



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APPROVALS

Hazardous Locations



Class I, Div. 2, Groups A, B, C, D Class II, Div. 2, Groups E, F, G Class III CLI, ZN1, AEx e

II T* (1)



(JBS-100-A only*) Ex eb IIC T* Gb (3)



JBS-100-A is IECEEx certified for use with:

BTv-CR/BTv-CT: IECEEx BAS 20.0011X

QTVR-CT: IECEEx BAS 20.0013X

XTv-CT: IECEEx BAS 20.0012X

KTV-CT: IECEEx BAS 20.0014X

HTv-CT: IECEEx PTB 21.0007X

VPL-CT: IECEEx BAS 20.0008X



Ex eb IIC T* Gb; Class I Zone 1 AEx eb IIC T*Gb
Ex tb IIIC T*°C Db; Zone 21 AEx tb IIIC T*°C Db

KIT CONTENTS

Item	Qty	Description
A	1	Stand assembly
B	1	Core sealer
C	1	Green/yellow tube
D	1	Cable lubricant
E	1	Cable tie
F	1	Lid
G	1	Box with terminal blocks

DESCRIPTION

The nVent RAYCHEM JBS-100-A and nVent RAYCHEM JBS-100-A6 are NEMA 4X-rated power connection kit. It is designed for use with nVent RAYCHEM BTV-CR, BTV-CT, QTVR-CT, XTV-CT, KTV-CT, HTV-CT and VPL-CT industrial parallel heating cables.

The JBS-100-A6 utilizes larger terminal blocks to accommodate up to 6 AWG power wires.

This kit may be installed at temperatures as low as –67°F (–55°C). For easier installation store above freezing until just before installation.

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

TOOLS REQUIRED

- Wire cutters
- Adjustable pliers
- Utility knife
- Needle nose pliers
- Large slotted screwdriver
- Marker
- 1/4 in or smaller flat-blade screwdriver

ADDITIONAL MATERIALS REQUIRED

- Pipe strap
- GT-66 or GS-54 glass cloth tape

OPTIONAL MATERIALS

- **Recommended conduit drain:** JB-DRAIN-PLUG-3/4IN P/N 278621-000
- Small pipe adapter for 1 in (25 mm) and smaller pipes: Catalog number JBS-SPA P/N E90515-000

WARNING:

This component is an electrical device that 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 agency certifications, and national electrical codes, ground-fault equipment protection must be used. Arcing may not be stopped by conventional circuit breakers.

- Component approvals and performance are based on the use of nVent-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.
- Use only fire-resistant insulation materials, such as fiberglass wrap and flame-retardant foam.

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.

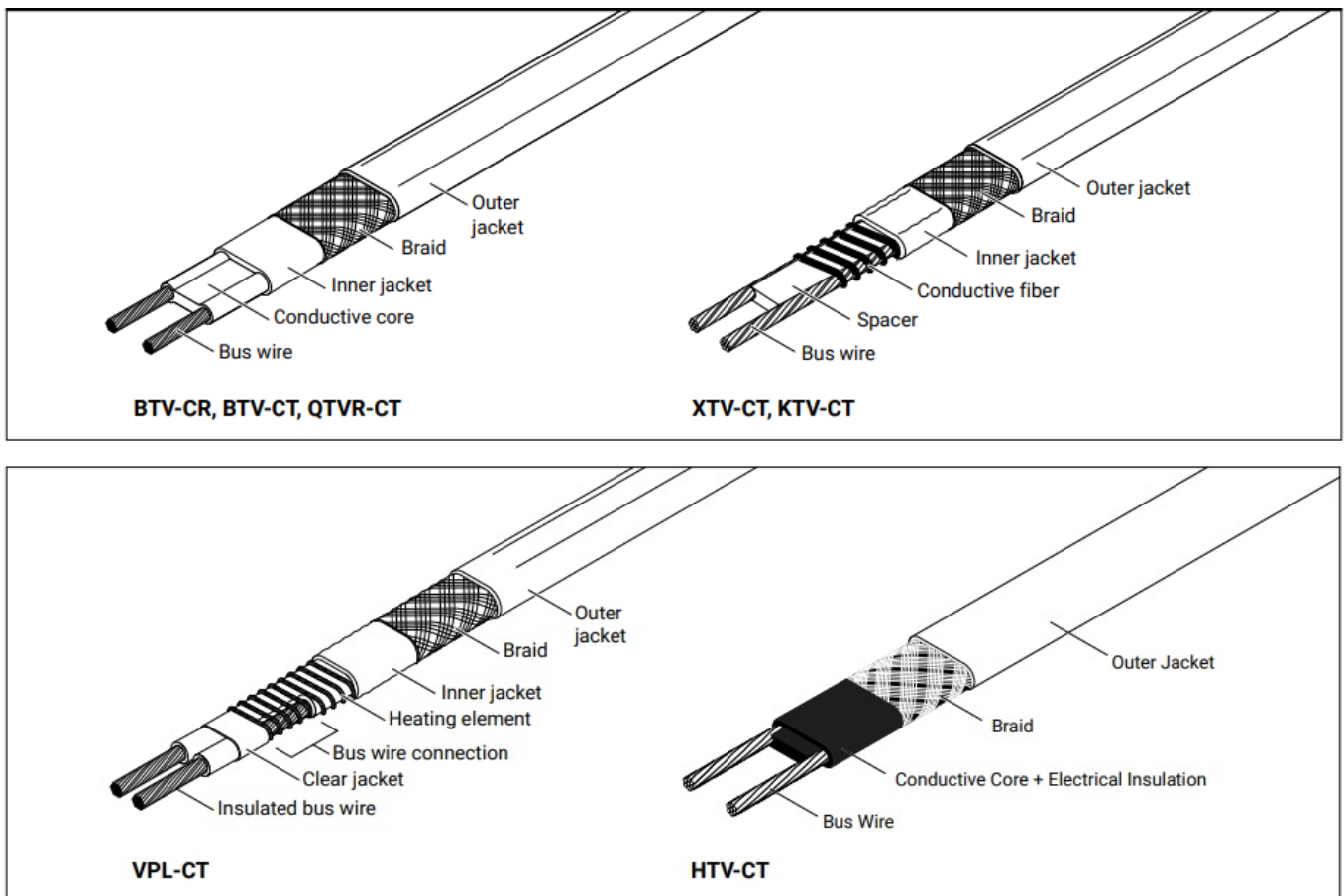
Consult MSDS VEN 0058 for further information.

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

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

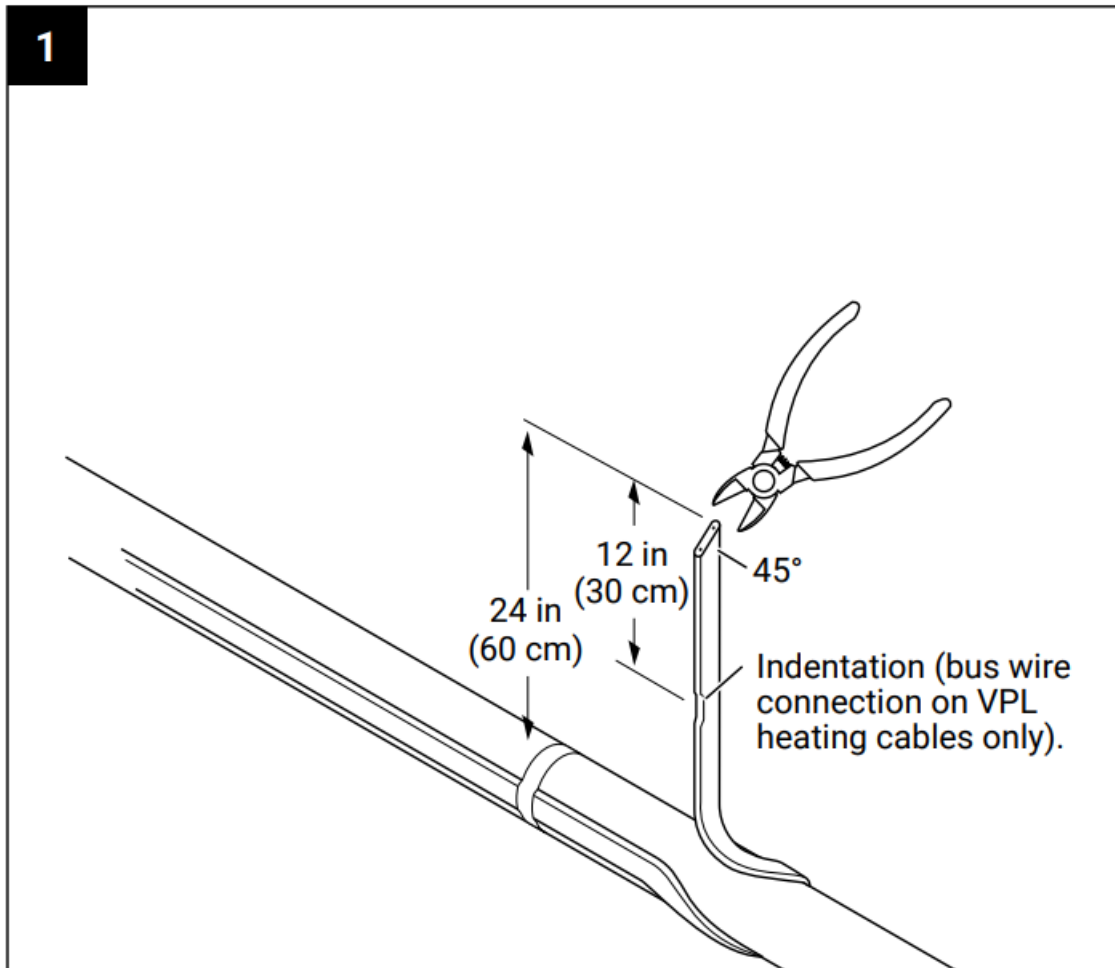
BOX INSTALLATION INSTRUCTIONS

Heating cable types

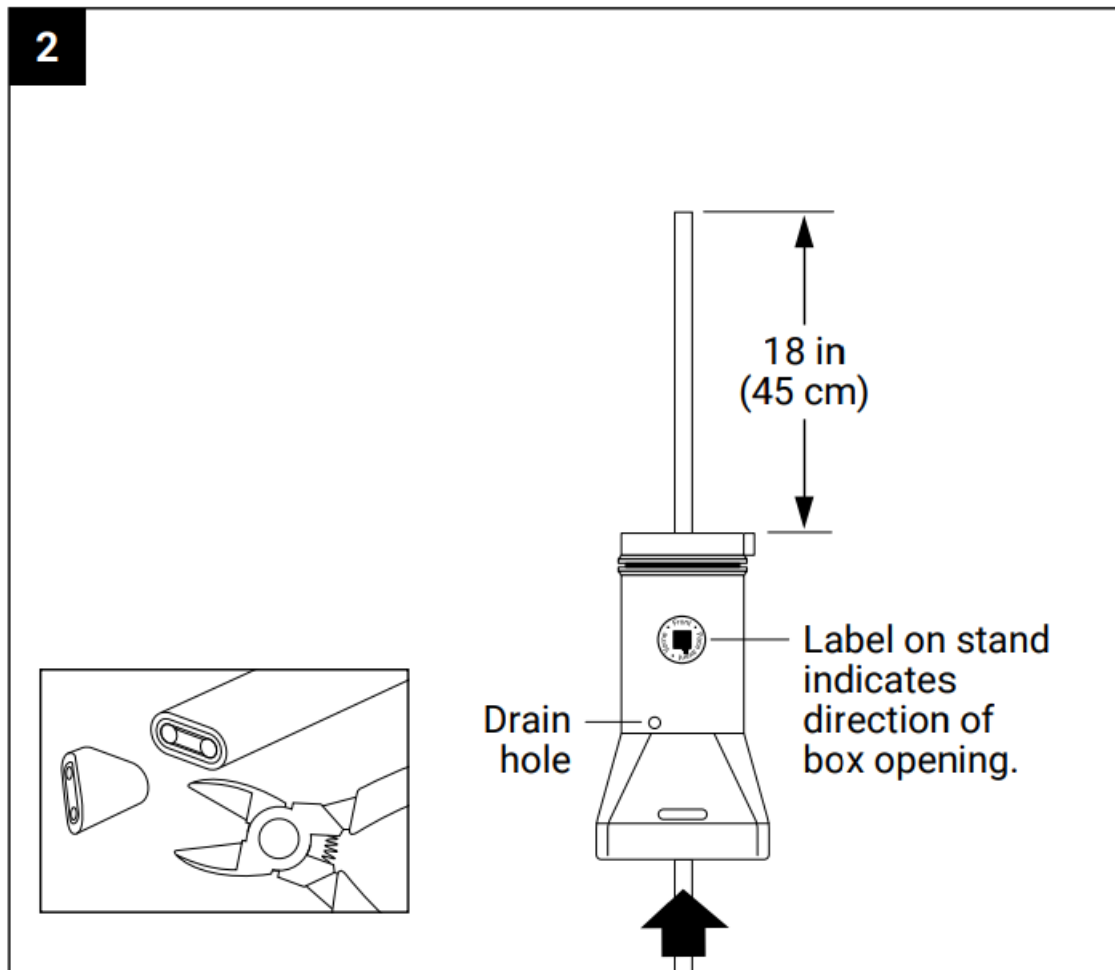


- Allow approximately 24 in (60 cm) of heating cable for installation. For VPL, cut cable 12 in (30 cm) from bus indentation.

- Cut off heating cable end at about 45° for easier insertion.



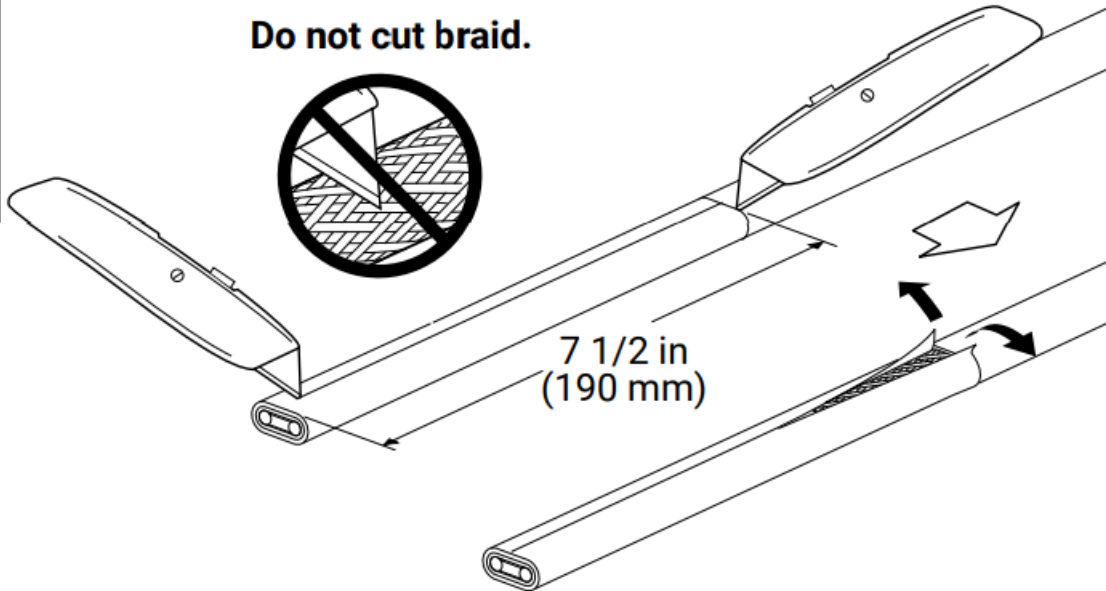
- Optional: If stand is to be installed on bottom side of pipe, knock out drain hole prior to inserting cable.
- With label on stand facing desired direction of box opening, push 18 in (45 cm) of heating cable through stand. Use cable lubricant if needed.
- Square off cable end with 90° cut.



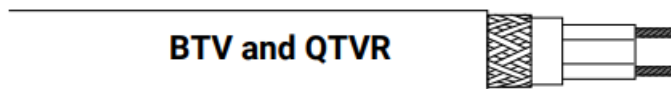
- Lightly score outer jacket around and down as shown.
- Bend heating cable to break jacket at score, then peel off jacket.

3

Do not cut braid.



4



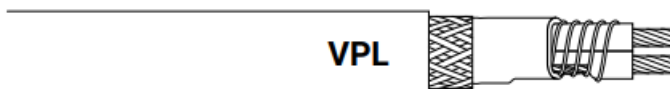
BTV and QTVR

Go to Step 5A



XTV and KTV

Go to Step 5B



VPL

Go to Step 5C

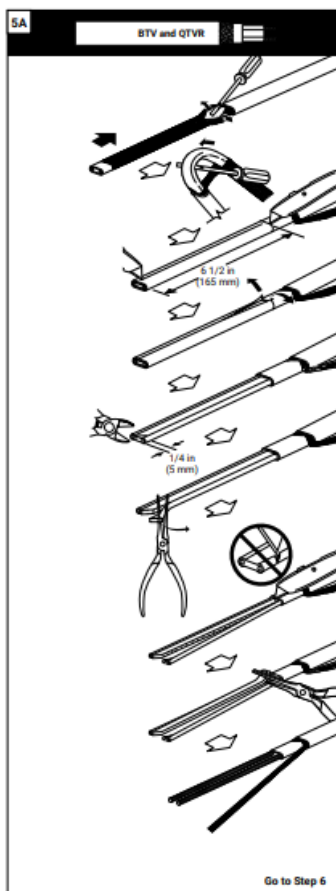


HTV

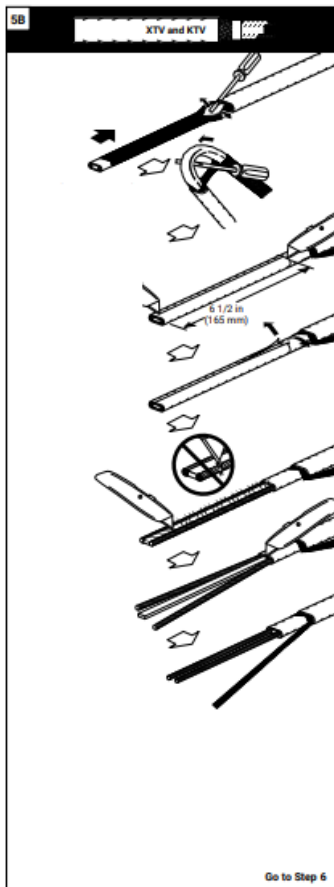
Go to Step 5D

- Push braid back to create a pucker.

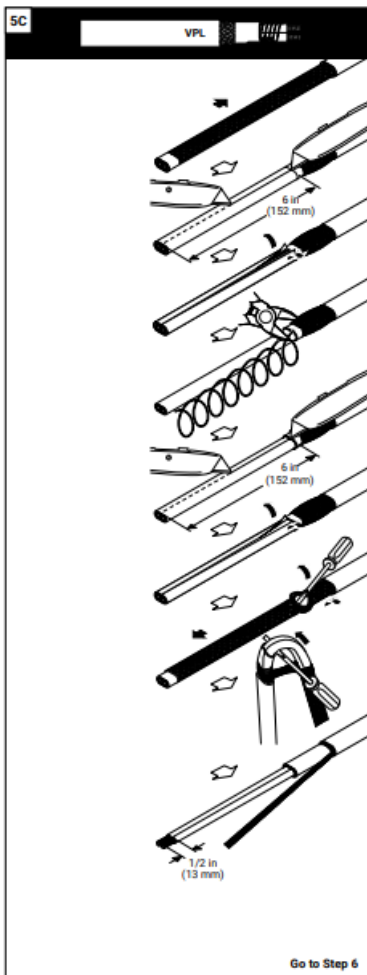
- At pucker use a screwdriver to open braid.
- Bend heating cable and work it through opening in braid.
- Lightly score inner jacket around and down as shown.
- Peel off inner jacket.
- Notch core.
- Peel bus wire from core.
- Score core between buswires at inner jacket.
- Bend and snap core.
- Peel core from bus wire.
- Remove any remaining core material from bus wires.
- Pull braid tight to make pigtail.



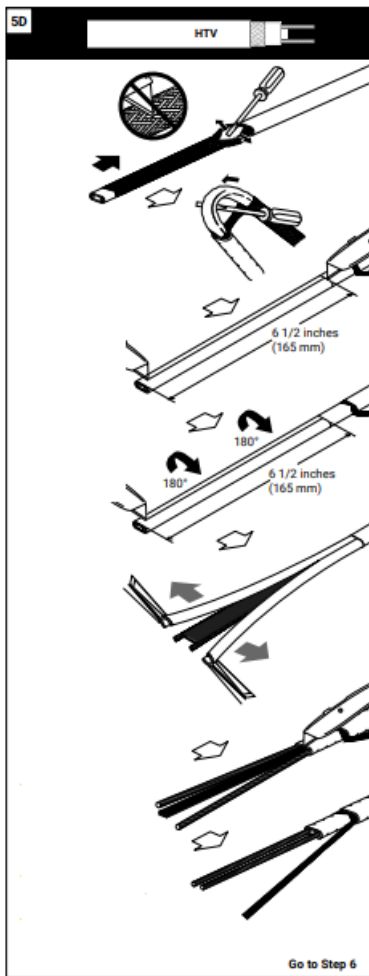
- Push braid back to create a pucker.
- At pucker use a screwdriver to open braid. \
- Bend heating cable and work it through opening in braid.
- Lightly score inner jacket around and down as shown.
- Peel off inner jacket.
- Cut and remove all fiber strands.
- Score and remove center spacer.
- Remove any remaining fiber material from bus wires.
- Pull braid tight to make pigtail.



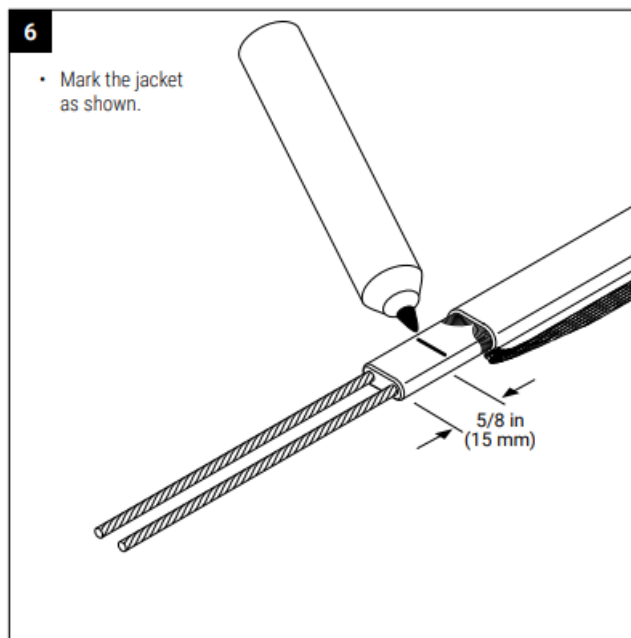
- Push braid back and bunch as tight as possible.
- Lightly score inner jacket around and down as shown.
- Peel off inner jacket.
- Unwind heating element, cut and remove as shown.
- Lightly score clear jacket around and down as shown.
- Bend heating cable to break jacket at the score then peel off jacket.
- Push braid forward. Use a screwdriver to open braid as shown.
- Bend heating cable and work it through opening in braid.
- Remove insulation from ends of bus wires.
- Pull braid tight to make pigtail.



- 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.
- Score inner jacket and conductive core around and down as shown.
- Peel off inner jacket.
- Flip the cable 180°C and score the other side of inner jacket and conductive core.
- Remove the inner jacket, conductive core by using needle-nose pliers as shown.
- Remove any remaining material from bus wires.
- Pull braid tight to make pigtail. 5D Go to Step 6
- Score and remove center insulation



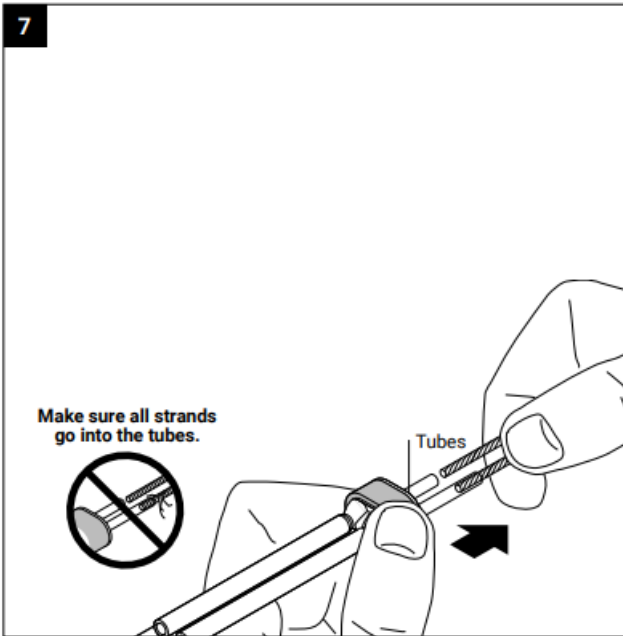
- Mark the jacket as shown.



CAUTION: Health Hazard.

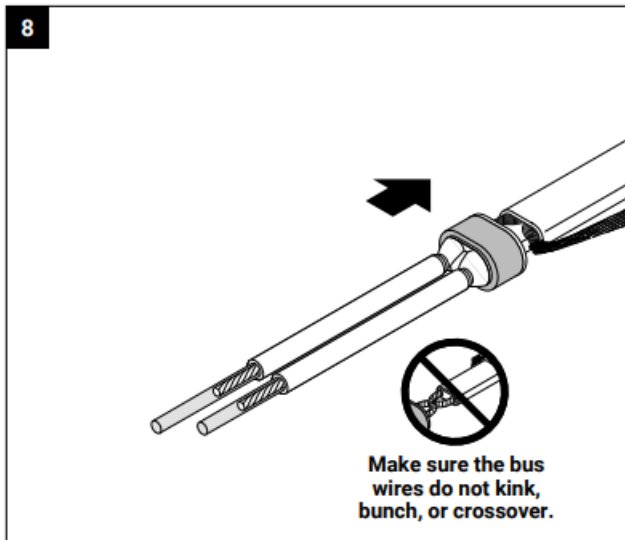
Wash hands after contact with sealant. Consult material safety data sheet VEN 0058.

- If needed, re-twist and straighten bus wires, then insert into the guide tubes as shown.

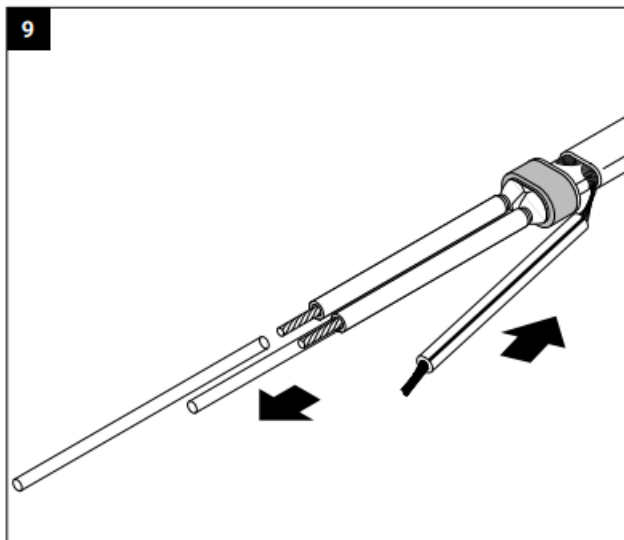


- Push core sealer onto the heating cable to the mark made in step 6.

Note: Extra force may be required for larger cables or at lower temperatures.

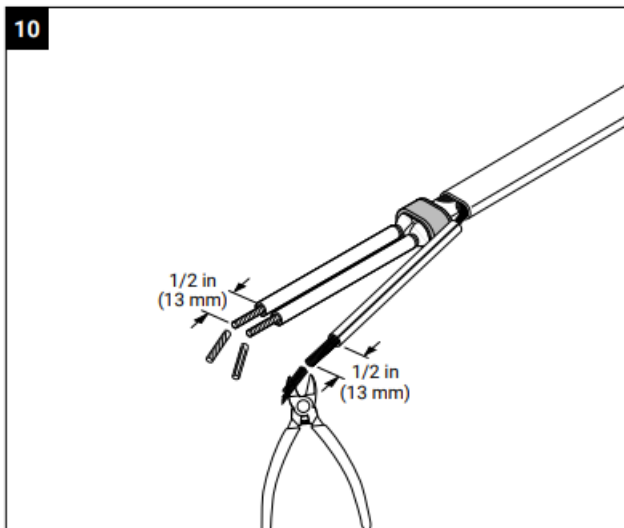


- Remove the guide tubes and dispose of them in a plastic bag.



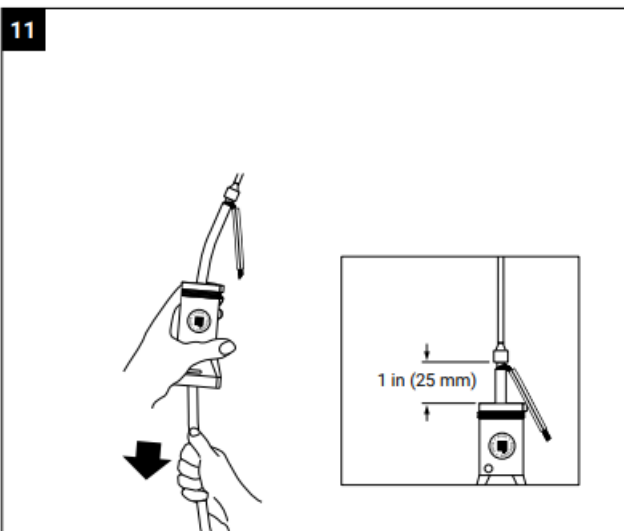
- Slip the green/yellow tube onto the braid. Heat-shrinking is not required.
- Trim bus wires and braid.

10



- Pull heating cable back into stand so 1 in (25 mm) is exposed as shown. Use cable lubricant if needed.

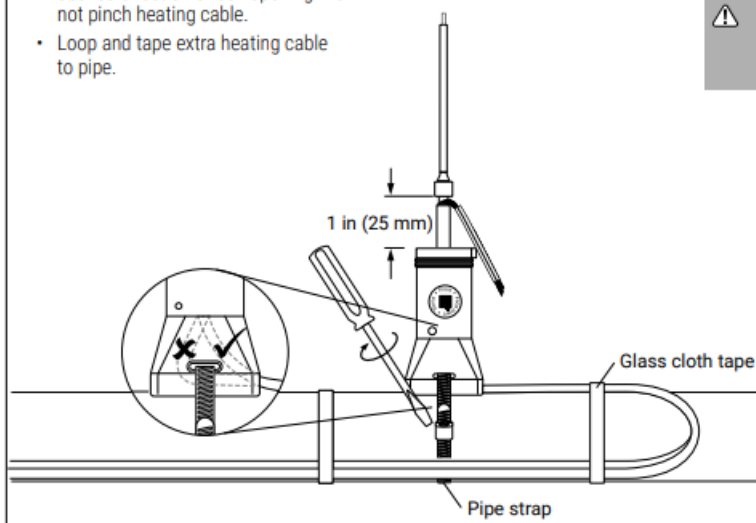
11



- Fasten stand to pipe with label facing desired direction of box opening. Do not pinch heating cable.
- Loop and tape extra heating cable to pipe

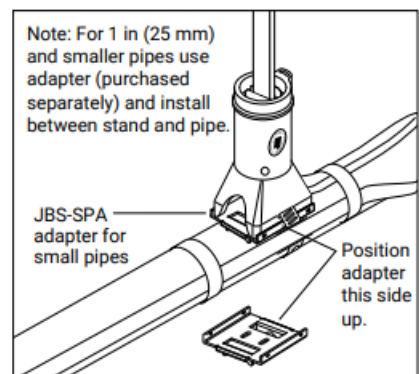
12

- Fasten stand to pipe with label facing desired direction of box opening. Do not pinch heating cable.
- Loop and tape extra heating cable to pipe.



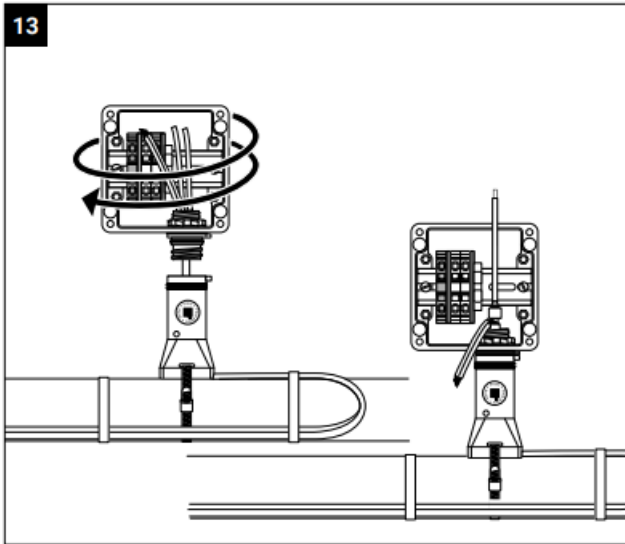
CAUTION: To avoid pinching the heating cable, be sure the cable is not under the pipe strap.

ATTENTION: Pour éviter de pincer le câble chauffant, assurez-vous que le câble ne se trouve pas sous la sangle du tuyau.



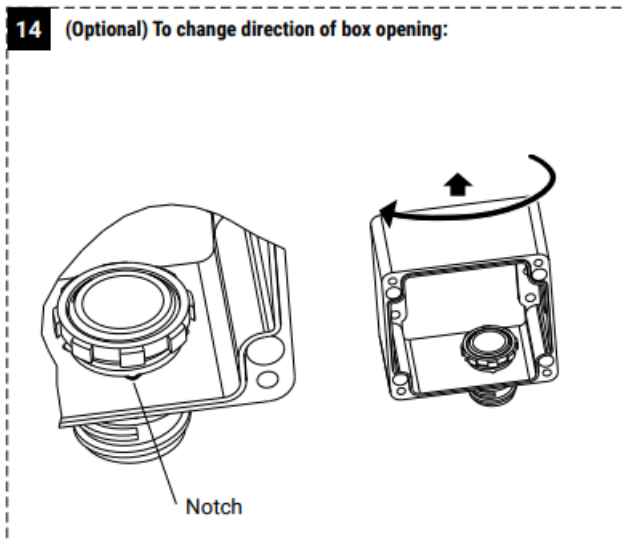
- Screw box onto stand until it stops. Do not overtighten.

13



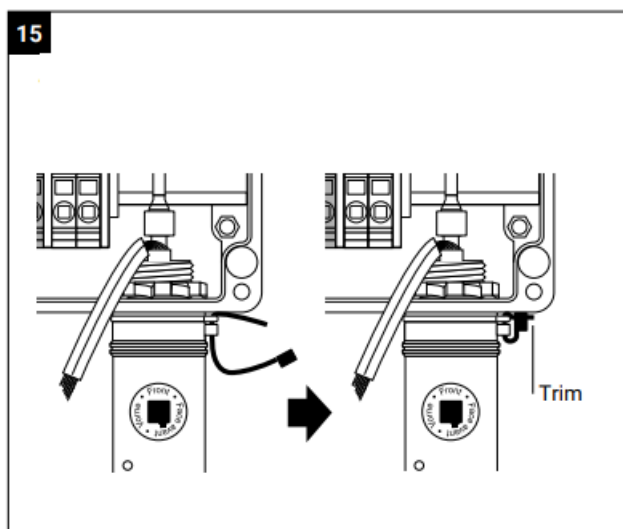
- Loosen locknut using adjustable pliers.
- Lift box and rotate. Make sure tab on threaded piece fits into one of the four notches in box.
- Tighten locknut

14 (Optional) To change direction of box opening:



- Insert cable tie through slots on stand and box, and tighten firmly to prevent box rotation.

15

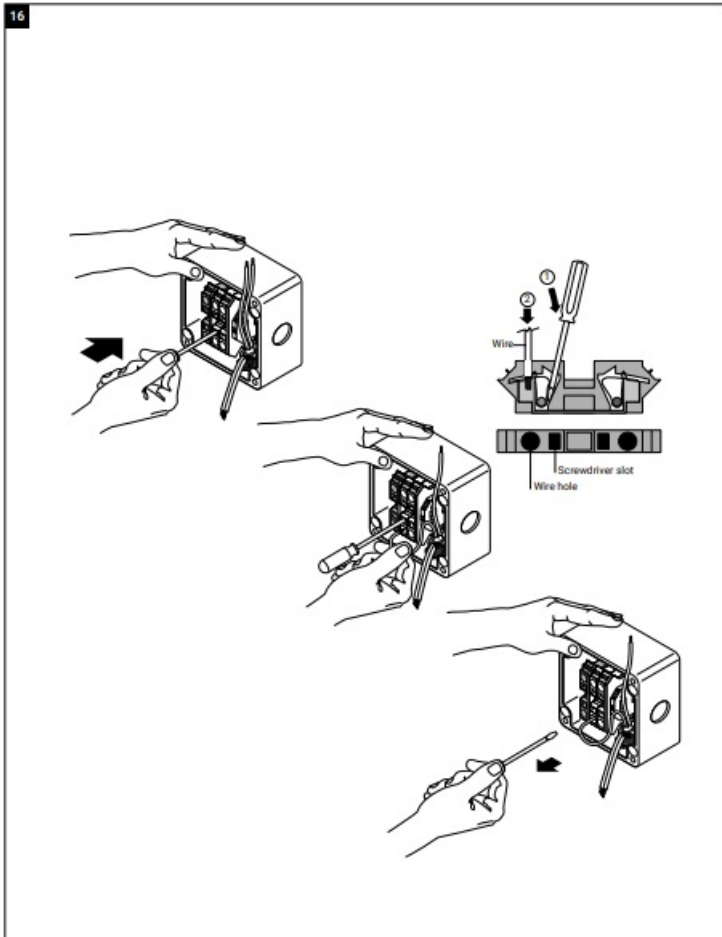


- This kit uses spring clamp style terminals.
Terminals use a steel spring to clamp the wire to provide improved vibration resistance, reduced maintenance

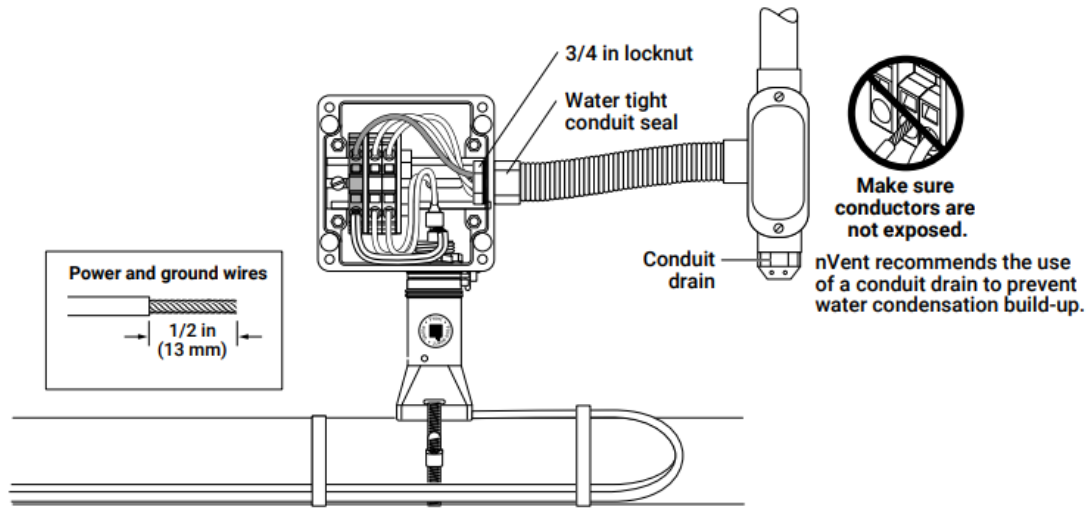
and faster installation.

To connect wires, firmly insert a slotted screwdriver into the square hole (1) to open the spring. When fully inserted, the screwdriver will lock 2 into place, allowing you to remove your hand and insert the wire into the round hole (1 2). Remove the screwdriver to clamp the wire. The wire is held securely against the bus bar for low contact resistance over time without the need to periodically retighten screws

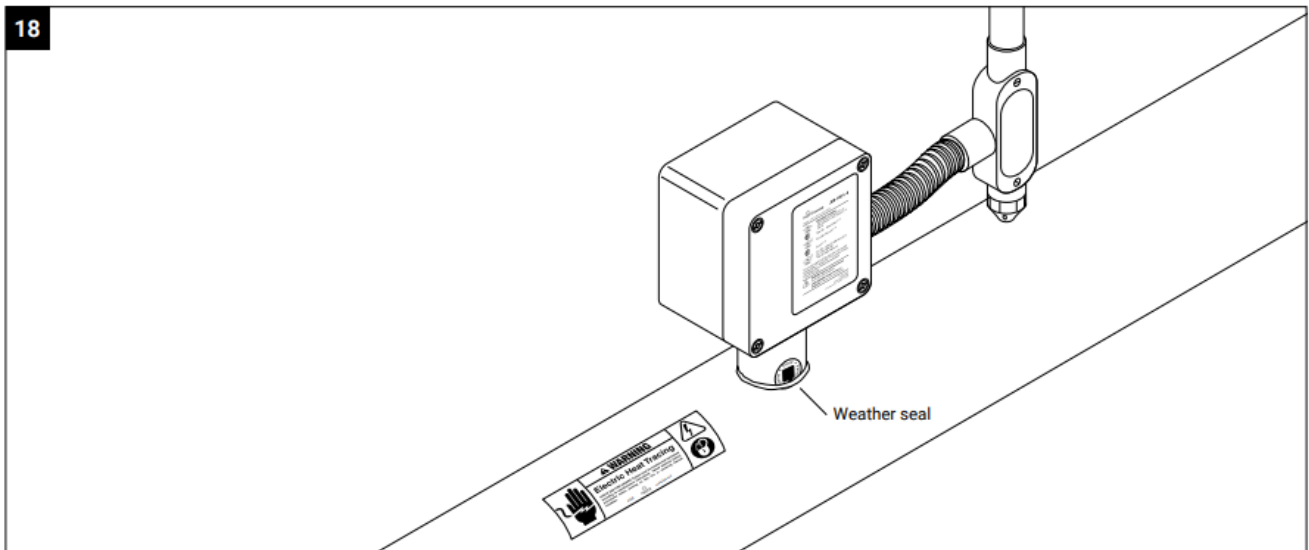
- Push screwdriver FIRMLY into square hole.
- Insert wire into round hole.
- Use green terminal for braid and ground wire.
- Remove screwdriver.
- Repeat for all connections.



- Install conduit and fittings as shown. To minimize loosening due to pipe vibration, use flexible conduit.
- Pull in power and ground wires, strip off 1/2 in (13 mm) of insulation and terminate



- nVent recommends the use of a conduit drain to prevent water condensation build-up.
- Install lid. Torque = 1.02 to 1.47 Nm
- Apply insulation and cladding.
- Weather-seal the stand entry.
- Leave these instructions with the end user for future reference



WARNING: Explosion Hazard- Substitution of Components May Impair Suitability for Class I Division 2 (Zone 2)

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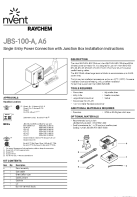
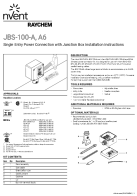
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PCN 789781-000



Documents / Resources

	<p>nVent RAYCHEM JBS-100-A Single Entry Power Connection with Junction Box [pdf] Instruction Manual</p> <p>JBS-100-A Single Entry Power Connection with Junction Box, JBS-100-A, Single Entry Power Connection with Junction Box, Junction Box, Box, Single Entry Power Connection, Entry Power Connection, Power Connection, Connection</p>
	<p>nVent RAYCHEM JBS-100-A Single Entry Power Connection with Junction Box [pdf] Instruction Manual</p> <p>JBS-100-A Single Entry Power Connection with Junction Box, JBS-100-A, Single Entry Power Connection with Junction Box, Entry Power Connection with Junction Box, Junction Box, Box, Entry Power Connection, Power Connection, Connection</p>

References

- [🔥 The Future of Connection and Protection | nVent](#)
- [🔥 Electrical Heat Tracing | Heat Tracing | nVent RAYCHEM](#)