

Instruction manual

for the TK Series Vertical Lineset support system



 **INABA DENKO®**

NOTES:

1. This product is designed for use with linesets up to 165 feet (50 meters) high. Heights above this will require a specially designed expansion loop.
2. Use of the correct brazing material and procedures is critical to ensure that the load bearing capability of the TK fitting is not compromised.

Consult Marketair for further details.

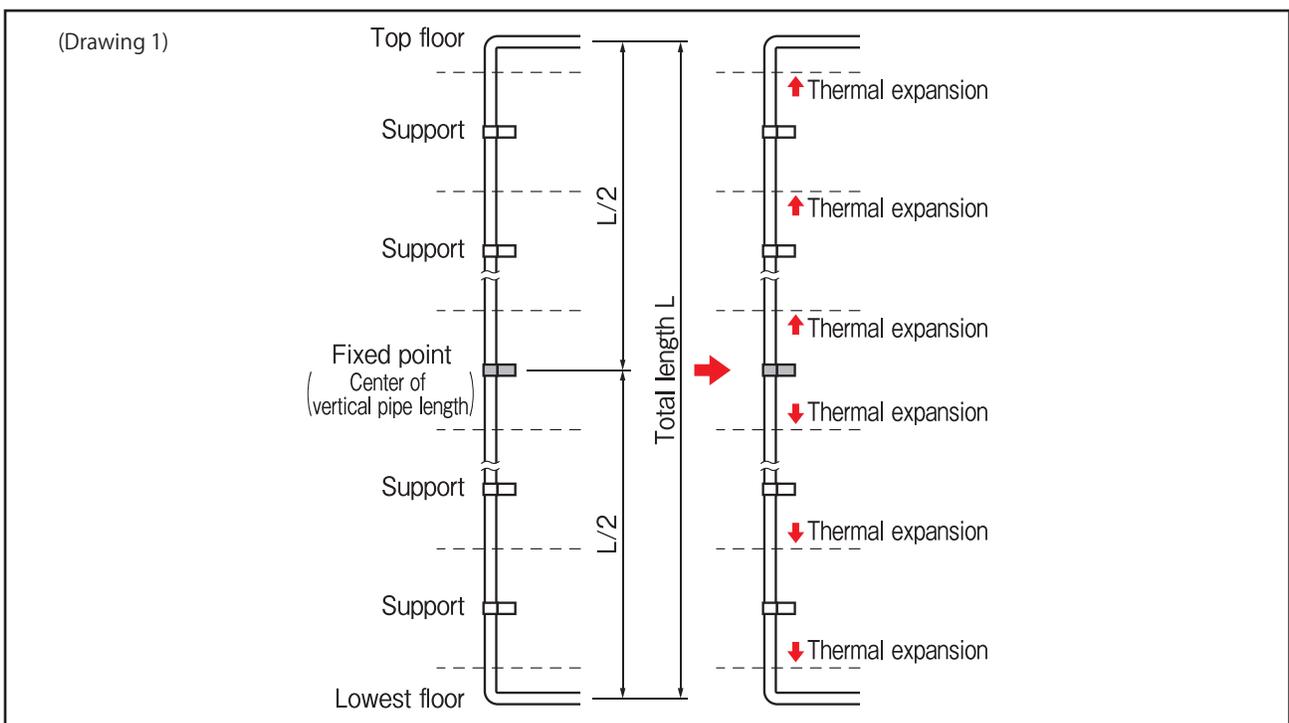
Installation Procedure

1

Determine positioning of TK Assembly

Determine the position of a fixed midpoint along the length of the vertical lineset pipe length. This acts as a fulcrum to direct the thermal expansion and contraction upwards and downwards from the midpoint, supporting the weight of the lineset and reducing the load on the fitting at the lowest floor by 50%.

Caution ● Use only on vertical risers of 165 feet or less. For use on vertical risers over 165 feet, special configurations are required, consult Marketair for details.



2

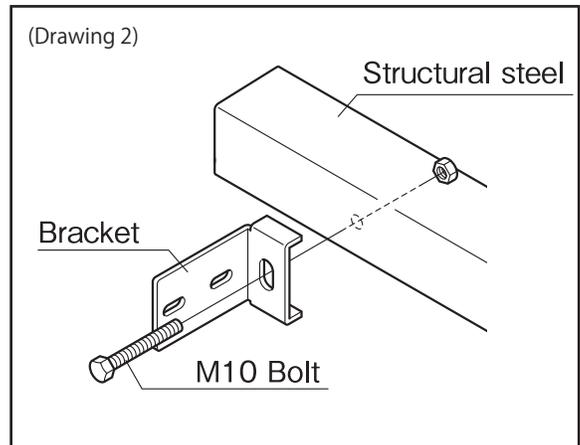
Remove Insulation

Before brazing the copper pipe support ferrule onto the lineset pipe, first remove the insulation around the work area for 6" in both directions.

3

Install Support Bracket

If attaching bracket to a structural steel member use a 3/8" galvanized bolt and nut, and ensure that the assembly can support the weight of the lineset. If attaching bracket to concrete, masonry or block wall, use the TK-K bracket and ensure it is firmly anchored.

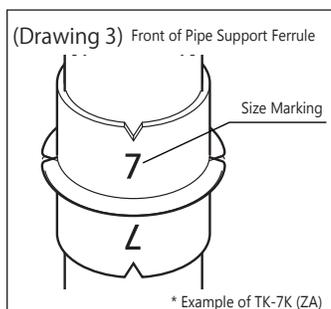


4

Install Pipe Support Ferrule

1 Selection, positioning and set-up of pipe support

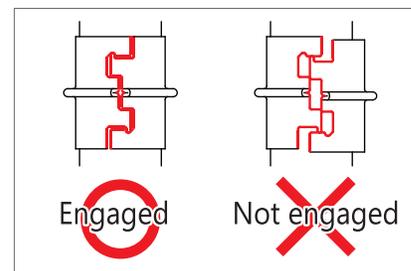
Select only correct TK model to suit lineset to be supported.

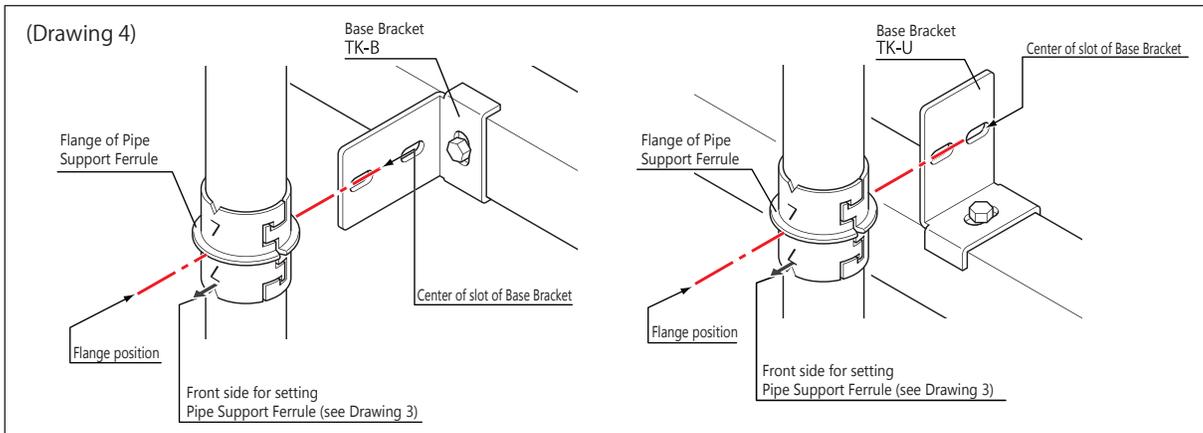


NOTE: TK model number is stamped on surface of ferrule at front.

Caution

- When fitting pipe support ferrule around pipe, the interlocking edges on the right hand vertical seam must engage completely with each other to ensure that ferrule will fit inside the fixing clamp.



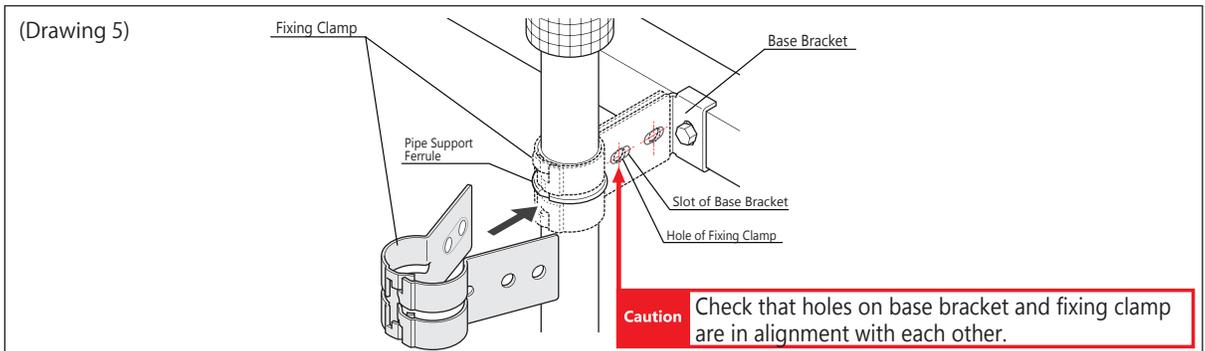


Caution ● Center lines of pipe support ferrule and slot on mounting bracket must be in alignment with each other to ensure correct attachment of fixing clamp to bracket.

2 Check for mounting position of Pipe Support Ferrule

Place ferrule around pipe so size marking faces the installer (drawing 3) and clamp it onto the pipe surface ensuring that the centerline of the ferrule is aligned with the centerline of the mounting bracket (drawing 4).

Check that mounting position of ferrule is correct by temporarily fitting the fixing clamp around the ferrule (drawing 5) to confirm that the mounting holes line up.



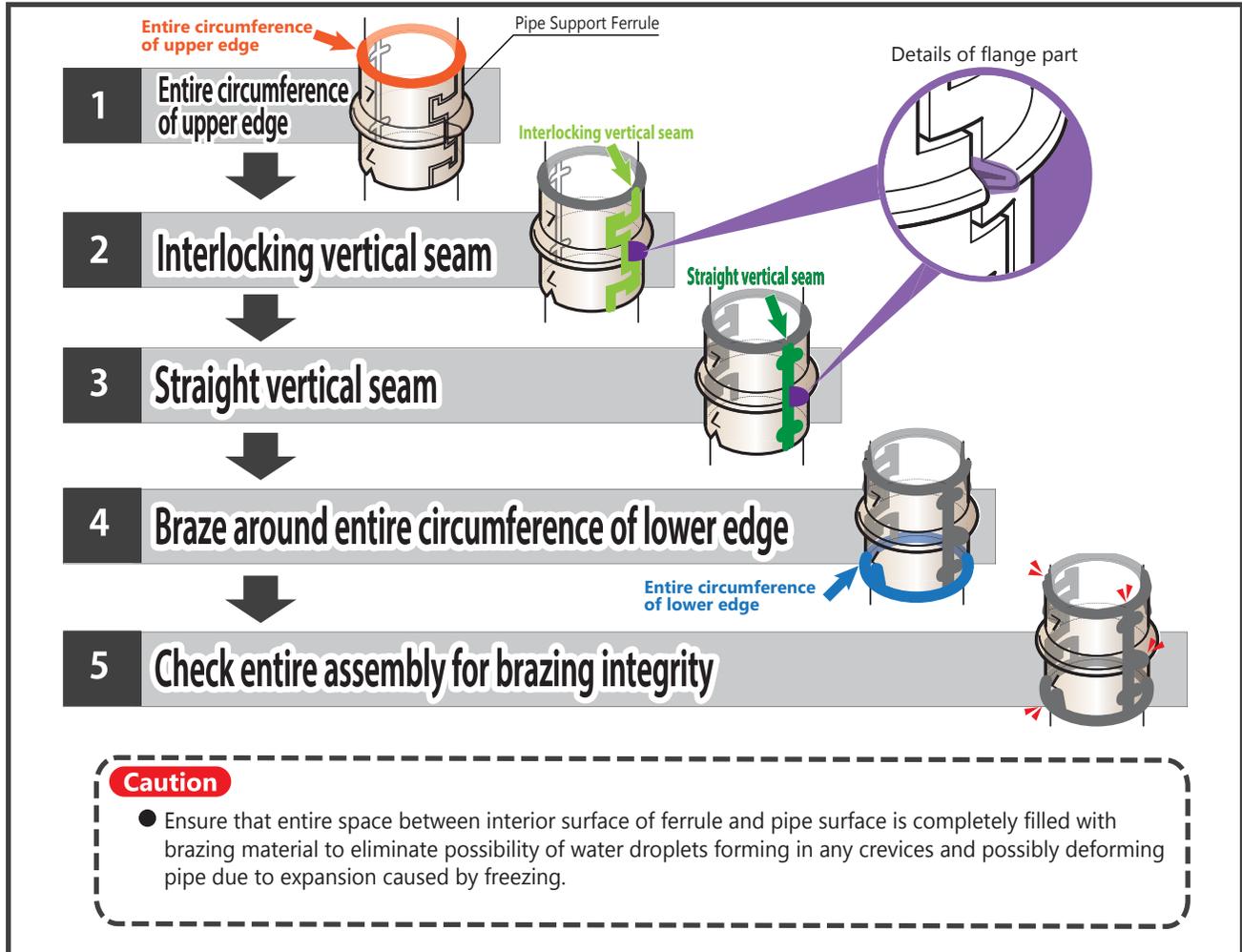
Remove fixing clamp before proceeding to next step.

5

Install Fixing Clamp

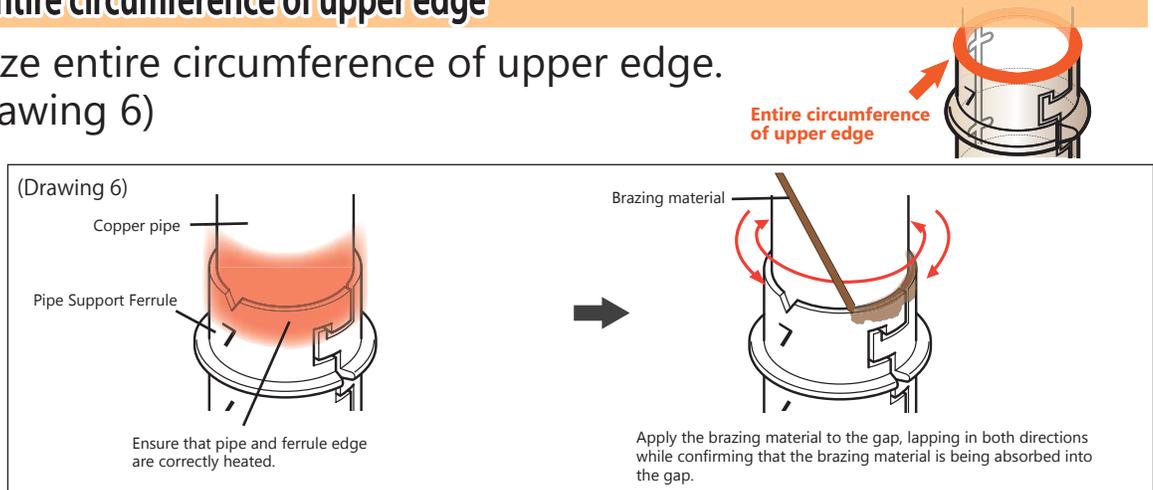
Caution TO AVOID POTENTIAL RISK OF EXPLOSION, NEVER BRAZE LINESET WHEN IT IS UNDER PRESSURE!

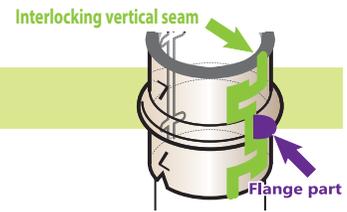
Use following procedure to securely braze pipe support ferrule onto pipe using only hard solder (SILVER SOLDER).



1 Entire circumference of upper edge

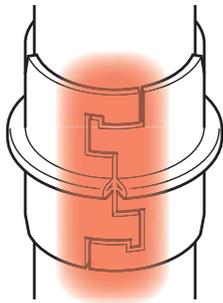
Braze entire circumference of upper edge.
(Drawing 6)





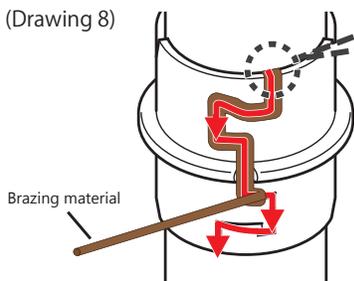
Braze the irregular interlocking vertical seam and flange. (Drawing 7 - 10)

(Drawing 7)



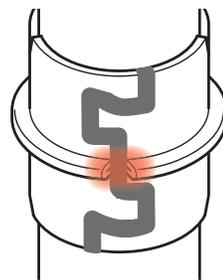
Ensure that entire surface of weld area is properly heated.

(Drawing 8)



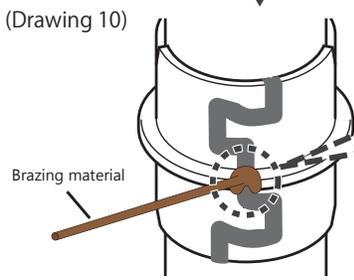
Apply filler rod into the gap between the 2 ferrule halves and ensure that the gap is completely filled with brazing material.

(Drawing 9)



Heat up the area between the open ends of the raised flange.

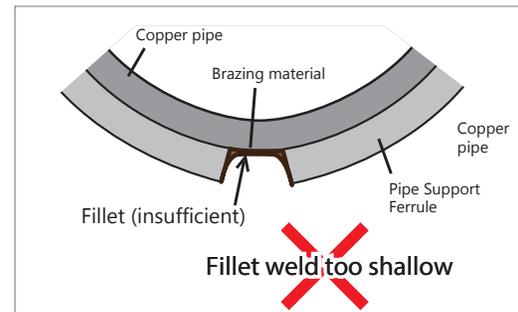
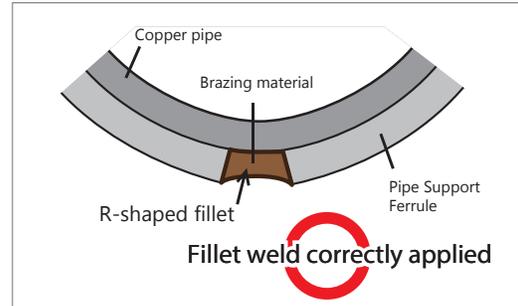
(Drawing 10)



Apply brazing material and ensure this area is completely filled as well.

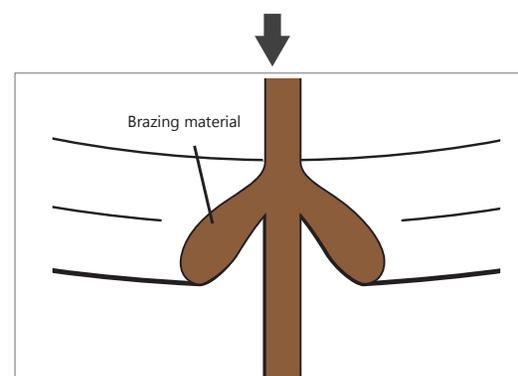
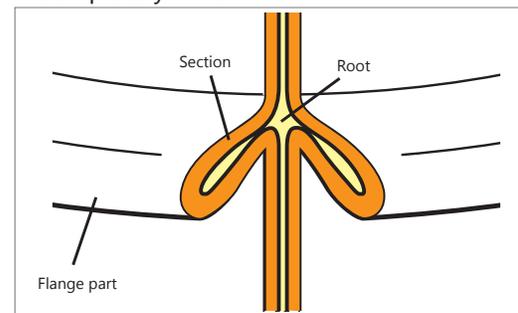
Caution

- Ensure that gap is completely filled with a substantial fillet weld.

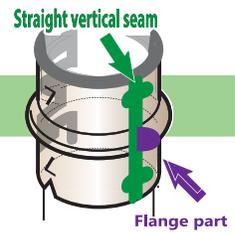


Caution

- Ensure that the entire surface of the gap is completely filled.

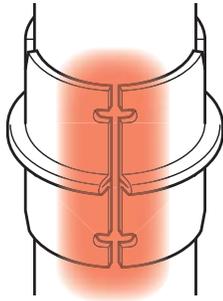


3 Straight vertical seam



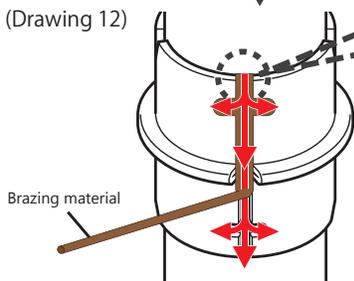
Braze straight vertical seam and flange on opposite side. (Drawing 11 - 14)

(Drawing 11)



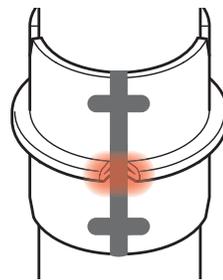
Ensure that entire surface of weld area is properly heated.

(Drawing 12)



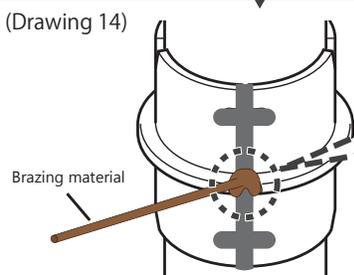
Apply filler rod into the gap between the 2 ferrule halves and ensure that the gap is completely filled with brazing material..

(Drawing 13)



Heat up the area between the open ends of the raised flange.

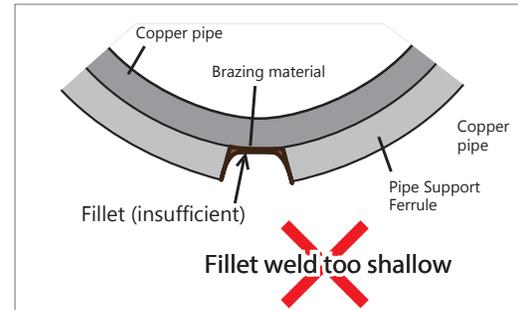
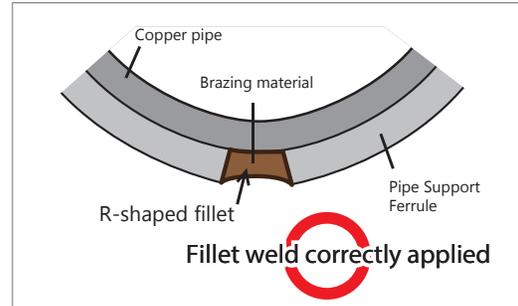
(Drawing 14)



Apply brazing material and ensure this area is completely filled as well.

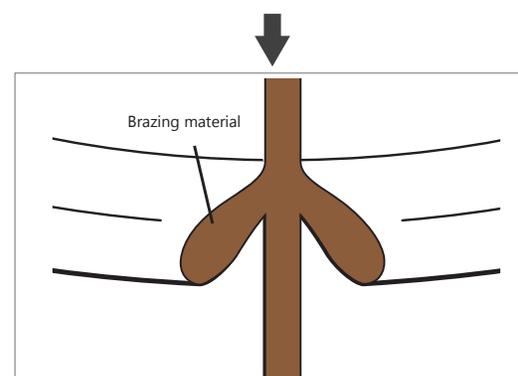
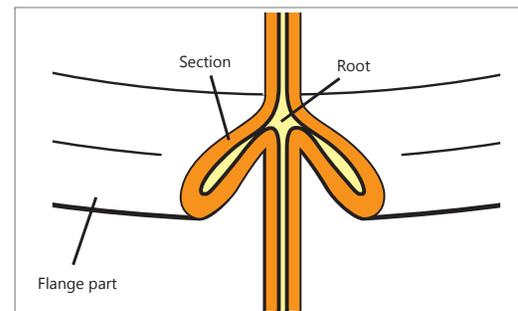
Caution

- Ensure that gap is completely filled with a substantial fillet weld.

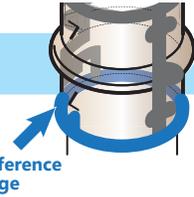


Caution

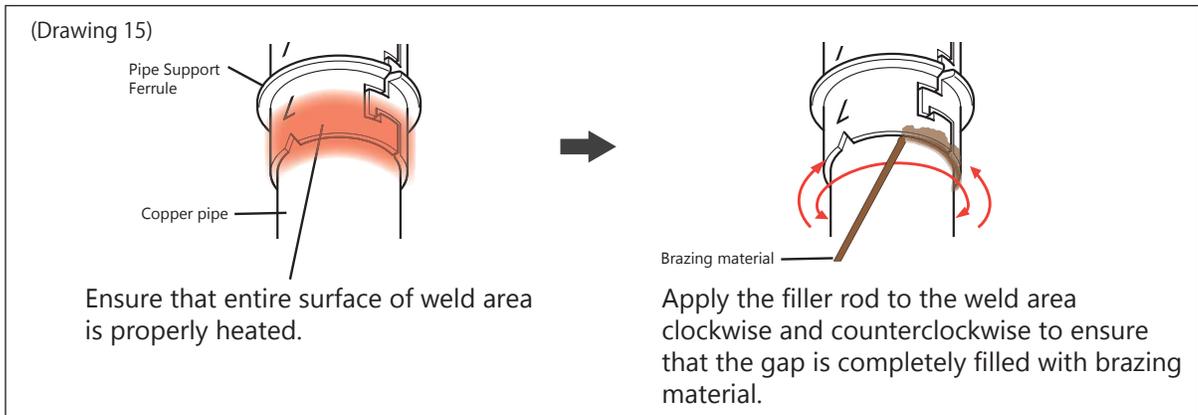
- Ensure that the entire surface of the gap is completely filled.



4 Entire circumference of bottom edge



Braze entire circumference of bottom edge.
(Drawing 15)



5 After competing brazing, recheck to confirm integrity of braze joint



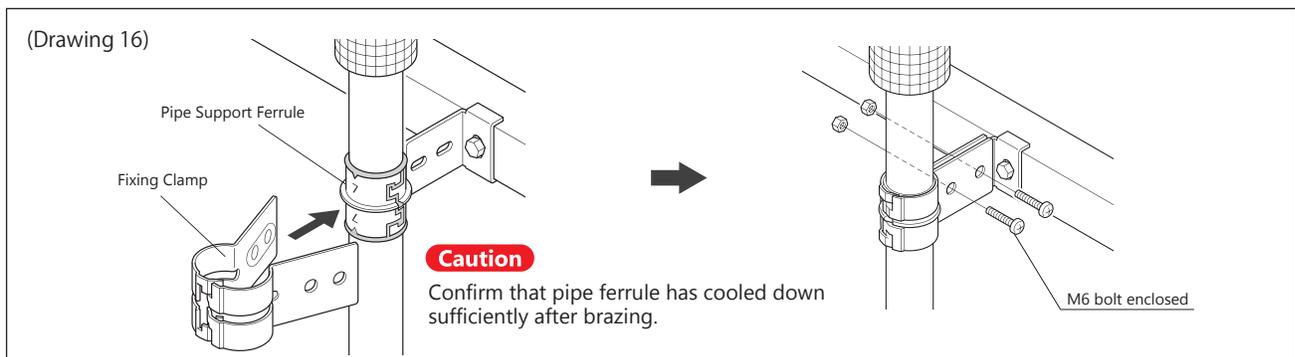
Check brazing condition again after completion of brazing work.

Caution

- Filled brazing material may flow downwards when heat is applied to an adjacent section, In this case, rebraze affected part.
- Check for integrity of brazing material on all brazed surfaces of ferrule.
- Cool down brazed ferrule assembly with damp cloth.

6 Attaching fixing clamp to Pipe Support Ferrule

After cooling ferrule, attach fixing clamp around ferrule and attach to mounting bracket (drawing 16).

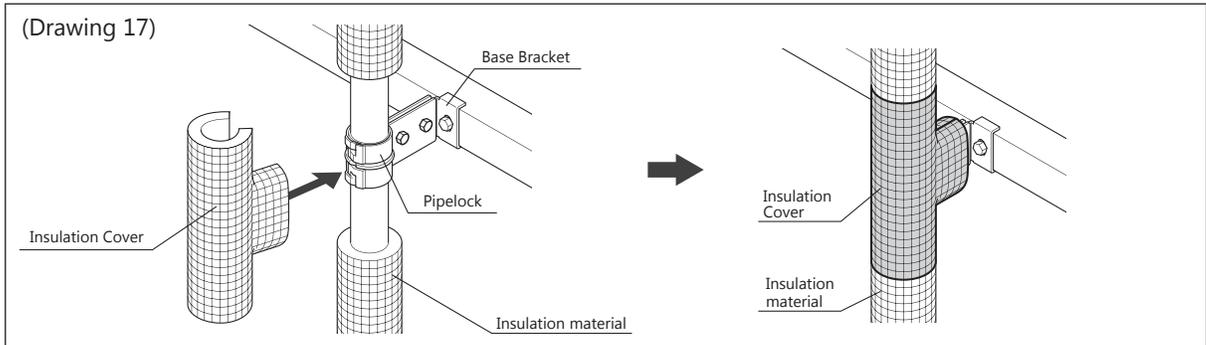


Caution ● IF fixing clamp is attached to ferrule before it is sufficiently cooled, damage to painted surface of clamp may occur.

7

Fitting of Insulation Sleeve to prevent sweating

- 1 To prevent sweating, install preformed insulation sleeve Type TK-DH sized correctly to fit TK model used to insulate entire ferrule, clamp and bracket assembly (drawing 17).



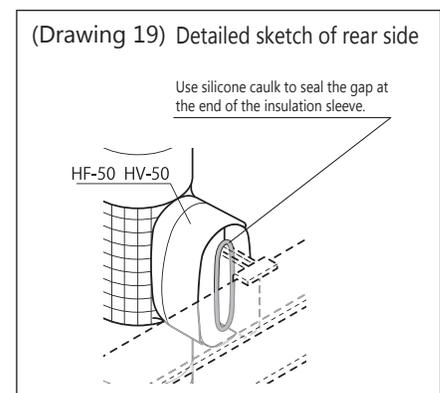
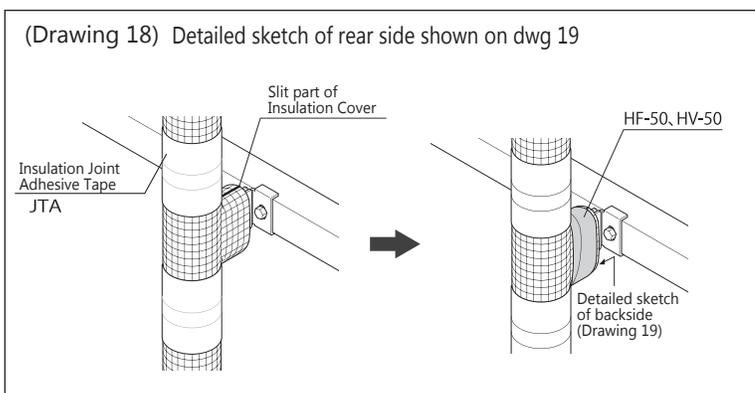
Caution

- Remove any dust and dirt at junction of insulation sleeve and lineset insulation.

- 2 Seal horizontal insulation seams by wrapping them with Inaba Insulation joint adhesive tape (JTA -100-I) centering it on joint and overlapping ends at least 1/2". (drawing 18).

To seal short leg of insulation sleeve on mounting bracket, wrap it with Inaba Adhesive tape (HF-50, HV-50).

Coat open ends of insulation sleeve with silicone sealant to seal it onto the mounting bracket.



INABA DENKO®

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