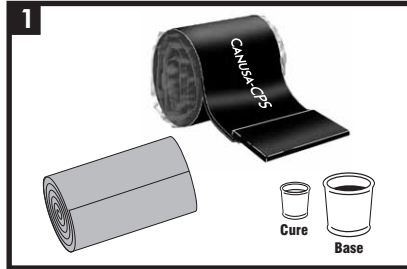


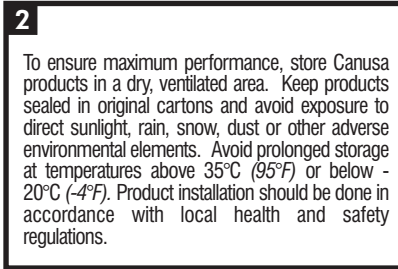
## TBK XL-65 Fibreglass Reinforced Sleeve System for Directional Drilling Kit of Pipelines

### Product Description



Canusa's Directional Drilling Kits - TBK XL systems are composed of a heat-shrinkable sleeve, a UV curable fibreglass reinforcement and epoxy kit(s). The epoxy kit(s) includes: application accessories, latex gloves and pre-measured quantities of Canusa E-Primer.

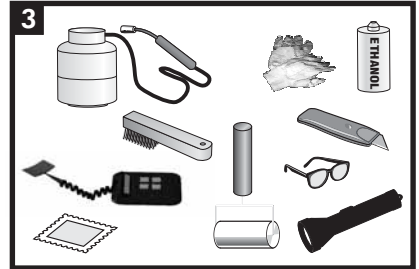
### Storage & Safety Guidelines



To ensure maximum performance, store Canusa products in a dry, ventilated area. Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements. Avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). Product installation should be done in accordance with local health and safety regulations.

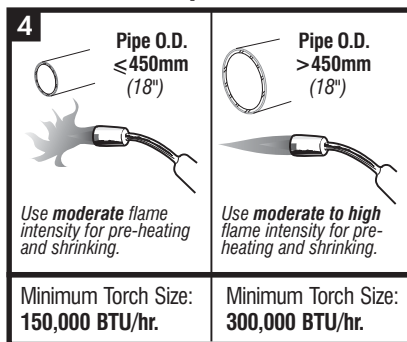
These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

### Equipment List

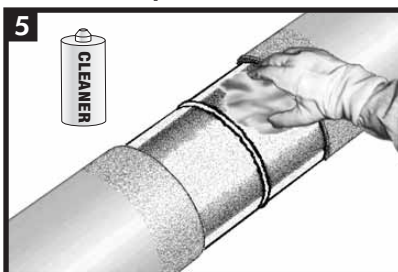


Canusa torch, propane tank, hose & regulator  
Temperature measuring device, roller, knife, wet film gauge  
Appropriate surface abrasion device, solvent  
400W Ultra-violet hand light, UV protective glasses  
Standard safety equipment (gloves, goggles, hard hat, etc.)

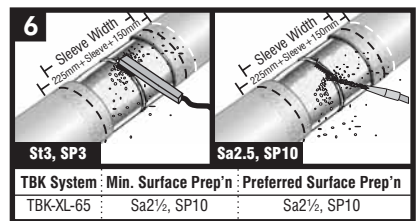
### Flame Intensity & Torch Size



### Surface Preparation

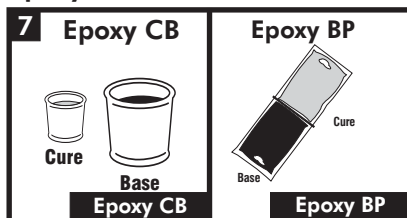


Clean exposed steel and adjacent pipe coating with a solvent cleaner to remove the presence of oil, grease, and other contaminants. Ensure that the mainline coating edges are bevelled to 30°.



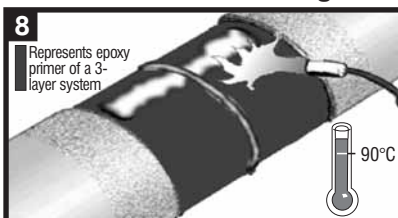
Ensure the pipe is dry before abrading. Using the chart above, abrade the pipe to the required cleanliness. Lightly abrade the line coating adjacent to the weld area to a distance 225mm (9") beyond the sleeve width on the front-end and 150mm (6") beyond the sleeve width on the back-end. Wipe clean or air blast the steel and pipe coating to remove foreign contaminants.

### Epoxy Primer



Follow the Preparation, Mixing and Application instructions provided with the supplied Canusa Epoxy Pack

### Pre-Heat & Primer Curing

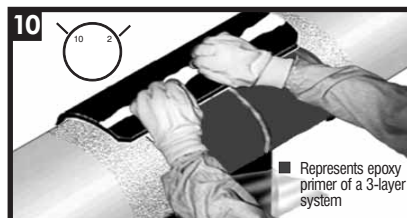


Pre-heat the epoxy and abraded coating to 90°C (194°F) with the appropriate propane torch. This will substantially cure the epoxy and ensure proper pre-heat of the substrate. Ensure that the epoxy primer is dry to the touch prior to sleeve installation.

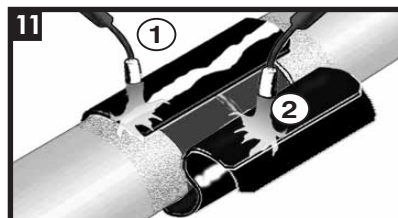
### Sleeve Installation



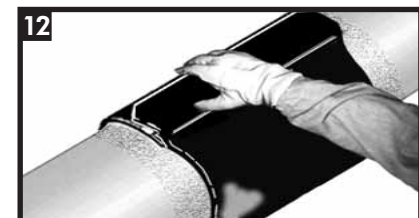
Using the wider sleeve, partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.



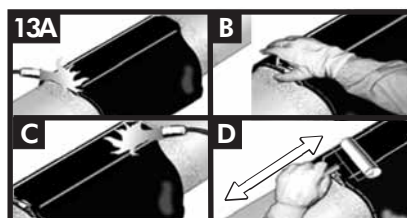
Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place. Remove the remaining release liner and hold-down strip tape (if any) on the underside of the closure.



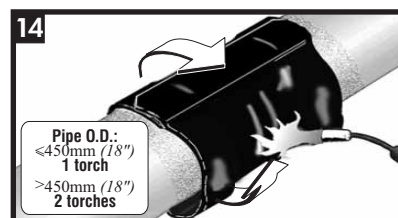
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap (1) and the adhesive side of the overlap (2).



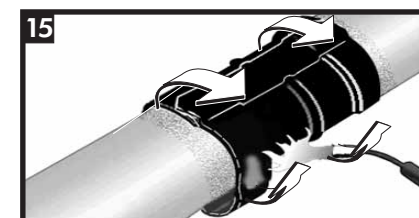
Press the closure firmly into place. Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



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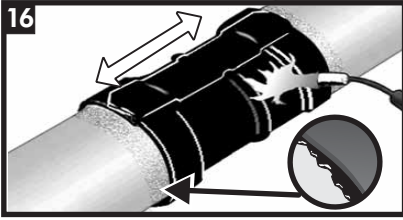
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of pipe.



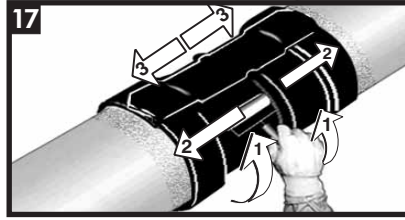
Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.

# TBK XL-65

Fibreglass Reinforced Sleeve System for Directional Drilling Kit of Pipelines

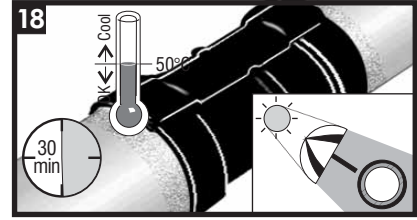


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.



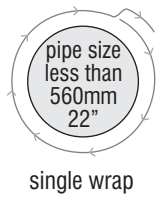
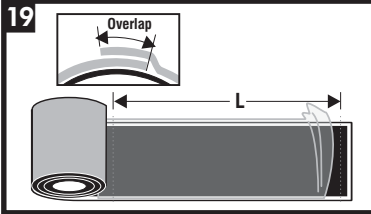
While the sleeve is still hot and soft, use a hand roller to gently roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. Continue the procedure by also firmly rolling the closure with long horizontal strokes from the weld outwards.

## Cool Sleeve to < 50°C

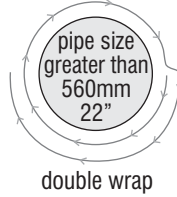


Allow the sleeve to cool for 30 minutes. After 30 minutes measure the sleeve surface temperature. If the temperature is above 50°C, use shading.

## UV Fibreglass Reinforcement



single wrap

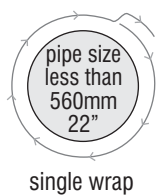
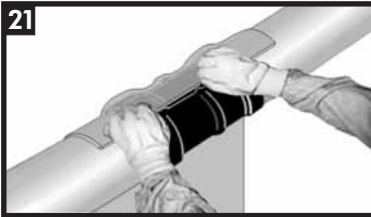


double wrap

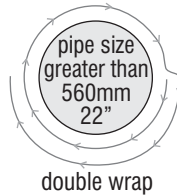
If the material is not supplied in a kit, measure the circumference of the applied sleeve and cut a length of the UV curable fibreglass reinforcement long enough to allow cover the sleeve + the overlap (for sizes greater than 560mm [22"], a double wrap at the bottom is required). **The minimum overlap is 100mm.**



Partially remove (~200-300mm) of the pink/orange release liner and...

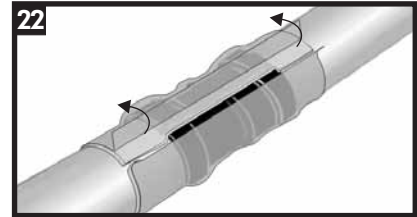


single wrap

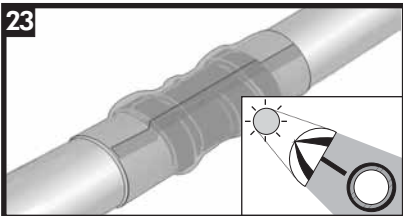


double wrap

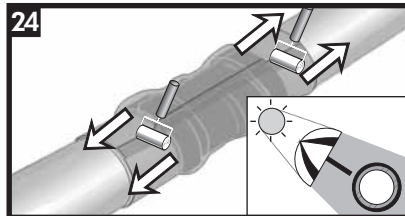
Centre the fibre-glass reinforcement over the sleeve and wrap as per the pipe size graphics (for single wraps, start between the 10 and 2 o'clock positions - for double wraps, start at the 3 or 9 o'clock positions). Press the underlap firmly into place.



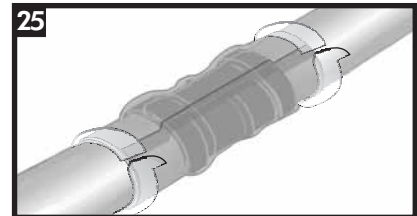
Fold-back the top release liner where the fibre-glass wrap will overlap.



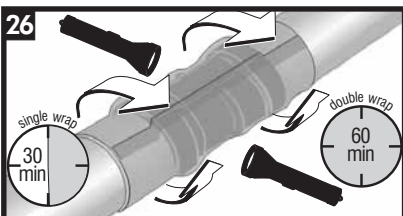
Finish wrapping the fibre-glass tightly around the cooled sleeve using the appropriate overlap. Fold the top release liner back over the fibre-glass wrap. **In bright sunlight, ensure the fibre-glass reinforcement is shaded.**



Using the roller, smooth each edge of the fibreglass at the transition profile between the fibreglass and the pipe. Ensure the entire circumference conforms to the pipe and sleeve profile.

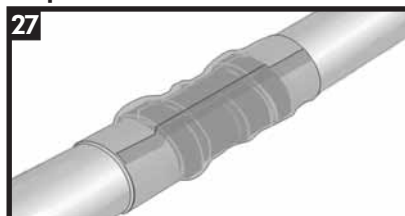


Tightly wrap the fibre-glass reinforcement with tension tape to add extra surface pressure to the ends.



**Wearing UV protective glasses**, cure the entire fibreglass wrap using the 400W ultra-violet light for a minimum of 30 minutes or until the entire fibreglass is hard all around its circumference. **For double wraps, a minimum of 60min is required.**

## Inspection



Visually inspect the installed system to ensure that:

- Fibreglass reinforcement is in full contact with the sleeve
- Adhesive flows beyond all sleeves edges.
- No cracks or holes in sleeve backing.

## Pulling Guidelines

**The sleeve system must be left to completely cool and epoxy fully cure before pipe is pulled through.**

Canusa UV FR is a self-extinguishing material that does not promote fire. It will give off CO and CO<sub>2</sub>, but no halogen gasses. Solidify unexposed surplus and dispose of together with processed material as cured plastic waste (in accordance with local and national regulations). Not classified as dangerous in the meaning of transport regulations.



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