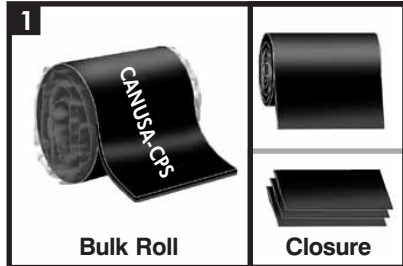


High Shrink - WLOX

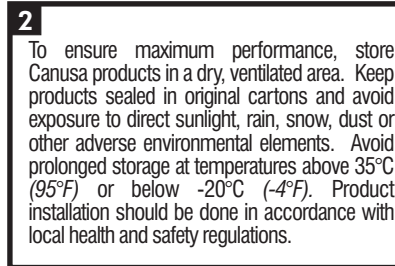
High shrink two piece protective bulk roll with separate closure

Product Description



High Shrink WLOX is typically shipped in bulk rolls. Closures are shipped either in bulk rolls or pre-cut. The adhesive is protected from contamination by an inner liner. High Shrink sleeves are used with tyton, flange, coupling, and casing joint applications.

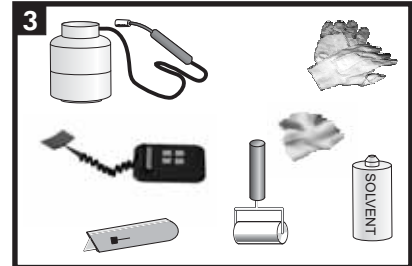
Storage & Safety Guidelines



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.

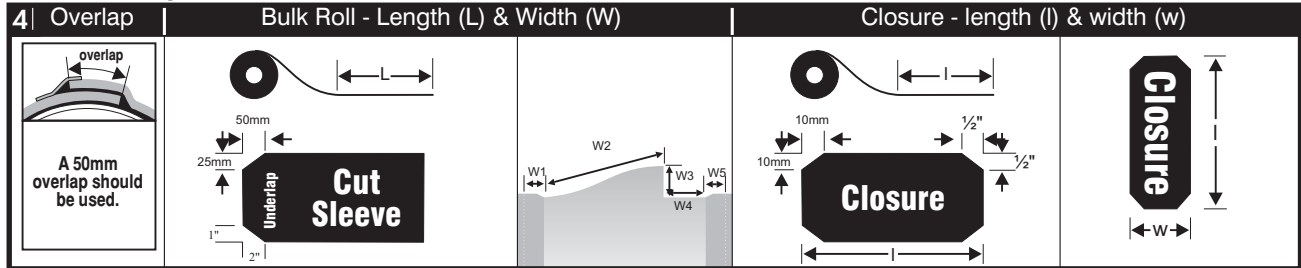
These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Equipment List



Propane tank & torch
Appropriate tools for surface abrasion
Knife, roller, rags & solvent cleanser
Temperature measuring device
Standard safety equipment, gloves, goggles, hard hat, etc.

Product Preparation - Sleeve



Cut the required length (L) of WLOX sleeve material from the bulk roll. The length should be calculated using the circumference of the joint + 150mm

$$L = \text{Joint O.D.} + 150\text{mm}$$

Cut the required width (W) of WLOX sleeve material from the bulk roll. The width should be calculated using the contours of the joint.

$$W = W1 + W2 + W3 + W4 + W5$$

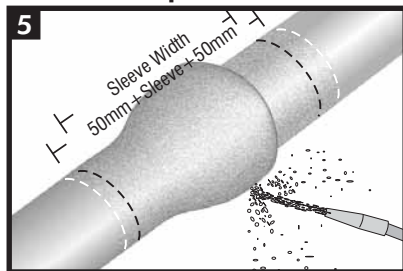
Ensure that there is no damage, dirt or moisture on the sleeve.

Cut the required length (l) of closure material from the bulk roll.

$$l = \text{sleeve width} - 5\text{mm}$$

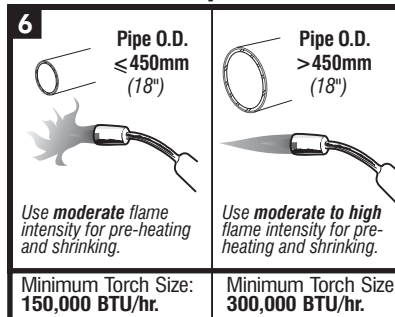
Ensure that there is no damage, dirt or moisture on the closure.

Surface Preparation



Ensure that the pipe is dry before cleaning. Prepare the steel joint area to a minimum of S12/SP2. Lightly abrade the pipe coating adjacent to the weld area to a distance of 50mm (2") beyond each end of the sleeve width.

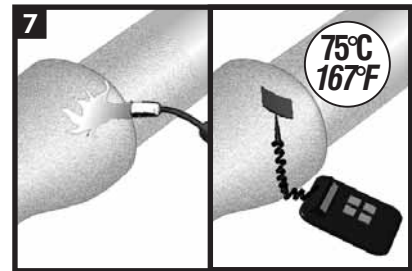
Flame Intensity & Torch Size



Minimum Torch Size: 150,000 BTU/hr.

Minimum Torch Size: 300,000 BTU/hr.

Pre-Heat



Pre-heat the joint area to a minimum of 75°C (167°F). Using a temperature measuring device, ensure that the correct temperature is reached on the steel and at least 50 mm (2") on each side of the sleeve.

Sleeve Installation



Partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.

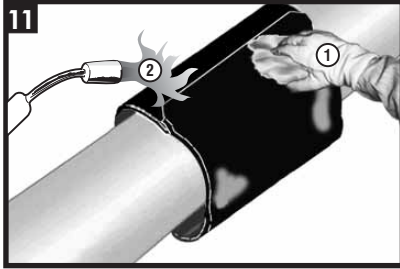


Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place and remove the remaining release liner.

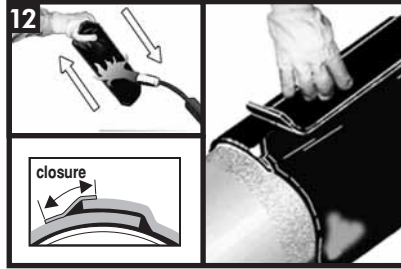


Wrap the WLOX sleeve around the tyton joint. Gently heat the backing of the underlap and the adhesive side of the overlap. Finish wrapping the sleeve around the tyton joint pressing the overlap firmly into place.

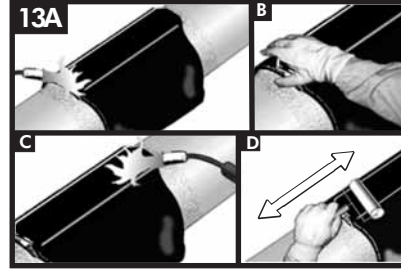
Sleeve Installation Cont'd



1. Clean the overlap area of the sleeve where the closure is to be applied.
2. Pre-warm the overlap area where the closure is to be placed.



Warm the adhesive side of the closure until it becomes shiny. Centre the closure over the overlap. Using a gloved hand press the closure firmly down onto the overlapping sleeve.



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.



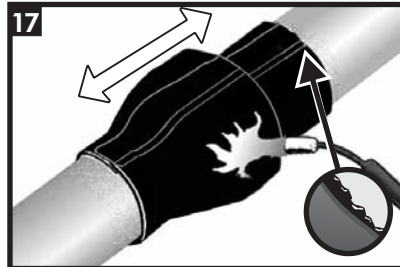
Using broad strokes, begin shrinking the WLOX sleeve around the entire circumference of the larger end (bell) of the tyton joint. Continue heating from the centre of the sleeve until sleeve recovery is completed around the bell of the tyton joint.



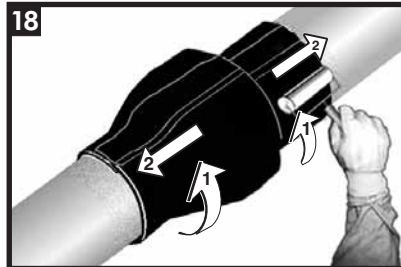
Continue shrinking from the bell of the tyton joint to the sleeve end. Sleeve recovery is complete when it conforms to the pipe.



If the closure lifts while shrinking, secure it with a gloved hand. Continue heating from the bell of the tyton joint to the other end (spigot) until recovery is complete.

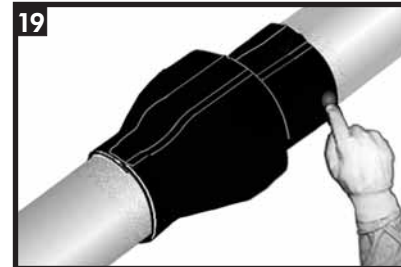


In a similar manner, heat and shrink the remaining side. Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference.



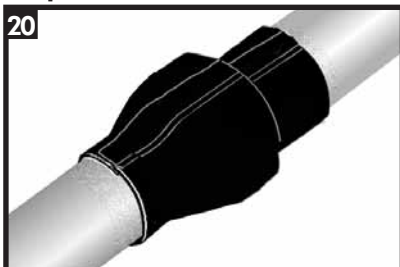
While the sleeve is still hot and soft, use a hand roller to firmly roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. If necessary, reheat to roll out air.

Quality Check (Finger Probe Test)



With a gloved hand, press down on the installed sleeve to ensure the backing and sleeve are soft. If there are any cool spots, the sleeve should be reworked with additional heat.

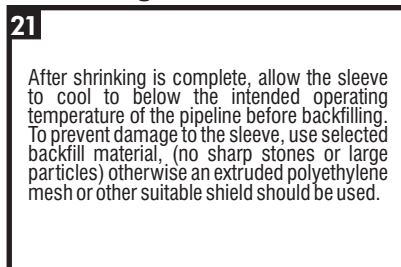
Inspection



Visually inspect the installed sleeve for the following:

- a) Sleeve is in full contact with the tyton joint
- b) No lifts between sleeve and closure
- c) Adhesive flows beyond both sleeve edges
- d) No cracks or holes in sleeve backing

Backfilling Guidelines



After shrinking is complete, allow the sleeve to cool to below the intended operating temperature of the pipeline before backfilling. To prevent damage to the sleeve, use selected backfill material, (no sharp stones or large particles) otherwise an extruded polyethylene mesh or other suitable shield should be used.



A SHAWCOR COMPANY

Canada

CANUSA-CPS
a division of SHAWCOR LTD.
25 Bethridge Road
Rexdale, Ontario
M9W 1M7,
Canada
Tel: +1 (416) 743-7111
Fax: +1 (416) 743-5927

U.S.A./Latin America

CANUSA-CPS
a division of SHAWCOR INC.
2408 Timberloch Place
Building C-8
The Woodlands, Texas
77380, U.S.A.
Tel: +1 (281) 367-8866
Fax: +1 (281) 367-4304

Europe/Middle East

CANUSA-CPS
a division of Canusa Systems Ltd.
Unit 3, Sterling Park
Gatwick Road
Crawley, West Sussex
England RH10 9QT
Tel: +44 (1293) 541254
Fax: +44 (1293) 541777

Asia/Pacific

CANUSA-CPS
a division of SHAWCOR LTD.
#05-31, Blk 52, Frontier
Ubi Avenue 3
Singapore
408867
Tel: +65-6749-8918
Fax: +65-6749-8919

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this installation guide is to be used as a guide and is subject to change without notice. This installation guide supersedes all previous installation guides on this product. E&OE