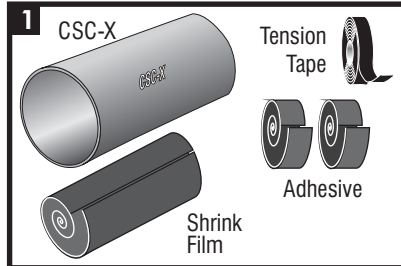


Canusa SuperCase™ CSC-X

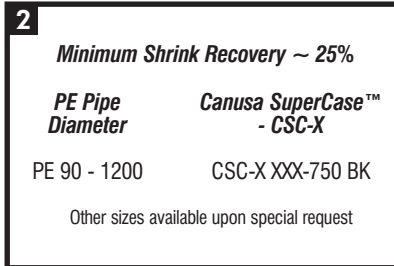
Two-piece, heat-shrinkable casing system for pre-foamed, pre-insulated pipe joints

Product Description



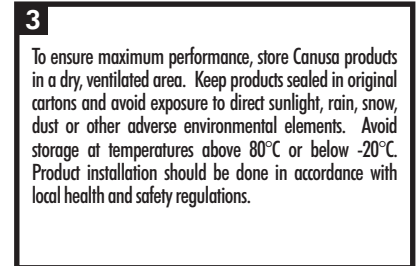
The fully shrinkable Canusa SuperCase™ - CSC-X is a crosslinked, heat shrinkable casing system for pre-foamed or foam half-shell filled joints on pre-insulated pipes. The CSC-X uses Shrink Film - WC-20R and SuperCase Adhesive - SA to seal the joints.

General Information

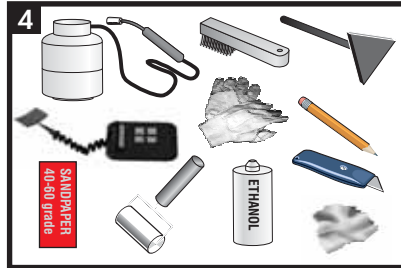


These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Storage & Safety Guidelines

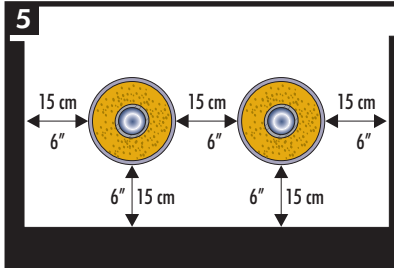


Equipment List



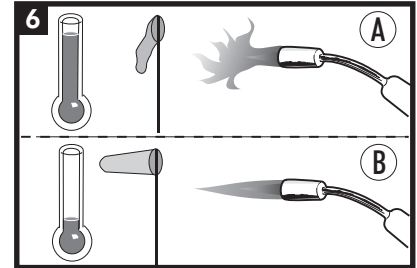
Propane tank, hose, torch & regulator
Sandpaper (40-60 grade) or wire brush
Knife, roller, rags & ethanol (min. 94%) cleanser
Temperature measuring device, Marking pencil
Standard safety equipment; gloves, goggles, hard hat, etc.

Backfilling Trench



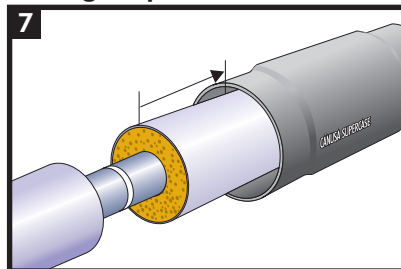
Ensure there is adequate work space area around the pipe in the backfilling trench.

Flame Intensity



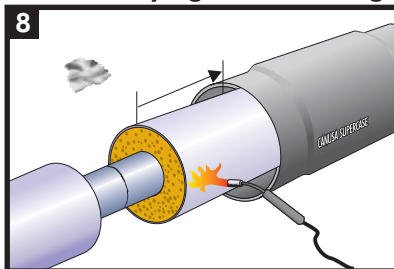
Adjust the flame according to outside conditions.
a. Use weak yellowish-orange flame for low wind, higher temps
b. Use moderate bluish-yellow flame for high wind, lower temps
Always aim the torch perpendicular to the Casing Shrink Film and the CSC-X and move in a circumferential direction quickly around the jacket pipe. **Do not overheat the jacket pipe as it will burn with excessive heating.**

Casing Preparation



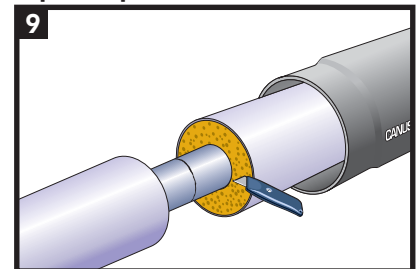
Check the CSC-X to ensure that it is not damaged. Before welding together the carrier pipes, slide the CSC-X as far away from the joint as possible.

General Drying and Cleaning



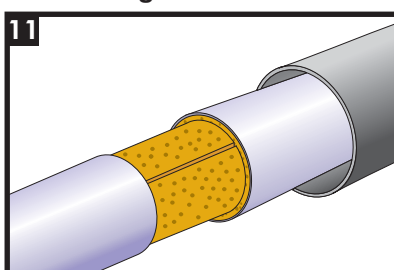
Use a propane torch with a low flame to dry the jacket pipe and carrier pipe. Use a dry, grease and lint-free rag to wipe clean the jacket pipe, carrier pipe and CSC-X.

Pipe Preparation



Remove any wet PUR foam from the end of the pre-insulated pipe.

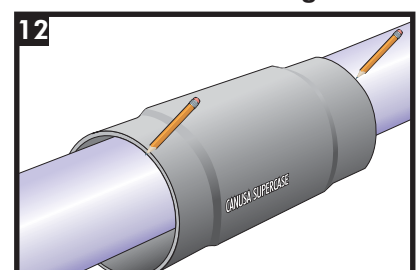
Half-Shell Installation or Foaming



Using a triangular scraper, clean the edges of the jacket pipe to remove any burrs and dirt from the sealing area.

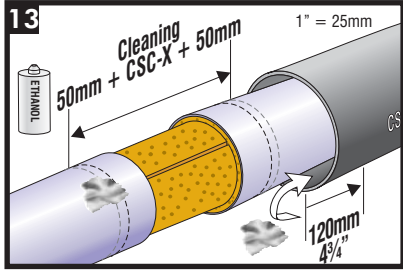
Install the foam half-shells as per the manufacturing instructions. Alternatively, foam the joint using a removable mold.

CSC-X Position Marking



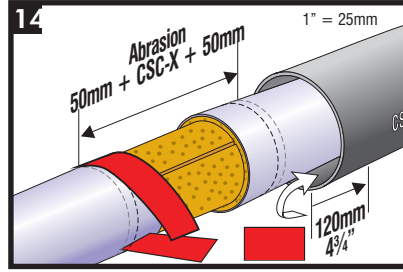
For convenience, centre the CSC-X over the joint and mark out two reference lines circumferentially on the jacket pipe (this will assist in preparation and positioning of the CSC-X). After marking the reference lines, slide the CSC-X away from the joint.

Surface Preparation



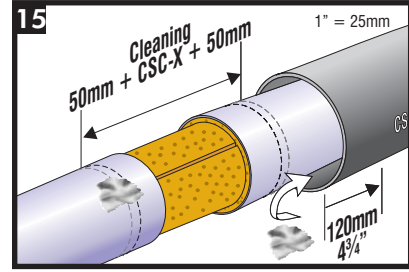
Clean the surface of the jacket pipe and the inside of the casing with a rag (150mm) to remove dirt. Degrease the surface of the jacket pipe and the inside of the CSC-X (150mm) using a grease and lint-free rag soaked in ethanol (min. 94%).

Surface Abrasion



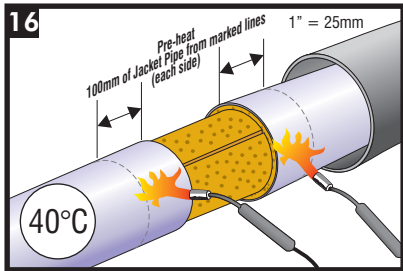
Roughen the surface of the jacket pipe on both sides of the cutback and the inside of the CSC-X (150mm) using the sandpaper (40 to 60 grade).

Final Surface Cleaning



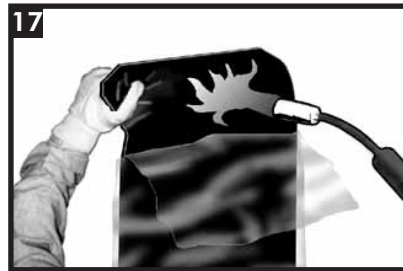
Using a dry, grease and lint-free rag, clean the roughened surface to remove any polyethylene or sand particles.

Pre-Heat

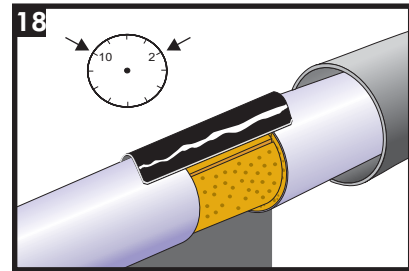


Using a propane torch and a low-yellow flame, warm 100mm (4") of the jacket pipe surface from the marked lines, on each side of the cutback to 40°C (104°F). **Do not heat the foam half-shells or overheat the jacket pipe.**

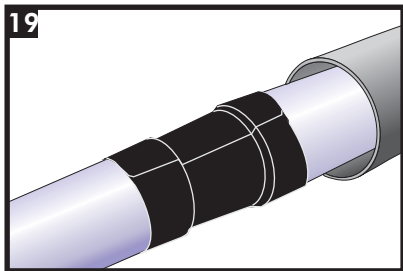
WC-20R Film Installation



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



Beginning between the 10 and 2 o'clock positions, centre the film over the joint so that it will cover the PUR foam and overlap both ends of the jacket pipe. Remove the remaining release liner.

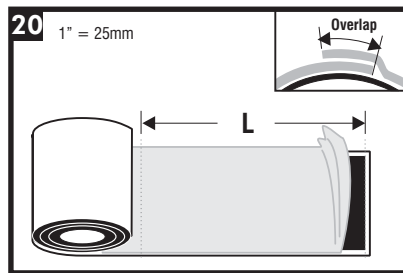


Tightly, wrap the film around the pipe, ensuring the overlap is sufficient. Visually inspect the wrapped film for the following:

- Film is in full contact with the foamed joint and jacket pipe.
- Film conforms to the foam profile.
- No cracks or holes in film backing.

In general, the WC-20R will shrink during the CSC-X application, however, the film can be heated to remove any wrinkling or to improve profile conformance (if required).

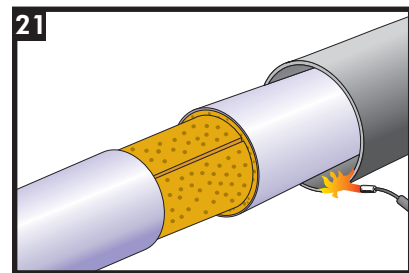
Adhesive Length (With Bulk Roll)



If not using the pre-cut adhesive from a kit, measure the circumference of the jacket pipe and cut two sealing strips long enough to allow for overlap.

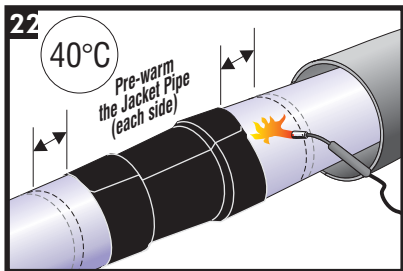
The Length (L) should be the circumference + 50mm overlap

Pre-Warming (Inside of Casing)



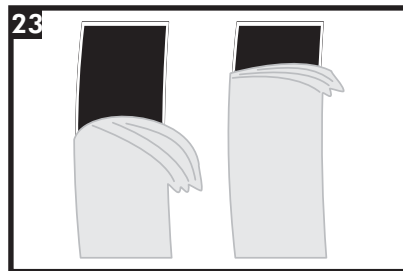
Pre-warm the inside of the casing on each end (150mm). Use low intensity flame to make sure that the casing does not start to recover.

Pre-Warming



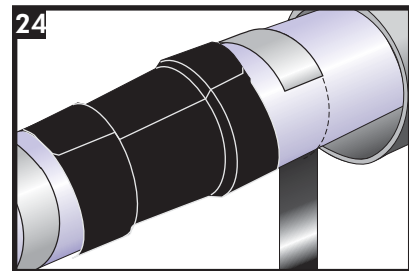
Pre-warm the pipe to 40°C-50°C (104°F-122°F). **Ensure the correct temperature with a temperature measuring device.** Do not exceed 60°C (140°C) as this makes the removal of release liner difficult.

Release Liner

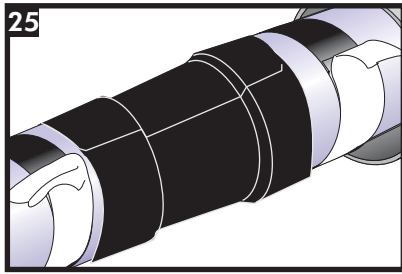


Remove the thinner release liner (opposite the mesh side) from both adhesive strips and...

Adhesive Application

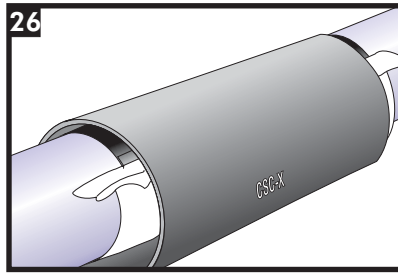


... apply the adhesive strips tightly around the jacket pipe with the mesh side facing up. The strips should be applied so that they are placed approximately 5mm inside of the marks. Make sure the adhesive is not stretched during wrapping. Partially peel-back the release liner on the under lap and wrap the strips around the jacket pipe so that they overlap.



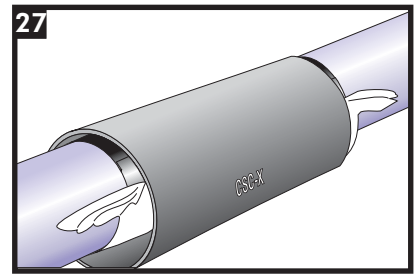
25 Fold the release liner outwards to allow for easy removal after positioning the casing.

CSC-X Placement

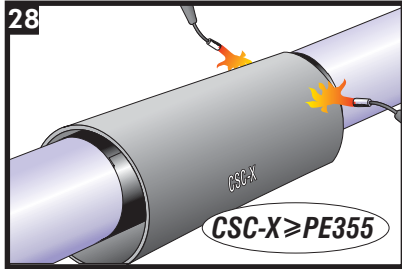


26 Carefully slide the CSC-X over the joint, so that the edges are centered over the edge of the adhesive strips.

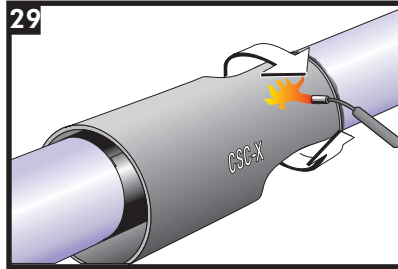
CSC-X Installation



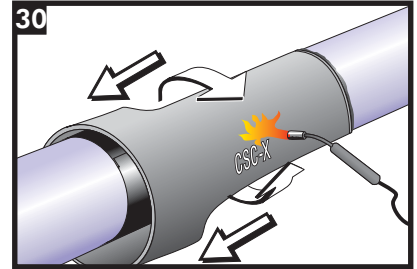
27 Completely remove the release liners from the adhesive strips.



28 For CSC-X sizes 355mm and greater, it is recommended to use two installers working on opposite sides of the pipe. Using broad strokes and a medium flame, begin shrinking at one end of the CSC-X.

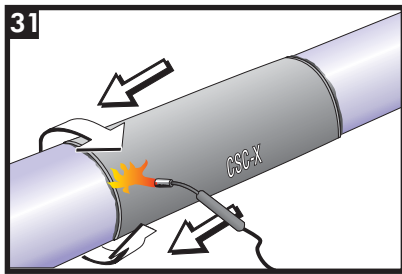


29 Shrink one end of the CSC-X evenly all around the pipe circumference. Keep the torches moving to avoid overheating any spots; ensure sufficient heat is applied at the bottom.

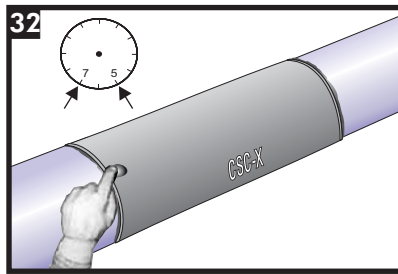


30 Use broad circumferential strokes and continue shrinking by moving horizontally...

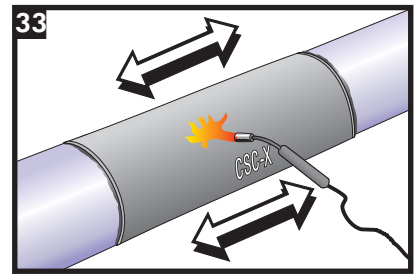
Quality Check (Finger Probe Test)



31 ...towards the opposite end of the CSC-X.

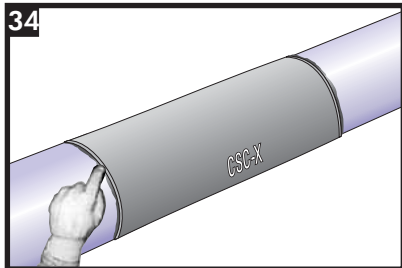


32 With a gloved finger, press down on the shrunk area to ensure the backing and adhesive are soft. Also, use a gloved hand to check parts of the shrunk area between the 5 and 7 o'clock positions. If there are cool spots, the CSC-X should be reworked with additional heat.



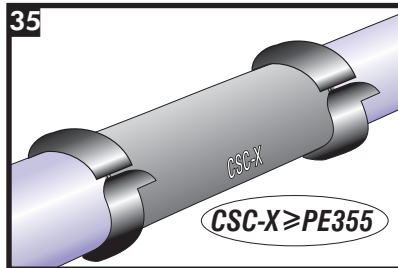
33 Shrinking of the CSC-X has been completed when the casing system (film + CSC-X) has fully conformed to the pre-insulated pipe joint. Adhesive may ooze from the ends of the CSC-X.

Quality Check (Finger Tip Test)



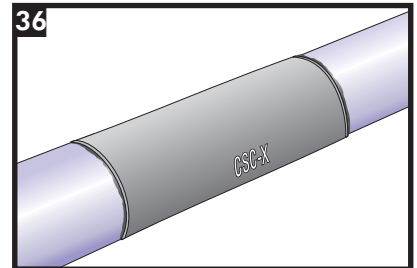
34 As a final check, ensure that the entire CSC-X conforms intimately with the entire pipe surface. This can be checked by feeling the edges all around the circumference of the casing. If there is edge lifting, the edge should be reworked with additional heat.

Tension Tape Application



35 For casing sizes PE355 and above, wrap the supplied tension tape around both edges immediately after shrinking, while the casing is still soft (if the casing has cooled down; reheat it). This ensures even cooling and conformance of the edges.

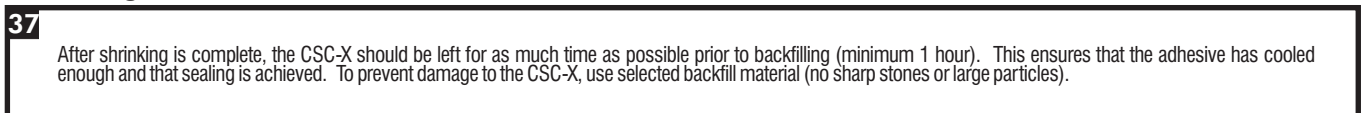
CSC-X Completed Installation



36 Ensure that the entire casing system conforms to the jacket pipe and the circumference of the half-shells. Visually inspect the completed casing system for the following:

- CSC-X is in full contact with the pre-insulated pipe joint
- Adhesive may flow beyond both casing edges
- No cold spots, cracks or holes in casing backing.

Backfilling Guidelines



37 After shrinking is complete, the CSC-X should be left for as much time as possible prior to backfilling (minimum 1 hour). This ensures that the adhesive has cooled enough and that sealing is achieved. To prevent damage to the CSC-X, use selected backfill material (no sharp stones or large particles).



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-SYSTEMS
a division of SHAWCOR UK LIMITED
Unit 3, Sterling Park
Gatwick Road
Crawley, West Sussex
England RH10 9QT
Tel: +44 (1293) 541254
Fax: +44 (1293) 541777

www.canusacps.com**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