

# CSC-X SuperCase

## Casing System for Pre-Foamed Joints on Pre-Insulated Pipelines

The CSC-X SuperCase is a fully shrinkable joint casing system designed to provide effective sealing and protection of field joints on pre-insulated pipelines. The CSC-X System integrates a crosslinked, bimodal HDPE Outer Casing with a Shrink Film, applied as the first layer over the foam, to deliver a reliable double seal of the pre-insulated field joint area. This unique solution allows for inspection of the foam at the joint prior to the application of the permanent CSC-X seal.



### Assured Long Term Sealing of the Joint

- Tubular design of the product and **shape memory** imparted through **cross-linking** ensure **superior conformance** of the Casing to the pipe over the design life of the pipeline
- Thick bi-modal HDPE Outer Casing provides **optimal mechanical protection** of the joints, robust **resistance to soil stresses** and creates a **water impermeable barrier**
- This **EN 489 Certified** product has an **extensive track record** of performance on insulated pipelines in the District Heating/Cooling and Oil and Gas industries

### Applications



Pre-Insulated Pipes



Pre-Foamed Joints

### Unmatched Installation Flexibility

- Allows for foam infill of the joint through either **foam injection** with a **removable mould** or installation of **pre-formed foam half shells**
- Available in a **wrap-around form** for the **repairs of insulated pipeline coatings**, **protection of inaccessible joints** and other specialized installation requirements
- Crosslinked material facilitates **fast installation** and prevents premature recovery of the casings in hot climates

### Inventory Reduction Proposition

- CSC-X Casings are offered in an **over-expanded version** (CSC-X RC-65) allowing for a single casing to be applied on two or even three consecutive pipe diameters, thus **significantly reducing inventories**.
- Over Expanded Casings provide a solution for joint protection across pipe diameter reductions.

### Full Range of Pre-Insulate Pipe Accessories

- Canusa-CPS offers a full range of light weight wraparound, **reusable foaming molds**, which allow for an efficient and practical foaming of the pre-insulated pipe joints in the field.
- Canusa-CPS also offers a full line of preformed polyurethane **Half Shells (CHS)** and **Foam Mix Kits (CFK)**.



# CSC-X Joint Casing System Features



## 1. CSC-X is Installed After Foaming

- Allows 100% Inspection of foam
- Avoids need to drill holes into casing required for foam injection and venting

## 2. Shrink Film

- Quick and easy to install
- Provides primary sealing of joint foam (Shrink together with CSC-X Joint Casing)

## 3. High Shear and Peel Strength Adhesive

- Ensures strong, watertight seal
- Provides excellent resistance to soil stresses

## 4. Crosslinked High Density Polyethylene Material

- Crosslinked material provides very fast response and shortens installation time
- Excellent resistance to mechanical forces such as impact, indentation and other soil stresses
- Retains its shape and hoop stress over the lifetime of the pipe system
- Does not pre-shrink when exposed to sunlight heat
- Excellent resistance to burning

## Other Key Advantages / Options

### CSC-X Field Bonder



#### Field Bonding for Repairs and Other Specialized Applications\*

- Allows for open-type (non-tubular) CSC-X to be applied to pipe after pipe joints are welded together
- Great for repairs or to reduce shipping costs as CSC-X open-type casings are shipped as flat sheets as opposed to tubes

### CSC-X Molded Foam



#### Molded Foaming\*

- Complete size range of Canusa foam molds (CFM) is available
- Canusa provides PU foaming materials
- Molds are light and easy to handle

### CSC-X Foam Half-Shells



#### Pre-Formed Foam Half-Shells\*

- Complete size range of Canusa half-shells (CHS) is available
- Eliminates joint foaming in the field

\* Please consult with your local Canusa-CPS Representative for specific project requirements.

# System Components and Sizing Guidelines

CSC-X System: Ordering Info and Standard Dimensions									
CSC-X Casing					Accessory Materials (Kit)				
PE Pipe Ø (mm)	Ordering Info	Supplied Size Ø (mm)	Recovered Size Ø (mm)	Length <sup>2</sup> Supplied (mm)	Ordering Info (Kit)	Shrink Film		Adhesive Strips	Tension Tape
						Length (mm)	Width <sup>3</sup> (mm)	Length (mm)	Length (mm)
90	CSC-X 90-700 BK/2	105	85	750	CSC-X Kit 90 - 500	395	500	2 x 315	-
110	CSC-X 110-700 BK/2	125	100	750	CSC-X Kit 110 - 500	475	500	2 x 380	-
125	CSC-X 125-750 BK/2	145	115	750	CSC-X Kit 125 - 500	530	500	2 x 430	-
140	CSC-X 140-750 BK/2	160	125	700	CSC-X Kit 140 - 500	590	500	2 x 480	-
160	CSC-X 160-750 BK/2	185	145	750	CSC-X Kit 160 - 500	670	500	2 x 545	-
180	CSC-X 180-750 BK/2	210	160	750	CSC-X Kit 180 - 500	745	500	2 x 610	-
200	CSC-X 200-750 BK/2	230	175	750	CSC-X Kit 200 - 500	825	500	2 x 680	-
225	CSC-X 225-750 BK/2	260	200	750	CSC-X Kit 225 - 500	925	500	2 x 760	-
250	CSC-X 250-750 BK/2	285	220	750	CSC-X Kit 250 - 500	1020	500	2 x 845	-
280	CSC-X 280-750 BK/2	315	240	750	CSC-X Kit 280 - 500	1140	500	2 x 940	-
315	CSC-X 315-750 BK/2	355	270	750	CSC-X Kit 315 - 500	1300	500	2 x 1055	-
355	CSC-X 355-750 BK/3	395	330	750	CSC-X Kit 355 - 500	1455	500	2 x 1185	2 x 5m
400	CSC-X 400-750 BK/3	445	375	750	CSC-X Kit 400 - 500	1635	500	2 x 1335	2 x 5m
450	CSC-X 450-750 BK/3	500	415	750	CSC-X Kit 450 - 500	1830	500	2 x 1500	2 x 5m
500	CSC-X 500-750 BK/3	550	460	750	CSC-X Kit 500 - 500	2025	500	2 x 1665	2 x 5m
520	CSC-X 520-750 BK/3	570	475	750	CSC-X Kit 520 - 500	2105	500	2 x 1730	2 x 5m
560	CSC-X 560-750 BK/3	615	510	750	CSC-X Kit 560 - 500	2260	500	2 x 1860	2 x 5m
630	CSC-X 630-750 BK/3	685	570	750	CSC-X Kit 630 - 500	2535	500	2 x 2090	2 x 5m
710	CSC-X 710-750 BK/3	780	645	750	CSC-X Kit 710 - 500	2870	500	2 x 2355	2 x 5m
800	CSC-X 800-750 BK/4	870	720	750	CSC-X Kit 800 - 500	3225	500	2 x 2650	1 x 66m
860	CSC-X 860-750 BK/4	935	770	750	CSC-X Kit 860 - 500	3460	500	2 x 2850	1 x 66m
900	CSC-X 900-750 BK/4	985	815	750	CSC-X Kit 900 - 500	3615	500	2 x 2980	1 x 66m
1000	CSC-X 1000-750 BK/4	1090	900	750	CSC-X Kit 1000 - 500	4030	500	2 x 3310	1 x 66m
1100	CSC-X 1100-750 BK/4	1185	980	750	CSC-X Kit 1100 - 500	4425	500	2 x 3635	1 x 66m
1200	CSC-X 1200-750 BK/4	1300	1065	750	CSC-X Kit 1200 - 500	4815	500	2 x 3965	1 x 66m
CSC-X RC-65 System: Ordering Info and Standard Dimensions									
CSC-X RC-65 Casing					Accessory Materials (Kit)				
PE Pipe Ø (mm)	Ordering Info	Supplied Size Ø (mm)	Recovered Size Ø (mm)	Length <sup>2</sup> Supplied (mm)	Ordering Info (Kit)	Shrink Film		Adhesive Strips	Tension Tape
						Length (mm)	Width <sup>3</sup> (mm)	Length (mm)	Length (mm)
110/90	CSC-X RC-65 110/90-750 BK	125	85	750	CSC-X Kit 110 - 500	475	500	2 x 380	-
125/110	CSC-X RC-65 125/110-750 BK	150	100	700	CSC-X Kit 125 - 500	530	500	2 x 430	-
140/125	CSC-X RC-65 140/125-750 BK	165	110	750	CSC-X Kit 140 - 500	590	500	2 x 480	-
160/140	CSC-X RC-65 160/140-750 BK	185	120	750	CSC-X Kit 160 - 500	670	500	2 x 545	-
180/140	CSC-X RC-65 180/140-750 BK	200	130	750	CSC-X Kit 180 - 500	745	500	2 x 610	-
180/160	CSC-X RC-65 180/160-750 BK	210	135	750	CSC-X Kit 180 - 500	745	500	2 x 610	-
225/180	CSC-X RC-65 225/180-750 BK	250	160	750	CSC-X Kit 225 - 500	925	500	2 x 760	-
280/225	CSC-X RC-65 280/225-750 BK	310	195	750	CSC-X Kit 280 - 500	1140	500	2 x 940	-
355/280	CSC-X RC-65 355/280-750 BK	390	245	750	CSC-X Kit 355 - 500	1455	500	2 x 1185	2 x 5m
400/355	CSC-X RC-65 400/355-750 BK	440	325	750	CSC-X Kit 400 - 500	1635	500	2 x 1335	2 x 5m
450/400	CSC-X RC-65 450/400-750 BK	490	365	750	CSC-X Kit 450 - 500	1830	500	2 x 1500	2 x 5m
Special Orders									
XXX	CSC-X XXX-YYY BK/A XXX - PE Size (mm) YYY - Nominal Casing Width (mm) YYY - 600, 800 A - Nominal Casing Thickness (mm)				CSC-X Kit XXX-ZZZ ZZZ - Nominal Shrink Film Width (mm) ZZZ - 300, 400, 600				

<sup>1</sup>Optional CSC-X Length: 600mm <sup>2</sup>Optional Shrink Film Widths include 300mm, 400mm, 600mm

# CSC-X SuperCase

## Casing System for Pre-Foamed Joints on Pre-Insulated Pipelines

Adhesive Properties	Test Method	Typical Value	
		Shrink Film	Casing
Softening Point	ASTM E28	120°C	80°C
Lap Shear	EN 12068	6 N/cm <sup>2</sup>	90 N/cm <sup>2</sup>
Casing Properties			
Tensile Strength	ASTM D638	20 MPa	30 MPa
Elongation	ASTM D638	600%	600%
Hardness	ASTM D2240	46 Shore D	60 Shore D
System Properties			
Adhesion Strength @ 23°C*	EN 12068	18 N/cm	75 N/cm
Water Absorption	ASTM D570	<0.05%	<0.05 %
Low Temperature Flexibility	ASTM D2671	-30°C	-15°C
Heat Aging @ 150°C, 14 days (Tensile Strength)	ISO R57	95%	95%
Heat Aging @ 150°C, 14 days (Tensile Elongation)	ISO R57	95%	95%
Soil Box & Pressure Vessel Test**	EN 489	-	100 cycles, 18kN/m <sup>2</sup> (1m) sand overfill, 30 kPa @ 30°C for 24 h



\* Tested using 1mm thick HSS backing

\*\* Tested with adhesive application method

The product information shown here is intended as a guide for standard products.

Consult your Canusa representative for specific projects or unique applications at [info@canusacps.com](mailto:info@canusacps.com).



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### Quality Management system registered to ISO 9001

Since 1967, Canusa-CPS has been a leading developer and manufacturer of specialty pipeline coatings for the sealing and corrosion protection of pipeline joints and other substrates. Canusa-CPS high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate many specific project applications.

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the product data sheet 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 data sheet is to be used as a guide and is subject to change without notice. This data sheet supersedes all previous data sheets on this product. E&OE

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