

CSC-XP SuperCase

Advanced Joint Casing System for Pre-Insulated Pipelines

CSC-XP, the latest generation of Canusa's SuperCase technology, has been engineered based on Canusa's HybridPEX™ technology, which combines the advantages of cross-linked and uncross-linked polyethylene in a single product. The revolutionary design of this product results in the most versatile pre-insulated pipe joint protection system on the market. The patented CSC-XP Casing can be installed with adhesive sealing and /or using electro-fusion welding with Canusa-CPS' automated IntelliFUSE™ system.

HybridPEX™ Technology*

- Cross-linked polyethylene outer layer **maintains hoop stress** on the pipe over the design life and **resists premature recovery** in hot climates
- Uncross-linked polyethylene inner layer of the casing allows for **effective welding (IntelliFUSE™)*** of the material to the mainline PE jacket pipe
- Advanced grade of high density bimodal polyethylene offers **enhanced resistance to abrasion, impact, penetration and cracking**, especially at low temperatures

Proven and Reliable Joint Protection

- CSC-XP system far exceeds the stringent requirements of EN 489 Standard and allows for **100% inspection** through **pressure testing**
- Structural integrity of the CSC-XP Casing system results in **robust and reliable joint protection** with **class leading resistance to soil stress**, moisture ingress and temperature cycling effects

Engineered for Maximum Efficiency

- Innovative CSC-XP design offers **simple and forgiving installation**, thus reducing cycle time and installed cost of the joint
- Combined with Canusa-CPS' IntelliFUSE™*, the system offers **industry leading installation speed** with automated quality control and traceability features

*Patent Pending



Applications



Pre-Insulated Pipes



Foam-In-Place



Pre-Foamed Joints



IntelliFUSE™



Repairs & Rehabilitation



CSC-XP Versatility



1. IntelliFUSE system: maximum strength and sealing with PE to PE welding

- Reliable and repeatable fusion cycle ensured by automation
- Out-of-round pipe conformance with tubular, crosslinked design
- Built-in quality control system with data logging and direct temperature feedback process.

2. Adhesive system: simple and forgiving installation providing superb moisture barrier

- Structural integrity of a tubular product combined with high performance of a purpose formulated adhesive
- Excellent resistance to soil stress and temperature cycling effects
- Proven long term sealing performance

3. Integrated IntelliFUSE & Adhesive system: combines advantages of both attachment methods

- Double sealing achieved within a single casing application
- Unmatched speed of installation while providing functional redundancy and double sealing

4. Repair system: wrap-around configuration

- Used for major repairs of damaged PE jacket and rehabilitation of joints
- Matches the functional performance of standard CSC-XP systems

Other Key Advantages / Options

IntelliFUSE™ System	Air Pressure Testable	Repair and Rehab
		
<ul style="list-style-type: none"> • Portable, easy to use system • Automation reduces human error • Built in quality control • Fast cycle time 	<ul style="list-style-type: none"> • Non-destructive, on-site quality control measure • Verifies correctness of installation • Allows for 100% inspection 	<ul style="list-style-type: none"> • Wrap-Around Casing configuration • Major PE Jacket Damage • Joint rehabilitation • Fully welded into a tube on the pipe to match standard CSC-XP performance

System Components and Sizing Guidelines

CSC-XP System: Ordering Info and Standard (Nominal) Dimensions											
Pipe Ø (mm)	CSC Casing				Accessory Materials (Kit)						
	Ordering Info (Joint Casings)		Diameter (Recovered)	Thickness (Supplied)	Thickness ¹ (Recovered)	Length ² (Supplied)	Ordering Info (Application Kits)		Adhesive Strips	Metal Strips	Spacers or Application Frame
	Ø (mm)		Ø (mm)	(mm)	(mm)	(mm)	Adhesive Kits	Electro-fusion Kits	Length (mm)	Length (mm)	
90	CSC-XP 90-750 BK	105	84	2.5	3.4	750	CSC-XP Kit 90	-	2 x 315	-	-
110	CSC-XP 110-750 BK	130	100	2.5	3.4	750	CSC-XP Kit 110	-	2 x 380	-	-
125	CSC-XP 125-750 BK	145	112	2.5	3.4	750	CSC-XP Kit 125	-	2 x 430	-	-
140	CSC-XP 140-750 BK	165	126	2.5	3.4	750	CSC-XP Kit 140	-	2 x 480	-	-
160	CSC-XP 160-750 BK	190	144	2.5	3.4	750	CSC-XP Kit 160	-	2 x 545	-	-
180	CSC-XP 180-750 BK	200	164	3.5	4.5	750	CSC-XP Kit 180	-	2 x 610	-	-
200	CSC-XP 200-750 BK	220	179	3.5	4.5	750	CSC-XP Kit 200	-	2 x 680	2 x 595	-
225	CSC-XP 225-750 BK	245	199	3.5	4.5	750	CSC-XP Kit 225	-	2 x 760	2 x 675	-
250	CSC-XP 250-750 BK	270	219	3.5	4.5	750	CSC-XP Kit 250	CSC-XP-F Kit 250	2 x 845	2 x 755	-
280	CSC-XP 280-750 BK	300	243	3.5	4.5	750	CSC-XP Kit 280	CSC-XP-F Kit 280	2 x 940	2 x 845	-
315	CSC-XP 315-750 BK	335	271	3.5	4.5	750	CSC-XP Kit 315	CSC-XP-F Kit 315	2 x 1060	2 x 955	-
355	CSC-XP 355-750 BK	385	319	4.5	5.5	750	CSC-XP Kit 355	CSC-XP-F Kit 355	2 x 1190	2 x 1085	-
400	CSC-XP 400-750 BK	430	357	4.5	5.5	750	CSC-XP Kit 400	CSC-XP-F Kit 400	2 x 1340	2 x 1225	-
450	CSC-XP 450-750 BK	480	399	4.5	5.5	750	CSC-XP Kit 450	CSC-XP-F Kit 450	2 x 1505	2 x 1380	4 x L
500	CSC-XP 500-750 BK	530	441	4.5	5.5	750	CSC-XP Kit 500	CSC-XP-F Kit 500	2 x 1670	2 x 1540	4 x L
520	CSC-XP 520-750 BK	555	459	4.5	5.5	750	CSC-XP Kit 520	CSC-XP-F Kit 520	2 x 1735	2 x 1600	4 x L
560	CSC-XP 560-750 BK	595	492	4.5	5.5	750	CSC-XP Kit 560	CSC-XP-F Kit 560	2 x 1865	2 x 1725	4 x L
630	CSC-XP 630-750 BK	670	554	4.5	5.5	750	CSC-XP Kit 630	CSC-XP-F Kit 630	2 x 2095	2 x 1945	4 x L
670	CSC-XP 670-750 BK	710	586	4.5	5.5	750	CSC-XP Kit 670	CSC-XP-F Kit 670	2 x 2230	2 x 2070	4 x L
710	CSC-XP 710-750 BK	750	618	4.5	5.5	750	CSC-XP Kit 710	CSC-XP-F Kit 710	2 x 2360	2 x 2195	4 x L
800	CSC-XP 800-750 BK	850	728	5.5	6.5	750	-	CSC-XP-F Kit 800	-	2 x 2475	App-Frame
860	CSC-XP 860-750 BK	915	781	5.5	6.5	750	-	CSC-XP-F Kit 860	-	2 x 2660	App-Frame
900	CSC-XP 900-750 BK	955	816	5.5	6.5	750	-	CSC-XP-F Kit 900	-	2 x 2785	App-Frame
1000	CSC-XP 1000-750 BK	1055	904	5.5	6.5	750	-	CSC-XP-F Kit 1000	-	2 x 3100	App-Frame
1100	CSC-XP 1100-750 BK	1165	993	5.5	6.5	750	-	CSC-XP-F Kit 1100	-	2 x 3410	App-Frame
1200	CSC-XP 1200-750 BK	1265	1080	5.5	6.5	750	-	CSC-XP-F Kit 1200	-	2 x 3720	App-Frame
1300	CSC-XP 1300-750 BK	1370	1168	5.5	6.5	750	-	CSC-XP-F Kit 1300	-	2 x 4030	App-Frame
1400	CSC-XP 1400-750 BK	1475	1256	5.5	6.5	750	-	CSC-XP-F Kit 1400	-	2 x 4340	App-Frame
Special Orders											
XXX	CSC-XP XXX-YYY BK	XXX - PE Size (mm)	YYY - Nominal Casing Length (mm)	CSC-XP Kit XXX	CSC-XP-F Kit XXX	XXX - PE Size (mm)					

¹Recovered thickness represents thickness after full (free) recovery ²Standard length shown, optional CSC-XP lengths are available. Casing Diameters are subject to change.

CSC-XP SuperCase

Advanced Joint Casing System for Pre-Insulated Pipelines

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

Consult your Canusa representative for specific projects or unique applications.

Adhesive Properties	Test Method	Typical Values
Softening Point	ASTM E28	80°C
Lap Shear	EN 12068	90 N/cm ²
Casing Properties	Test Method	Typical Values
Tensile Strength	ASTM D638	30 MPa
Elongation	ASTM D638	600
Hardness	ASTM 2240	60 Shore D
Abrasion Resistance	ASTM D1044	35 mg
System Properties	Test Method	Typical Values
Adhesion Strength @ 23°C*	EN 12068	75 N/cm
Water Absorption	ASTM D570	< 0.05 %
Low Temp. Flexibility	ASTM D2671	-30°C
Heat Aging @ 150°C, 14 days (Tensile Strength)	ISO R57	95%
Heat Aging @ 150°C, 14 days (Tensile Elongation)	ISO R57	95%
Soil Box & Pressure Vessel Test** (Adhesive Method)	EN 489: 2009	Pass
Soil Box & Pressure Vessel Test*** (IntelliFUSE™ Method)	EN 489	Pass-Weld Stress Crack Resistance



Canusa-CPS A division of Shawcor Ltd.

Head Office

25 Bethridge Road
Toronto, ON, Canada M9W 1M7
Tel: +1 416 743 7111
Fax: +1 416 743 5927

Canada

Dome Tower St. 2200, 333-7th Avenue SW
Calgary, AB, Canada T2P 2Z1
Tel: +1 403 218 8207
Fax: +1 403 264 3649

Americas

5875 N. Sam Houston Pkwy W., Suite 200
Houston, TX, USA 77086
Tel: +1 281 886 2350
Fax: +1 281 886 2353

Middle East

Plot # 37-WR43, Sector no.: ICAD III
Musaffah South, PO Box 2621
Abu Dhabi, The United Arab Emirates
Tel: +971 2 204 9800

Europe, Africa & Russia

Dellaertweg 9-E, Gebouw "Le Carrefour"
2316 WZ Leiden, The Netherlands (NL)
Tel: +31 71 80 802 70
Fax: +31 71 80 802 71

Asia-Pacific

101 Thomson Road, #11-03 United Square
307591 Singapore
Tel: +65 6749 8918
Fax: +65 6749 8919

Quality Management system registered to ISO 9001

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

PDS_CSC-XP_rev019

EN 489 Sand Box Test

Casing completely intact on both sides.

Easily Exceeds EN 489 Requirements

IntelliFUSE™

Please contact Canusa representative for more information.

*Tested using 1mm thick HSS backing
**Tested with adhesive application method
***Tested with electrofusion IntelliFUSE™ application method

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.