

Climate Recovery Duct System Technical Specifications



Climate Recovery (CR) Duct System

Overview

The CR Duct System offers a complete, pre-insulated system for heating, ventilation and air-conditioning.

CR Ducts and CR Fittings consist mainly of glass, sand, and soda.

CR Ducts and CR Fittings both possess patented aluminum CR Foil on inner and outer surfaces, which provides a condensation barrier.

The CR Duct System is built to the standard dimensions of the European ventilation market.

CR Ducts are standardly mounted round but, through use of the CR Transformer, can be made rectangular when necessary.

Applications

The CR Duct System can only be used for indoor installations.

CR products are not to be used for kitchen exhaust.

Local rules and regulations are to be recognized when installing any CR products.

When calculating pressure drops, please use tables and diagrams for corresponding sheet metal products. CR products will be slightly lower.

ENJOY WORK		Lightweight	Adaptability	Round/ rectangular	Pre-insulation	Noise reduction
CREATE BUSINESS	Labor savings	✓	✓	✓	✓	✓
	Material savings		✓	✓		✓
	Product offering expansion	✓			✓	
	Installation quality				✓	
	Better brand image					
	Planning facilitation				✓	✓
	Lifecycle costs				✓	

Climate Recovery (CR) Duct System

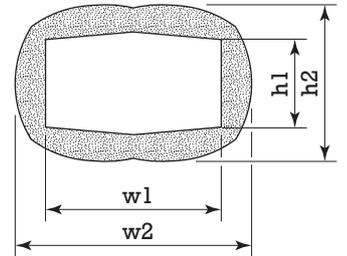
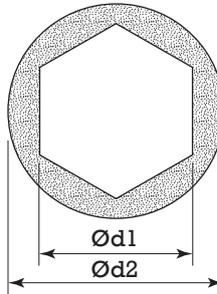
CE-test certifications & working conditions			
Tightness	Class D		EN 1507:2006
Fire Classification	A2-s1,d0 Unburnable		EN 13501-1:2007+A1:2009
Pressure			EN 13403:2003
Max Under	-400 Pa	Shock waves	-1000 Pa
Max Over	+1000 Pa	Shock waves	+2500 Pa
Heat Transfer (λ)	$\approx 0.035\text{W/mK}$		
Temperature			
Minimum	-40° C	Maximum	+60° C

Certifications

The CR Duct System has been certified through SP Certification, the Swedish governing body for CE certification and accreditation. The matrix above represents tests and certifications that have been passed and awarded by SP Certification.

Sustainable materials	CO ₂ reduction	Self-supporting	No vibrations	No heat transfer	Reopening	Standard dimensions
		✓	✓	✓	✓	✓
			✓	✓	✓	
✓					✓	✓
		✓				✓
✓	✓			✓		
✓			✓	✓	✓	✓
		✓			✓	

CR Duct



CR Ducts are made of compressed glass wool with inner & outer surfaces covered by a layer of CR Foil.

All CR Ducts are shipped 235 cm long.

Average insulation thickness \approx 30mm.

Water vapor resistance $>$ 140m²h Pa/mg

Round mounting

Ød1*	l	Ød2	kg/m
mm	mm	mm	
125	2.35	195	0.64
160	2.35	230	0.86
200	2.35	270	1.06
250	2.35	320	1.34
315	2.35	385	1.66

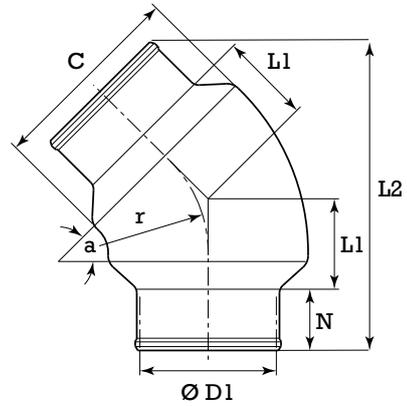
Rectangular mounting

Ød1	w1	h1	w2	h2
mm	mm	mm	mm	mm
125	140	75	200	135
160	188	94	258	166
200	220	115	280	175
250	283	141	358	221
315	340	175	400	225

*True inner diameter \approx 10-20 mm greater than Ød1

CR Bend

45°



$r \approx \text{Ø}D1$

CR Bends are made of compressed glass wool with inner & outer surfaces covered by a layer of CR Foil.

Average insulation thickness \approx 30mm.

Standard circular sheet metal nipples fit inside neck of CR Bends.

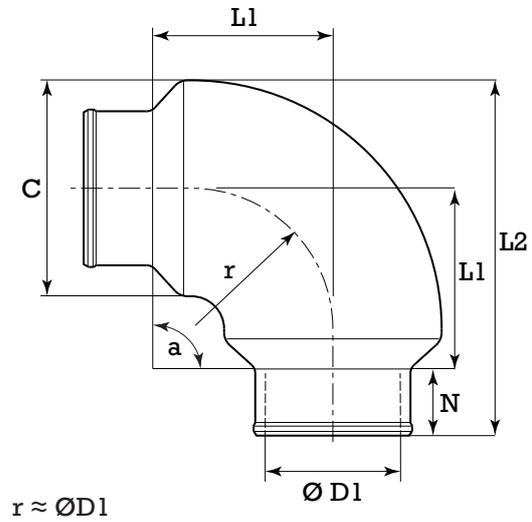
Water vapor resistance $>$ 140m²h Pa/mg

ØD1 mm	C mm	L1 mm
125	192	84
160	233	98
200	267	115
250	317	136
315	382	163

ØD1 mm	L2 mm	N mm
125	298	63
160	353	73
200	412	83
250	482	93
315	568	103

CR Bend

90°



CR Bends are made of compressed glass wool with inner & outer surfaces covered by a layer of CR Foil.

Average insulation thickness \approx 30mm.

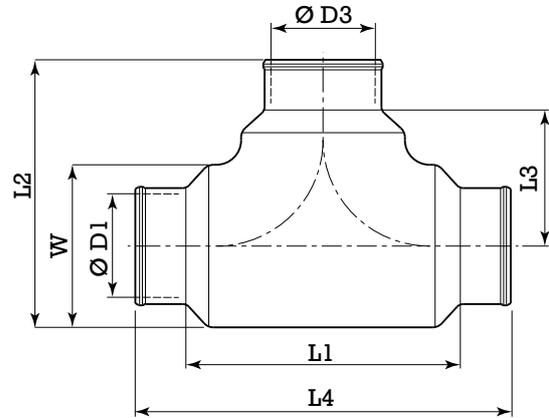
Standard circular sheet metal nipples fit inside neck of CR Bends.

Water vapor resistance $>$ 140m²h Pa/mg

ØD1 mm	C mm	L1 mm
125	192	157
160	233	192
200	267	232
250	317	282
315	382	347

ØD1 mm	L2 mm	N mm
125	306	63
160	381	73
200	449	83
250	534	93
315	641	103

CR T-piece



CR T-pieces are made of compressed glass wool with inner & outer surfaces covered by a layer of CR Foil.

Average insulation thickness \approx 30mm.

The standard circular nipple fits inside the neck of the CR T-piece.

Water vapor resistance $>$ 140m²h Pa/mg

ØD1 mm	ØD3 m	L1 mm	L3 mm	L2 mm
125	125	314	157	318
160	160	384	192	380
200	125	464	184	381
200	200	464	232	449
250	250	564	282	536
315	125	694	242	496
315	200	694	280	554
315	315	694	347	641

ØD1 mm	ØD3 m	L4 mm	W mm
125	125	440	192
160	160	530	233
200	125	630	267
200	200	630	267
250	250	750	317
315	125	900	382
315	200	900	382
315	315	900	382

CR Nipple



CR Nipples connect two CR Ducts together.

Made of galvanized sheet metal.

CR Adapter



CR Adapters connect products with standard circular nipple dimensions to the corresponding CR Duct sizes.

Made of galvanized sheet metal.

CR Sleeve



CR Sleeves cover the ends of CR Ducts when joints are created.

Made of polyurethane mixture, including flame retardant.

CR Clamp



CR Clamps tighten CR Ducts around joints created.

Made of stainless steel.

Utilize hex bit, size 8.

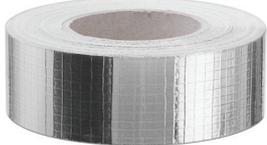
CR Transformer



CR Transformers are placed around CR Ducts when installations require rectangular dimensions.

Made of .7mm plate steel, coated with aluzinc.

CR Tape



CR Tape is non-reversible.

Made of aluminum foil with tightening glue.

Width: 50mm
100mm

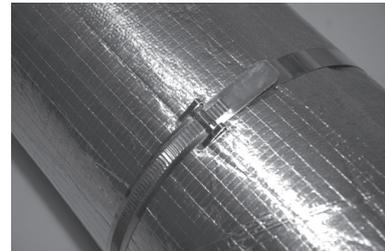
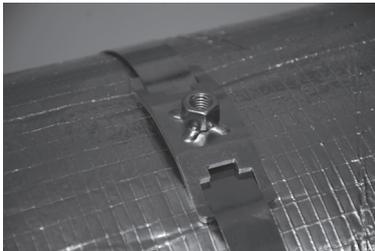
Proper Hanging

Attachment to the structure

This should be done in accordance with building specifications per standard EN 12236 protocols. When mounting the CR Duct System to the fixed building structure, M8 steel threaded rod should be used. CR-CM8 has a click function that allow attachment by directly pressing M8 rods into the fixture. CRM8 must be screwed onto the fixture.

Hanging support

CR Straps should be drawn through the openings of CR-CM8 or CRM8 fixtures. The flat end of the strap is then wrapped around the exterior of the CR Duct, then through the fixed end and secured by the ridged bindings. Leaving a loose binding before hanging will allow easier adjustments made to the placement of M8 fixtures along the duct surface.



Hanger spacing

Hanging support of the CR Duct System should be maintained at a minimum of every 2.3 meters of duct length and within 10 cm of any joint.

If CR products are installed vertically, the support must be placed a minimum of 50 cm from joint connections, with further support spaced at a minimum of every 2.5 meters.

When combining the CR Duct System with sheet metal ductwork, support should be placed within 10 cm of joints and every 2 meters.



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