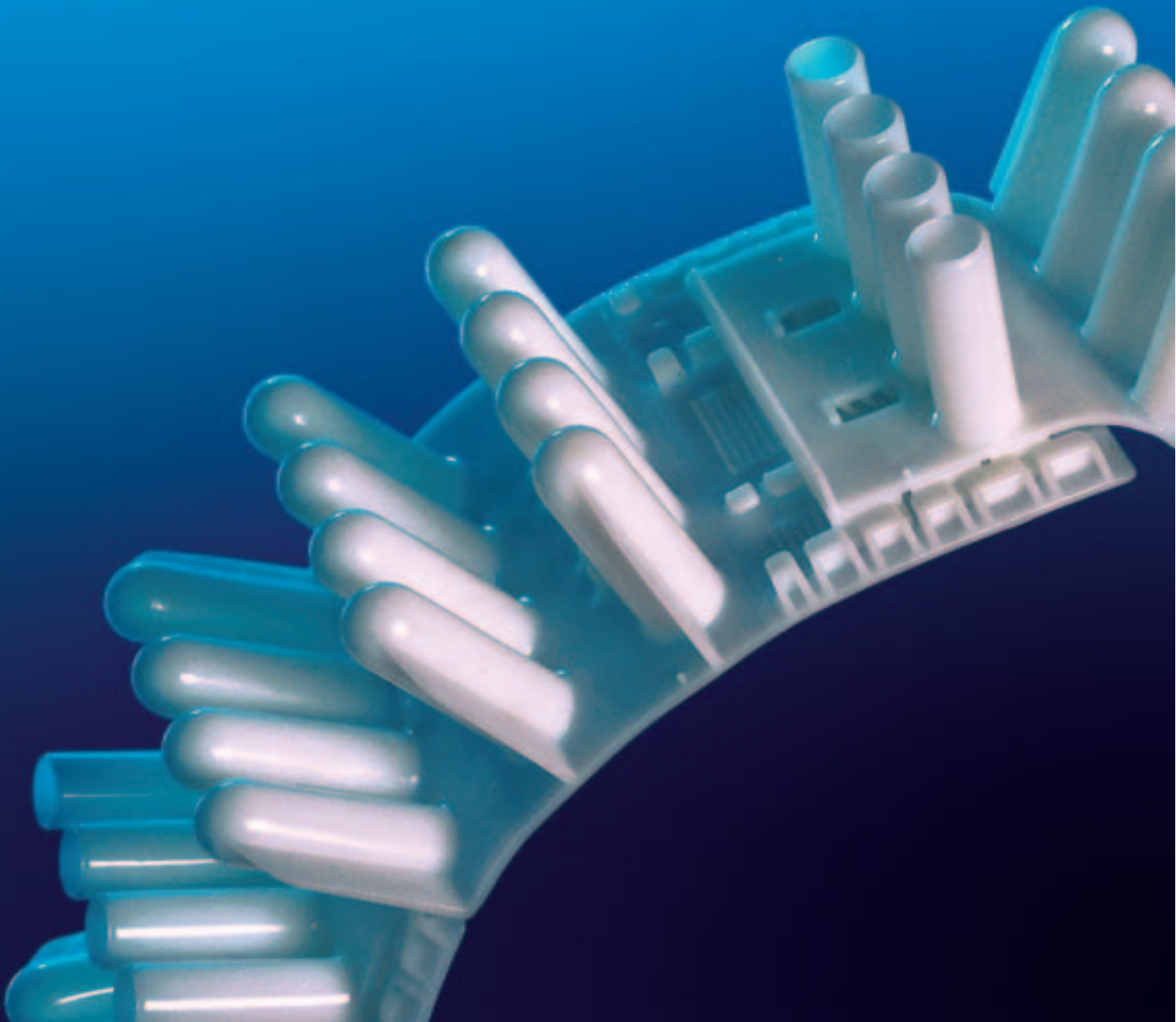


12

SPACERS FOR PIPELINES CASED CROSSINGS





THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner

CISQ/ICM

hereby certify that the organization

R.A.C.I. Ricerche Applicazioni Chimiche Industriali S.r.l.

Head Office and Operative Unit: Via Adriano, 101 - I-20128 MILANO (MI)

Operative Unit: Via Delle Tre Venzie, 1 - I-26018 CASALETTO VAPRIO (CR)

for the following field of activities

Design and production of 1" on-off valves, spacers, plastic spacers for pipelines. Supply of on-off and regulation valves, accessories, coatings, joints, flanges and fittings for pipelines, repair clamps, materials for pipelines marking, hydrants and pipes for fire fighting systems. Design, supply and site service of pre-insulated pipe networks and of energy recovery systems with turbo expansion of natural gas with production of electrical energy. Design, supply and installation of noise and vibration damping systems for streets and airports pavements. Supply and installation of noise and vibration damping systems for rails and of alarm systems for district heating networks.

has implemented and maintains a
Quality Management System

which fulfils the requirements of the following standard

ISO 9001:2000

Issued on: 2003-09-18

Validity date: 2006-09-17

Registration Number: IT-4366



Felice Bonazzi
President of IQNet



Giuseppe Prati
President of CISQ

*IQNet partner**

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*The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnetcertification.com

RACI was founded in 1952, pipeline division for spacers is the result of 30 years of experience. According to our philosophy, the keys to the continuous success of our products are: our capacity to respond to any specific customer or market request, our keen attention to details and the balanced interaction between quality and service.

This philosophy implies that a lot of attention has always been paid to the research carried out by RACI R&D dept. This big consideration for advanced research has been rewarded by both the incomparable performance of our spacers and by the excellent world wide reputation of RACI.

Introduction

In many countries pipelines crossing or running parallel to highways and railways shall be protected by casing. Spacers are used in order to separate the carrier pipeline from the casing. Raci casing Spacers isolate water, sewer and gas pipelines from casing simply and effectively. Insulators are required to separate casing and carrier pipes according to the following requirements:

spacers

must ensure electrical insulation between the carrier pipe and the casing pipe.

must guarantee an easy insertion of the carrier into the casing pipe preventing damage of carrier pipe coating.

must permit to be tightly fastened onto carrier pipes in order to avoid horizontal movements during insertion.

must be made of material which does not conduct electricity and which ensures permanent resistance to chemical corrosion.

must be resistant to mechanical and thermal shocks and stresses, particularly those that occur during both the installation and the inserting operation.



Raci spacers have been applied in the main worldwide crossings

The advantages of RACI spacers

Spacers are manufactured entirely out of high density polyethylene (HDPE). No metal bolts or attachments are required.

The modular system which permits to compose insulator rings allows spacers to be used on a wide pipe diameter range therefore reducing inventory costs.

Spacers are quickly and easily assembled by manually fitting elements one into the other.

The tooth insertion method allows on site adjustments to fit a wide range of pipe diameters.

A low friction coefficient guarantees an easy insertion into the casing.

Raci spacer elements are the result of a deep structural analysis and of computer-assisted design and manufacturing which represent the best compromise between mechanical resistance and material used. No metallic parts are involved for their assembly. Each element represents a flexible section with a toothed male strap at one end and an appropriate toothed female slot on the other end. This design allows on site adjustments for variances within the O.D. range and permits to cover all types of pipes within the global range which goes from 30 to 3414 mm.

Spacers are designed and tested to maintain continuous and long term support for the carrier pipe and its contents.

Spacers provide a constant projection around the entire circumference of the carrier pipe.

Spacers provide long term protection from corrosion.

Spacers can be installed on steel-coated pipes, concrete pipes, ductile iron pipes or plastic pipes.

Spacers are divided into six models which address a wide range of pipe sizes. All of the elements are designed according to different applications. They must in fact ensure different static and dynamic characteristics in order to guarantee the safest job on site. Each grouping offers varying support heights which allow spacers to clear bell joints, flanges, couplings or simply to offer a better centring. The available height range goes from 15 to 130 mm.

Special applications

For applications with a continuous temperature above 60° C Nylon spacers are available. Customized versions can also be manufactured with other types of polymers according to mechanical and thermal requirements.

HPDE characteristics

TABLE A
physical
characteristics
of High Density
Polyethylene

Yield strength *	> 22 N/mm ²	UNI EN ISO 527-2
Tensile strength*	> 16 N/mm ²	UNI EN ISO 527-2
Elongation at break *	> 400%	UNI EN ISO 527-2
Hardness shore D	64	ASTM D 2240
minimum working temperature	-20° C	
minimum stocking temperature	-20° C	
Dielectric strength	> 37 kV/mm	ASTM D 149/64
UVL stabilization	good	

* on test specimen with extruded material

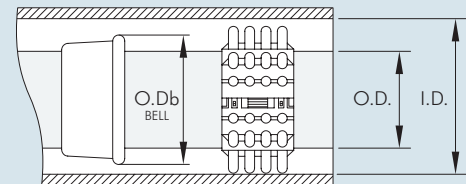
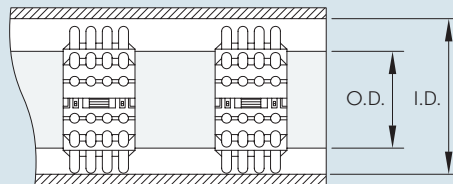
Selection guidelines

Basic dimensions

Exact carrier pipe Outside Diameter (O.D.) including the coating film

Exact casing pipe Internal Diameter (I.D.)

Exact bell, flange or coupling O.Db (bell)



In order to choose the right element you only need the O.D. carrier pipe.



Table of elements

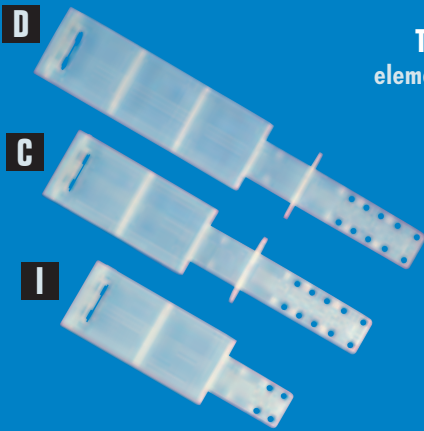
Elements needed to make one insulator ring

TABLE B1
elements S/T



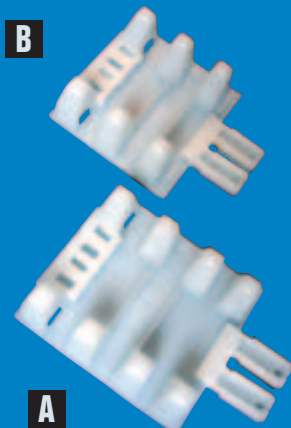
CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR		RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	S	T	(m)		(ft)	
						GAS	WATER	GAS	WATER
30	35	1,18	1,38	1	-	2,0	2,0	6,5	6,5
38	43	1,50	1,69	-	1	2,0	2,0	6,5	6,5
59	68	2,32	2,68	2	-	2,0	2,0	6,5	6,5
69	75	2,72	2,95	1	1	2,0	2,0	6,5	6,5
76	84	2,99	3,31	-	2	2,0	2,0	6,5	6,5
88	102	3,46	4,02	3	-	2,0	2,0	6,5	6,5
103	107	4,06	4,21	2	1	2,0	1,5	6,5	5,0
108	114	4,25	4,49	1	2	2,0	1,5	6,5	5,0
115	120	4,53	4,72	-	3	2,0	1,5	6,5	5,0
121	132	4,76	5,20	4	-	1,5	1,5	5,0	5,0
133	140	5,24	5,51	3	1	1,5	1,5	5,0	5,0
141	146	5,55	5,75	2	2	1,5	1,5	5,0	5,0
147	152	5,79	5,98	1	3	1,5	1,5	5,0	5,0
153	168	6,02	6,61	-	4	1,5	1,5	5,0	5,0

TABLE B2
elements C/D/I



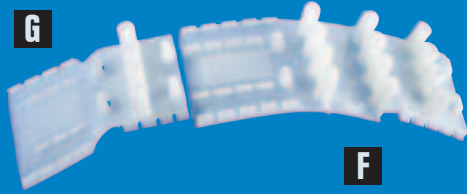
CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR			RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	C	D	I	(m)		(ft)	
							GAS	WATER	GAS	WATER
42	52	1,65	2,05	-	-	1	1,5	1,5	5,0	5,0
58	80	2,28	3,15	1	-	-	1,5	1,5	5,0	5,0
81	99	3,19	3,90	-	1	-	1,5	1,0	5,0	3,0
100	133	3,94	5,24	1	-	1	1,5	1,0	5,0	3,0
134	170	5,28	6,69	1	1	-	1,0	1,0	3,0	3,0
171	200	6,73	7,87	-	2	-	1,0	1,0	3,0	3,0

TABLE B3
elements A/B



CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR		RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	A	B	(m)		(ft)	
						GAS	WATER	GAS	WATER
55	64	2,17	2,52	-	2	2,0	2,0	6,5	6,5
60	70	2,36	2,76	1	1	2,0	2,0	6,5	6,5
68	77	2,68	3,03	2	-	2,0	2,0	6,5	6,5
85	98	3,35	3,86	-	3	2,0	2,0	6,5	6,5
90	106	3,54	4,17	1	2	2,0	1,5	6,5	5,0
98	116	3,86	4,57	3	-	2,0	1,5	6,5	5,0
118	132	4,65	5,20	-	4	2,0	1,5	6,5	5,0
125	140	4,92	5,51	1	3	2,0	1,5	6,5	5,0
140	158	5,51	6,22	4	-	1,5	1,5	5,0	5,0
158	180	6,22	7,09	2	3	1,5	1,5	5,0	5,0
178	200	7,01	7,87	5	-	1,5	1,5	5,0	5,0
200	240	7,87	9,45	-	7	1,5	1,5	5,0	5,0
215	242	8,46	9,53	6	-	1,5	1,5	5,0	5,0
239	272	9,41	10,71	6	1	1,5	1,0	5,0	3,5
245	281	9,65	11,06	7	-	1,5	1,0	5,0	3,5

TABLE B4
elements F/G



CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR		RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	F	G	(m)		(ft)	
						GAS	WATER	GAS	WATER
92	115	3,62	4,53	1	1	2,5	2,5	8,0	8,0
116	152	4,57	5,98	2	-	2,5	2,5	8,0	8,0
153	188	6,02	7,40	2	1	2,5	2,0	8,0	7,0
189	224	7,44	8,82	3	-	2,5	2,0	8,0	7,0
225	260	8,86	10,24	3	1	2,0	2,0	7,0	7,0
261	295	10,28	11,61	4	-	2,0	2,0	7,0	7,0
296	313	11,65	12,32	4	1	2,0	2,0	7,0	7,0
314	376	12,36	14,80	5	-	2,0	1,5	7,0	5,0
377	446	14,84	17,56	6	-	2,0	1,5	7,0	5,0
447	528	17,60	20,79	7	-	2,0	1,5	7,0	5,0

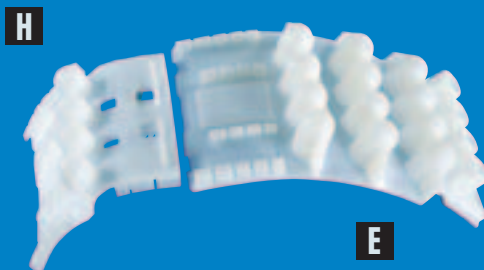
TABLE B5
elements M/N and P/Q



CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR		RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	M / P	N / Q	(m)		(ft)	
						GAS	WATER	GAS	WATER
143	168	5,63	6,61	1	1	2,5	2,5	8,0	8,0
169	201	6,65	7,91	2	-	2,5	2,5	8,0	8,0
202	227	7,95	8,94	1	2	2,5	2,5	8,0	8,0
228	252	8,98	9,92	2	1	2,5	2,0	8,0	7,0
253	286	9,96	11,26	3	-	2,5	2,0	8,0	7,0
287	311	11,3	12,24	2	2	2,0	2,0	7,0	7,0
312	337	12,28	13,27	3	1	2,0	2,0	7,0	7,0
338	395	13,31	15,55	4	-	2,0	2,0	7,0	7,0
396	421	15,59	16,57	4	1	2,0	2,0	7,0	7,0
422	505	16,61	19,88	5	-	2,0	2,0	7,0	7,0
506	590	19,92	23,23	6	-	2,0	1,5	7,0	5,0
591	674	23,27	26,54	7	-	2,0	1,5	7,0	5,0
675	759	26,57	29,88	8	-	1,5	1,5	5,0	5,0
760	915	29,92	36,02	9 (*)	- (*)	1,5	1,0	5,0	3,5
850	1015	33,46	39,96	10 (*)	- (*)	1,5	1,0	5,0	3,5

(*) N.A. NOT APPLICABLE FOR P AND Q TYPE

TABLE B6
elements E/H



CARRIER PIPE O.D				ELEMENTS TO MAKE ONE INSULATOR		RECOMMENDED SPACING BETWEEN INSULATORS			
MIN (mm)	MAX (mm)	MIN (in)	MIN (in)	E	H	(m)		(ft)	
						GAS	WATER	GAS	WATER
221	268	8,7	10,55	2	1	2,5	2,5	8,0	8,0
269	320	10,59	12,6	3	-	2,5	2,5	8,0	8,0
321	366	12,64	14,41	3	1	2,5	2,5	8,0	8,0
367	420	14,45	16,54	4	-	2,5	2,0	8,0	7,0
421	465	16,57	18,31	4	1	2,5	2,0	8,0	7,0
466	530	18,35	20,87	5	-	2,5	2,0	8,0	7,0
531	630	20,91	24,8	6	-	2,0	2,0	7,0	7,0
631	730	24,84	28,74	7	-	2,0	2,0	7,0	7,0
731	830	28,78	32,68	8	-	2,0	1,8	7,0	6,0
831	910	32,71	35,83	9	-	2,0	1,8	7,0	6,0
910	1030	35,83	40,55	10	-	2,0	1,5	7,0	5,0
1031	1159	40,59	45,63	11	-	2,0	1,5	7,0	5,0
1160	1360	45,67	53,54	13	-	2,0	1,2	7,0	4,0
1361	1600	53,58	62,99	15	-	2,0	1,2	7,0	4,0
1601	1799	63,03	70,83	17	-	2,0	1,0	7,0	3,5
1800	2110	70,87	83,07	20	-	2,0	0,8	7,0	2,6
2111	2430	83,11	95,67	23	-	1,5	0,6	5,0	2,0
2431	2860	95,71	112,6	27	-	1,5	0,5	5,0	1,6
2861	3414	112,64	134,41	32	-	1,5	0,4	5,0	1,3

Simplified choices

TABLE C
suggested choices
for all carrier pipe
O.D. values

CARRIER PIPE DN (inches)	RECOMMENDED SOLUTION	ALTERNATIVE SOLUTIONS	
up to 3"	S/T	C/D/I	-
from 3" to 5"	A/B	S/T	C/D/I
from 5" to 12"	F/G	A/B	M/N
from 12" to 24"	M/N	E/H	F/G
over 24"	E/H	M/N	-

Ring's spacing

Length of crossing and linear weight of filled carrier pipe

The spacing of the rings must ensure that the carrier pipe is fully supported throughout its length, this calculation is related to the carrying capacity of the elements and it is resumed in the tables of range. To ensure against the effects of differential loading at the entrance and exit points of the casing, two rings are to be provided at the beginning and at the end of the crossing segment, regardless the sizes of the pipe.

Where mechanically joined pipes, flanges, couplings or bells are involved, rings must be installed within 0,3 m on each side of the bell.



How to calculate the number of rings

The exact number of elements N_2 comes from the following formula:

$$N_2 = \frac{L}{I} + 3$$

N_2 Required rings
 L crossing length
 I spacing as per tables pg. 6-7

The total number of elements for each crossing N_{tot} is:

$$N_{tot} = N_1 \times N_2$$

N_1 elements to make one insulator as per tables pg. 6-7

How to choose the height of the elements

The spacers' elements are also available in different heights except for the C-D-I-S-T model, in order to either clear the mechanical joints or simply to obtain a better centring between carrier and casing pipes.

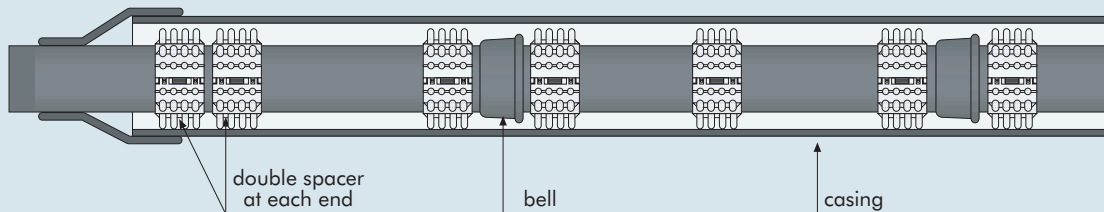
Exact carrier pipe
O.D. including
the coating film

Exact casing
pipe I.D.

Exact bell,
flange or coupling
O.D. (bell)

The basic calculation in order to define maximum spacer height is the following:

$$[\text{carrier pipe OD}] + [2x \text{ height of element}] + [\text{clearance 12 to 15 mm}] < [\text{casing ID}]$$



In case of carrier pipes made of ductile iron or pipes with flanged junctions, the height of each element must be above the mechanical joint (bell or flange) too.

$$[\text{carrier pipe OD}] + [2x \text{ height of element}] > [\text{bell O.D.} + \text{clearance 20 mm}]$$

TABLE D
technical datas

ELEMENTS		S	T	A	B	C	D	I
Useful length	(mm)	94 - 110	119 - 135	113 - 128	95 - 110	180 - 250	240 - 310	130 - 160
	(in)	3,7 - 4,33	4,68 - 5,32	4,45 - 5,04	3,74 - 4,33	7,08 - 9,84	9,45 - 12,2	5,12 - 6,30
Width	(mm)	85		100		63		
	(in)	3,35		3,94		2,48		
Height	(mm)	20		19 - 36 - 50		15		
	(in)	0,79		0,75 - 1,42 - 1,97		0,59		
Carrying capacity	(Kg)	110		180		100		
	(lbs)	242		397		220,46		
execution HDPE (23° C)								
Carrying capacity	(Kg)	20		32		18		
	(lbs)	44		71		40		
execution NYLON or POLYPROPYLENE(100° C)								

ELEMENTS		F	G	M	N	E	H	P	Q
Useful length	(mm)	197 - 237	91 - 129	265 - 320	185 - 240	280 - 335	130 - 185	265 - 320	185 - 240
	(in)	7,76 - 9,33	3,58 - 5,08	10,43 - 12,60	7,28 - 9,45	11,02 - 13,19	5,12 - 7,28	10,43 - 12,60	7,28 - 9,45
Width	(mm)	130		180		225		180	
	(in)	5,12		7,09		8,86		7,09	
Height	(mm)	25 - 41 60 - 75		18 - 25 - 36 - 41 50 - 75 - 90		25 - 41 - 60 - 75 90 - 110 - 130		110 - 120	
	(in)	0,98 - 1,61 2,36 - 2,95		0,71 - 0,98 - 1,42 - 1,61 1,97 - 2,95 - 3,54		0,98 - 1,61 - 2,36 - 2,95 3,54 - 4,33 - 5,12		4,33 - 4,72	
Carrying capacity	(Kg)	500		1000		2750		1000	
	(lbs)	1102		2204		6061		2204	
execution HDPE (23° C)									
Carrying capacity	(Kg)	80		180		500		180	
	(lbs)	176		397		1102		397	
execution NYLON or POLYPROPYLENE(100° C)									

Tape for plastic pipes

In case of plastic carrier pipe (PVC, PE and similar), it is suggested to tape the contact area between the ring insulator and the carrier pipe, this precaution will avoid any horizontal sliding of the rings on the carrier pipe during the inserting operations. The following table resume the required quantity of tape for each insulating ring referred to the different size of pipes.

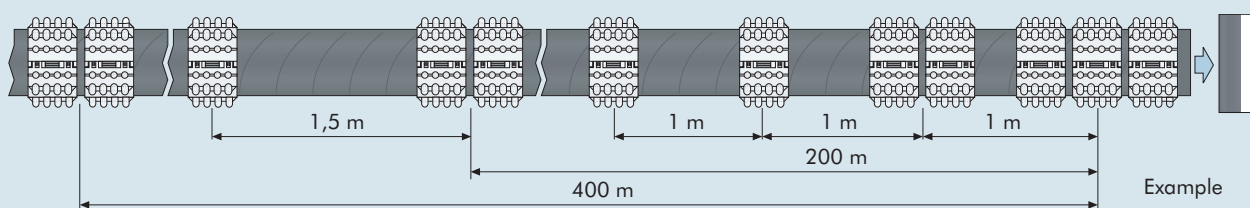
TABLE E
required quantity of self
amalgamating tape (m)
1 m = 39,37 in

CARRIER PIPE DN	ELEMENTS					
	C/D/I - S/T - A/B		F/G		M/N - P/Q - E/H	
	required quantity (m)	required quantity (in)	required quantity (m)	required quantity (in)	required quantity (m)	required quantity (in)
2"	0,45	17,7	1,65	65,0	-	-
4"	0,75	29,5	2,4	94,5	-	-
6"	1,2	47,2	1,5	59,1	3,45	135,8
8"	0,75	29,5	1,8	70,9	2,7	106,3
10"	-	-	2,1	82,7	3,3	129,9
12"	-	-	2,7	106,3	4,05	159,4
16"	-	-	3,3	129,9	5,25	206,7
20"	-	-	-	-	6,6	259,8
24"	-	-	-	-	7,8	307,1
30"	-	-	-	-	9,75	383,9
32"	-	-	-	-	10,35	407,5
36"	-	-	-	-	11,7	460,6
40"	-	-	-	-	12,9	507,9
42"	-	-	-	-	13,5	531,5
48"	-	-	-	-	15,45	608,3

Please note that the above quantities concerning tape consumption are calculated considering: up to DN 6" rolls height 50 mm - for DN > 6" rolls height 100 mm

Heavy-duty applications

In case of very long crossings > 150 m or for very heavy carrier pipes it is also possible to increase the frequency of the insulating rings, or consider the adoption of reinforced elements. These elements are designed with an increased wear thickness. However, in case of heavy duty applications, a more careful analysis and calculation is necessary, taking into account the particular conditions on site. For these cases we recommend to ask for Raci technical support.



RACI quality control

All Raci tests are carried out in our internal laboratory according to the UNI EN 527 standard. For each production batch, we test 10 specimens which verify compliance to our standards. (see TABLE A).

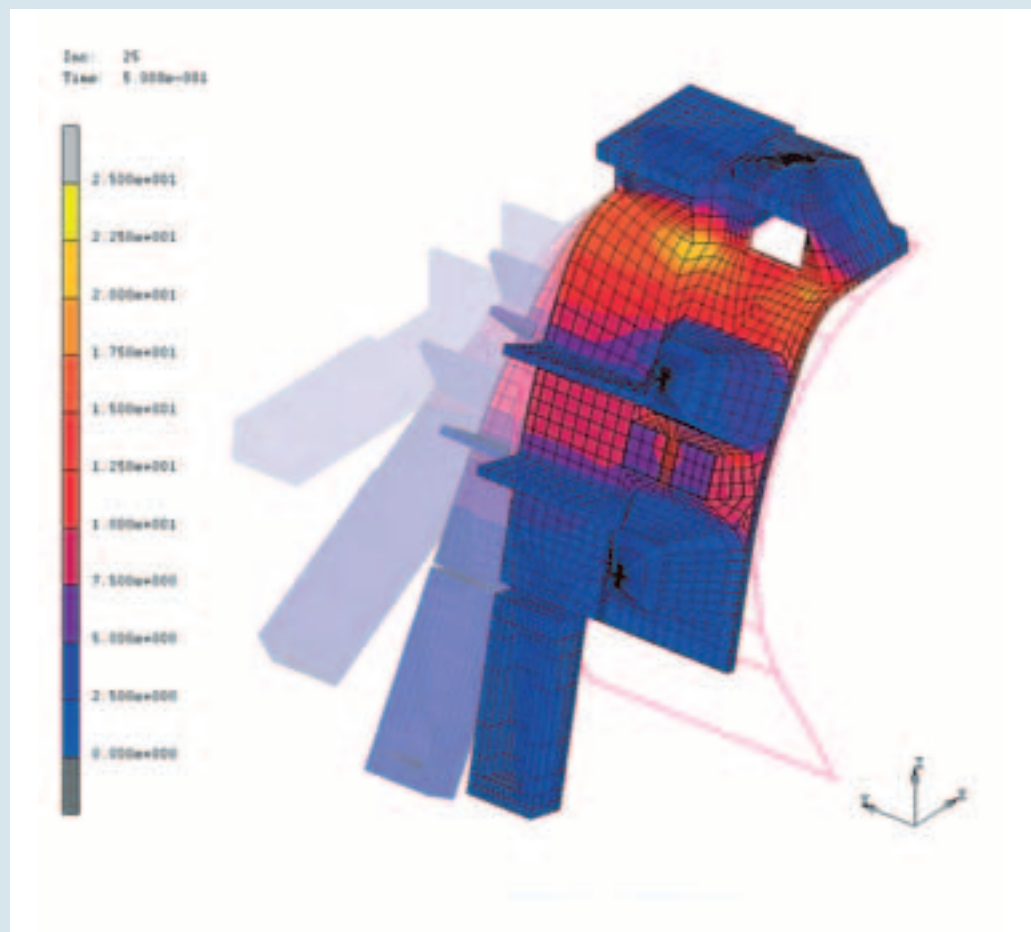
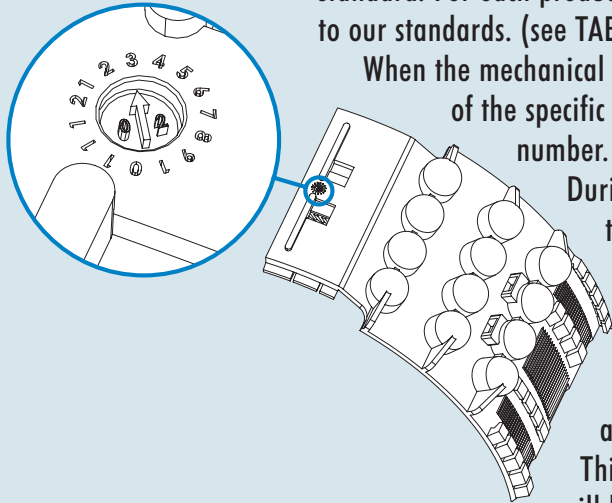
When the mechanical characteristics are satisfied, we guarantee the production of the specific batch by marking every elements with the corresponding batch number. This allows to trace the story of each element.

During the production phase, all pieces are tested according to their project's drawing.

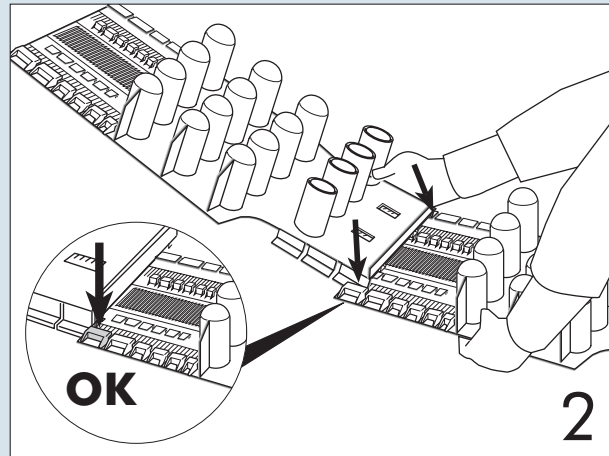
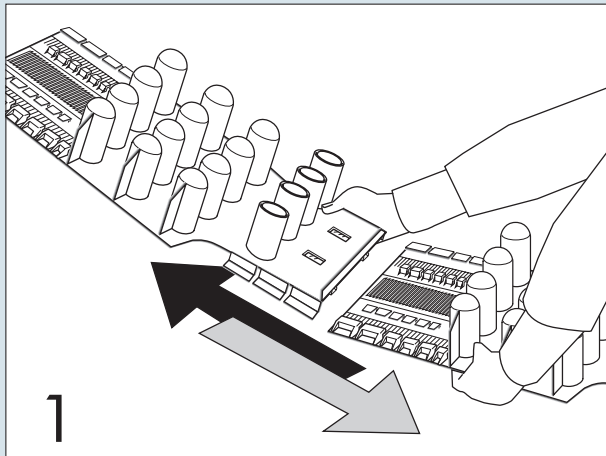
Before packaging, visual inspection ensures that the overall quality reaches our standards.

RACI quality dept. also provide sample-surveys by installing a few elements on a pipe and checking them through an ageing test which is carried out in the climatic chamber.

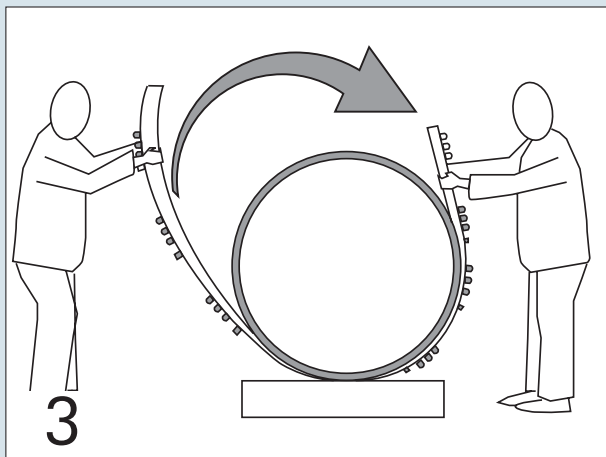
This test will last for 15 days. The temperature excursion range will be from -20°C to $+80^{\circ}\text{C}$. After this test, samples will be checked against creep or any other damage.



Instruction for assembly

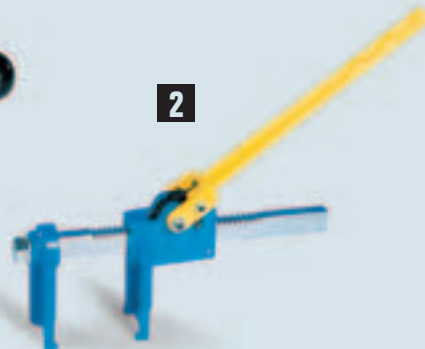
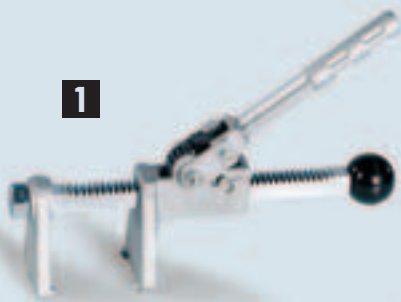


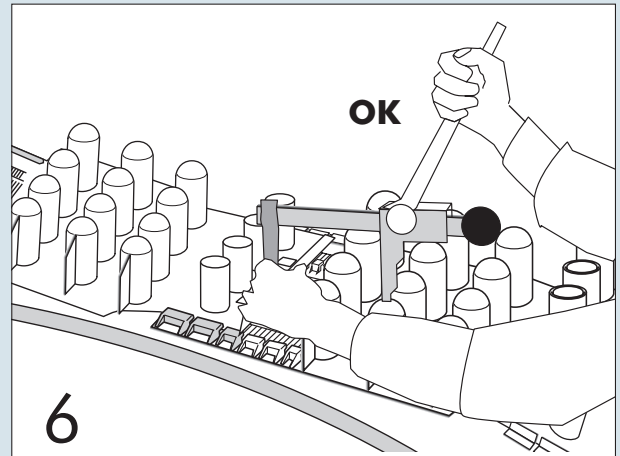
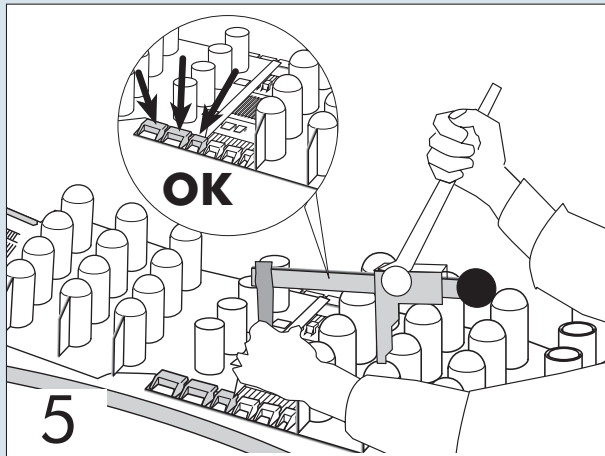
Insert the male button-strap into the slot of the next pieces until you have assembled the required number of elements to circle the pipe in order to create a belt of elements. Look at the table of elements (pg. 6-7).



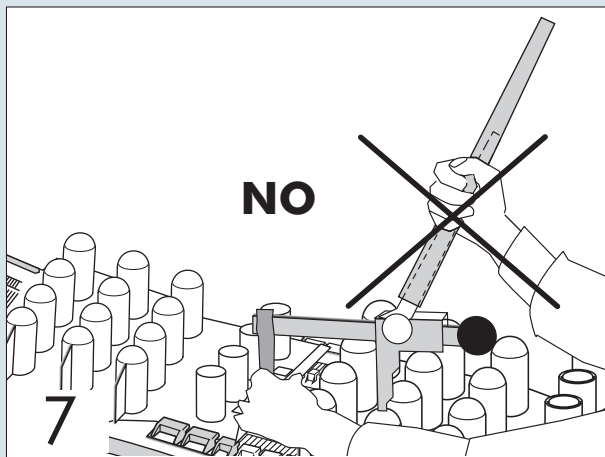
Wrap the spacer belt around the pipe and close the ends by hand, inserting the male butt-strap into the slot to make a complete ring.

Start to fasten the ring around the pipe, using the clamp tight each element up to the end of third tooth.





For the final clamping around the pipe tight gradually, in order to obtain as much as possible an omogeneous number of engaged teeth.

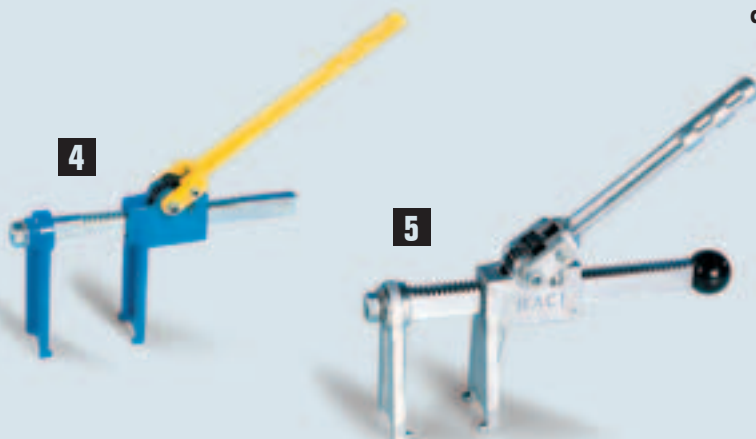


Do not use extension lever to increase the torque, you could break some components of the clamp. The clamp has been studied in order to guarantee the appropriate fastening only by using the original lever.

TABLE F
clamp types

ELEMENTS	CLAMPS	CODE
S/T	3	EEE5
C/D/I	3	EEE5
F/G	1	EEE1
M/N	5*	EEE7B
E/H h 25-90	2	EEE4
E/H h 130	4	EEE6

* clamp type 5
can be used also for elemnts F/G



Casing end seal

Once the carrier pipe has been completely introduced inside the casing, two end seals are necessary.

The different types of end seals which belong to our range guarantee a safe, clean and cost-effective solution for both new and pre-existing installation.

Casing end seals are easy and fast to install.

The material used is highly resistant to ageing and it offers excellent mechanical strength. There are four types of end seal:

Espansit end seal, wave type Z

Conic end seal, Espansit frustum type C

Ekf type end seal

Heat shrinkable end seal

Casing end seal "Espansit" type Z

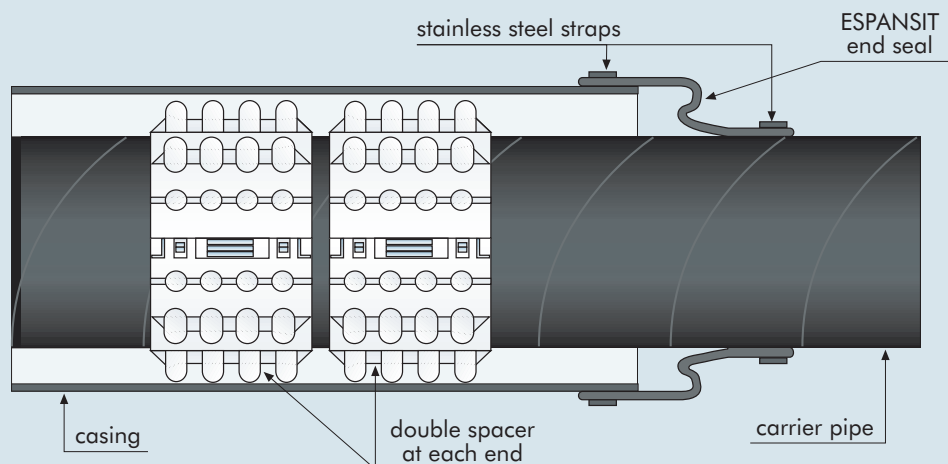
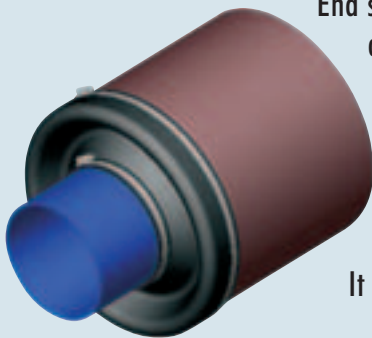
"Espansit" end seal type Z is entirely made of synthetic rubber (EPDM) and is the most functional, simple and cheap solution for sealing the clearances between the casing and the carrier pipe at the end of the pipe.

End seal type Z have a tolerance of 10% on their O.D. values (both casing and carrier pipe). If this tolerance is not enough for the application we recommend to choose a higher size, therefore increasing the pipe O.D. with wrappings of self-amalgamating P.I.B. tape.

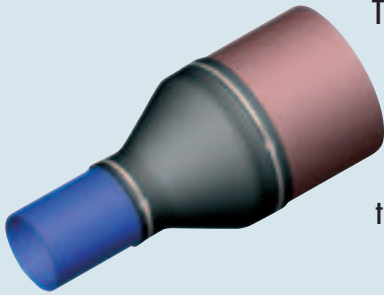
This type also guarantees good sealing for applications with eccentric carrier pipe.

It is easily fixed onto the pipes by means of stainless steel straps.

It is only suitable for NEW installations.



Casing end seal "Espansit" type C



This kind of casing is available in almost every size, and the conical design compensates for a possible eccentric position of the pipes.

The end seals are made of CR-SBR black rubber.

The "Espansit" type C is also available in the OPEN version.

The end seal consists of a rubber sheet which can be folded around the pipelines and then pasted on to the edges.

Casing end seal EKF type

Its easily adaptable shape allows the seal EKF type to be cut according to the carrier pipe diameter. This makes it suitable for a huge combination of carrier and casing pipes. The casing frustum cone shaped end seal EKF type is made of a 3-4 mm thick high quality EPDM rubber.

On the outer seal surface different sizes are marked to simplify the cutting operation. The seal must be fixed to both pipes with clamping straps which are applicable to all diameters and are included in the kit. Two casing pipe seats are provided for each end seal EKF size. This solution reduces the need to keep many different sizes on stock.



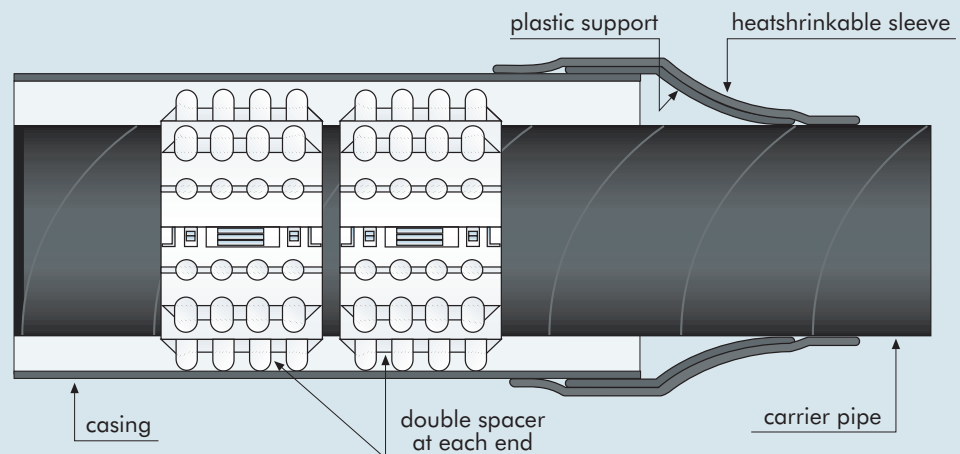
Heat shrinkable CSK end seal type

The two fundamental data of heat shrinkable sleeves are their diameter before shrinking and the smallest diameter they can reach after shrinking.

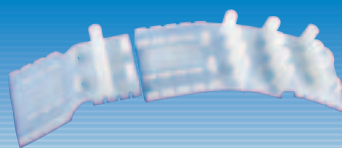
The outside diameter of both the casing O.D. and of the carrier pipe O.D. must be included in the shrinking range of the heat shrinkable sleeve.

Complete sealing is guaranteed in this way.

The CSK end seal is made of an open band which has to be wrapped around the pipe with its own closing patch.



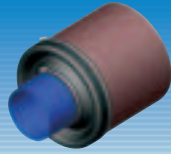
How to order



SPACERS

ELEMENTS TYPE	HEIGHT (mm)	CODE	SPACERS FOR CARTON	CARTON DIMENSIONS (cm)	WEIGHT FOR CARTON (kg)	
					GROSS	NET
C	15	CDC	120	40 x 30 x 35	5	4
D	15	CDD1	100	40 x 30 x 35	6	5
I	15	CDI1	150	40 x 30 x 35	5	4
S	20	CDS1	100	40 x 30 x 35	4	3
T	20	CDT	80	40 x 30 x 35	4	3
A	19	CDA19	140	40 x 30 x 35	7	6
A	36	CDA36	110	40 x 30 x 35	7	6
A	50	CDA50	80	40 x 30 x 35	6	5
B	19	CDB19	160	40 x 30 x 35	6	5
B	36	CDB36	130	40 x 30 x 35	5	4
B	50	CDB50	90	40 x 30 x 35	5	4
F	25	CDF25	150	60 x 40 x 50	24	22
F	41	CDF41	100	60 x 40 x 50	19	17
F	60	CDF60	70	60 x 40 x 50	16	14
F	75	CDF75	60	60 x 40 x 50	17	15
G	25	CDG25	50	40 x 30 x 35	10	9
G	41	CDG41	60	40 x 30 x 35	7	6
G	60	CDG60	40	40 x 30 x 35	5	4
M	18	CDM18	100	60 x 40 x 50	29	27
M	36	CDM36	60	60 x 40 x 50	22	20
M	41	CDM41	55	60 x 40 x 50	23	21
M	50	CDM50	40	60 x 40 x 50	18	16
M	75	CDM75	30	60 x 40 x 50	17	15
M	90	CDM90	25	60 x 40 x 50	17	15
N	18	CDN18	100	60 x 40 x 50	22	20
N	36	CDN36	70	60 x 40 x 50	18	16
N	50	CDN50	50	60 x 40 x 50	15	13
N	75	CDN75	35	60 x 40 x 50	12	11
N	90	CDN90	30	60 x 40 x 50	12	10
E	25	CDE25	50	60 x 40 x 50	30	28
E	41	CDE41	26	60 x 40 x 50	20	18
E	41	CDE41R	26	60 x 40 x 50	22	20
E	60	CDE60	18	60 x 40 x 50	17	15
E	75	CDE75	14	60 x 40 x 50	16	14
E	90	CDE90	12	60 x 40 x 50	16	14
E	110	CDE110	10	60 x 40 x 50	15	13
E	130	CDE130	8	60 x 40 x 50	12	10
H	25	CDH25	60	60 x 40 x 50	23	21
H	41	CDH41	58	60 x 40 x 50	24	22
H	60	CDH60	40	60 x 40 x 50	18	16
H	75	CDH75	30	60 x 40 x 50	15	13
H	90	CDH90	26	60 x 40 x 50	14	12
H	110	CDH110	22	60 x 40 x 50	12	10
H	130	CDH130	18	60 x 40 x 50	11	9
P	110	CDP110	24	60 x 40 x 50	16	14
P	120	CDP120	20	60 x 40 x 50	15	13
Q	110	CDQ110	30	60 x 40 x 50	13	11
Q	120	CDQ120	26	60 x 40 x 50	12	10

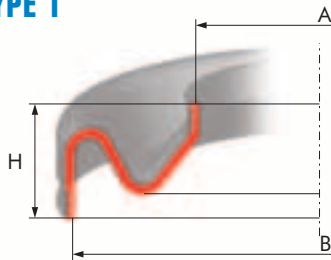
In order to simplify stock management we only accept orders for complete boxes



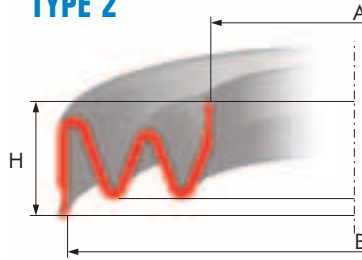
ESPANSIT END SEAL Type Z

SIZE (inches)	DIMENSIONS (mm) A x B x H	CODE	TYPE	SIZE (inches)	DIMENSIONS (mm) A x B x H	CODE	TYPE
2X4	60x114x75	EZ020X4	1	8X16	225x410x80	EZ080X16	2
2X6	64x160x78	EZ020X6R	1	8X18	225x457x80	EZ080X18	2
2X6	65x170x78	EZ020X6	1	9X12	224x325x75	EZ090X12	1
2"1/2X6	80x160x75	EZ021X6R	1	10X12	260x330x75	EZ10X12	1
2"1/2X6	80x170x78	EZ021X6	1	10X14	250x356x75	EZ10X14R	1
3X6	95x159x75	EZ030X6R	1	10X14	280x360x75	EZ10X14	1
3X6	92x170x75	EZ030X6	1	10X16	280x410x75	EZ10X16	1
3X7	100x195x75	EZ030X7	2	10X16	280x410x75	EZ10X16-2	2
3X8	90x220x75	EZ030X8R	1	10X20	273x508x80	EZ10X20	3
3X8	97x225x78	EZ030X8	1	10X22	275x556x90	EZ10X22	3
3X10	90x275x80	EZ030X10	2	12X16	335x410x75	EZ12X16	1
3X12	90x346x80	EZ030X12	3	12X18	325x457x90	EZ12X18	1
3"1/2X8	108x219x75	EZ031X8	2	12X20	324x508x80	EZ12X20	2
4X6	118x162x75	EZ040X6	1	12X22	348x579x80	EZ12X22	2
4X8	120x220x75	EZ040X8	1	14X18	360x457x75	EZ14X18	1
4X10	112x275x80	EZ040X10	2	14X20	360x508x80	EZ14X20	1
4X12	110x346x80	EZ040X12	3	16X20	406x508x90	EZ16X20	1
4"1/2X8	138x219x75	EZ041X8	1	16X22	410x558x90	EZ16X22	1
4"1/2X10	130x290x80	EZ041X10	2	16X24	400x609x90	EZ16X24	2
5X8	152x220x75	EZ050X8	1	20X24	508x610x75	EZ20X24	1
5X9	155x235x75	EZ050X9	1	20X26	508x660x75	EZ20X26	2
5X10	145x275x78	EZ050X10	2	22X26	558x660x90	EZ22X26	1
6X10	159x273x75	EZ060X10R	1	24X30	615x760x90	EZ24X30	1
6X10	173x273x75	EZ060X10	1	24X32	600x812x90	EZ24X32	2
6X12	159x324x80	EZ060X12R	2	26X30	668x760x75	EZ26X30	1
6X12	175x330x75	EZ060X12	1	26X32	660x813x157	EZ26X32	1
6X14	168x365x80	EZ060X14	2	30X36	765x915x150	EZ30X36	1
6X16	160x406x80	EZ060X16	3	32X38	813x965x157	EZ32X38	1
8X10	225x280x75	EZ080X10	1	32X40	825x1018x160	EZ32X40	1
8X12	200x324x75	EZ080X12	1	34X40	863x1015x160	EZ34X40	1
8X14	230x355x75	EZ080X14	1	36X42	914x1066x160	EZ36X42	1

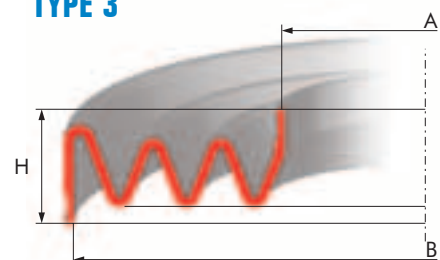
TYPE 1



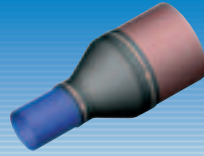
TYPE 2



TYPE 3



Stainless steel straps included

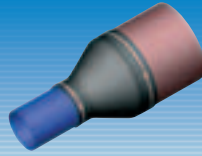


ESPANSIT FRUSTUM END SEAL Type C

SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE	SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE
1x1,5	32x53x220	E010X011CC	E010X011CO	4x10	109x300x330	E040X10CC	E040X10CO
1x2	32x66x220	E010X020CC	E010X020CO	4x12	109x356x370	E040X12CC	E040X12CO
1x2,5	32x84x240	E010X021CC	E010X021CO	4x14	109x391x400	E040X14CC	E040X14CO
1x3	32x98x250	E010X3CC	E010X3CO	4x16	109x447x440	E040X16CC	E040X16CO
1x4	32x126x270	E010X4CC	E010X4CO	4x18	109x503x480	E040X18CC	E040X18CO
1x5	32x154x290	E010X5CC	E010X5CO	4x20	109x559x520	E040X20CC	E040X20CO
1x6	32x185x310	E010X6CC	E010X6CO	4x22	109x615x550	E040X22CC	E040X22CO
1x8	32x241x350	E010X8CC	E010X8CO	4x24	109x671x600	E040X24CC	E040X24CO
1,5x2	46x66x210	E011X020CC	E011X020CO	4x26	109x726x630	E040X26CC	E040X26CO
1,5x2,5	46x84x230	E011X021CC	E011X021CO	5x6	133x185x240	E050X6CC	E050X6CO
1,5x3	46x98x240	E011X3CC	E011X3CO	5x8	133x241x280	E050X8CC	E050X8CO
1,5x4	46x126x260	E011X4CC	E011X4CO	5x10	133x300x320	E050X10CC	E050X10CO
1,5x5	46x154x280	E011X5CC	E011X5CO	5x12	133x356x360	E050X12CC	E050X12CO
1,5x6	46x185x300	E011X6CC	E011X6CO	5x14	133x391x380	E050X14CC	E050X14CO
1,5x8	46x241x340	E011X8CC	E011X8CO	5x16	133x447x420	E050X16CC	E050X16CO
2x2,5	57x84x220	E020X021CC	E020X021CO	5x18	133x503x460	E050X18CC	E050X18CO
2x3	57x98x230	E020X3CC	E020X3CO	5x20	133x559x500	E050X20CC	E050X20CO
2x4	57x126x250	E020X4CC	E020X4CO	5x22	133x615x540	E050X22CC	E050X22CO
2x5	57x154x270	E020X5CC	E020X5CO	5x24	133x671x580	E050X24CC	E050X24CO
2x6	57x185x290	E020X6CC	E020X6CO	5x26	133x726x620	E050X26CC	E050X26CO
2x8	57x241x330	E020X8CC	E020X8CO	6x8	160x241x260	E060X8CC	E060X8CO
2x10	57x300x370	E020X10CC	E020X10CO	6x10	160x300x300	E060X10CC	E060X10CO
2x12	57x356x410	E020X12CC	E020X12CO	6x12	160x356x340	E060X12CC	E060X12CO
2x14	57x391x430	E020X14CC	E020X14CO	6x14	160x391x360	E060X14CC	E060X14CO
2x16	57x447x470	E020X16CC	E020X16CO	6x16	160x447x400	E060X16CC	E060X16CO
2,5x3	72x98x220	E021X3CC	E021X3CO	6x18	160x503x440	E060X18CC	E060X18CO
2,5x4	72x126x240	E021X4CC	E021X4CO	6x20	160x559x480	E060X20CC	E060X20CO
2,5x5	72x154x260	E021X5CC	E021X5CO	6x22	160x615x520	E060X22CC	E060X22CO
2,5x6	72x185x280	E021X6CC	E021X6CO	6x24	160x671x560	E050X24CC	E050X24CO
2,5x8	72x241x320	E021X8CC	E021X8CO	6x26	160x726x600	E060X26CC	E060X26CO
2,5x10	72x300x360	E021X10CC	E021X10CO	6x28	160x782x640	E060X28CC	E060X28CO
2,5x12	72x356x400	E021X12CC	E021X12CO	8x10	208x300x270	E080X10CC	E080X10CO
2,5x14	72x391x420	E021X14CC	E021X14CO	8x12	208x356x300	E080X12CC	E080X12CO
2,5x16	72x447x460	E021X16CC	E021X16CO	8x14	208x391x330	E080X14CC	E080X14CO
3x4	84x126x230	E030X4CC	E030X4CO	8x16	208x447x370	E080X16CC	E080X16CO
3x5	84x154x250	E030X5CC	E030X5CO	8x18	208x503x410	E080X18CC	E080X18CO
3x6	84x185x270	E030X6CC	E030X6CO	8x20	208x559x450	E080X20CC	E080X20CO
3x8	84x241x310	E030X8CC	E030X8CO	8x22	208x615x490	E080X22CC	E080X22CO
3x10	84x300x350	E030X10CC	E030X10CO	8x24	208x671x520	E080X24CC	E080X24CO
3x12	84x356x390	E030X12CC	E030X12CO	8x26	208x726x560	E080X26CC	E080X26CO
3x14	84x391x420	E030X14CC	E030X14CO	8x28	208x782x600	E080X28CC	E080X28CO
3x16	84x447x450	E030X16CC	E030X16CO	8x30	208x838x640	E080X30CC	E080X30CO
3x18	84x503x490	E030X18CC	E030X18CO	8x32	208x894x680	E080X32CC	E080X32CO
3x20	84x559x530	E030X20CC	E030X20CO	10x12	259x356x270	E10X12CC	E10X12CO
3x22	84x615x570	E030X22CC	E030X22CO	10x14	259x391x290	E10X14CC	E10X14CO
3x24	84x671x610	E030X24CC	E030X24CO	10x16	259x447x330	E10X16CC	E10X16CO
3x26	84x726x650	E030X26CC	E030X26CO	10x18	259x503x370	E10X18CC	E10X18CO
4x5	109x154x230	E040X5CC	E040X5CO	10x20	259x559x410	E10X20CC	E10X20CO
4x6	109x185x250	E040X6CC	E040X6CO	10x22	259x615x450	E10X22CC	E10X22CO
4x8	109x241x290	E040X8CC	E040X8CO	10x24	259x671x490	E10X24CC	E10X24CO

CO = open version CC = close version

Stainless steel straps included

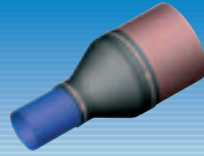


ESPANSIT FRUSTUM END SEAL Type C

SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE	SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE
10x26	259x726x530	E10X26CC	E10X26CO	18x30	434x838x480	E18X30CC	E18X30CO
10x28	259x782x570	E10X28CC	E10X28CO	18x32	434x894x520	E18X32CC	E18X32CO
10x30	259x838x610	E10X30CC	E10X30CO	18x34	434x950x560	E18X34CC	E18X34CO
10x32	259x894x640	E10X32CC	E10X32CO	18x36	434x1005x600	E18X36CC	E18X36CO
10x34	259x950x680	E10X34CC	E10X34CO	18x38	434x1062x640	E18X38CC	E18X38CO
10x36	259x1005x720	E10X36CC	E10X36CO	18x40	434x1118x680	E18X40CC	E18X40CO
12x14	308x391x260	E12X14CC	E12X14CO	20x22	483x615x290	E20X22CC	E20X22CO
12x16	308x447x280	E12X16CC	E12X16CO	20x24	483x671x330	E20X24CC	E20X24CO
12x18	308x503x340	E12X18CC	E12X18CO	20x26	483x726x370	E20X26CC	E20X26CO
12x20	308x559x380	E12X20CC	E12X20CO	20x28	483x782x410	E20X28CC	E20X28CO
12x22	308x615x420	E12X22CC	E12X22CO	20x30	483x838x450	E20X30CC	E20X30CO
12x24	308x671x450	E12X24CC	E12X24CO	20x32	483x894x490	E20X32CC	E20X32CO
12x26	308x726x490	E12X26CC	E12X26CO	20x34	483x950x530	E20X34CC	E20X34CO
12x28	308x782x530	E12X28CC	E12X28CO	20x36	483x1005x570	E20X36CC	E20X36CO
12x30	308x838x570	E12X30CC	E12X30CO	20x38	483x1062x610	E20X38CC	E20X38CO
12x32	308x894x610	E12X32CC	E12X32CO	20x40	483x1118x650	E20X40CC	E20X40CO
12x34	308x950x650	E12X34CC	E12X34CO	22x24	531x671x300	E22X24CC	E22X24CO
12x36	308x1005x690	E12X36CC	E12X36CO	22x26	531x726x340	E22X26CC	E22X26CO
12x38	308x1062x730	E12X38CC	E12X38CO	22x28	531x782x380	E22X28CC	E22X28CO
12x40	308x1118x770	E12X40CC	E12X40CO	22x30	531x838x420	E22X30CC	E22X30CO
14x16	338x447x280	E14X16CC	E14X16CO	22x32	531x894x450	E22X32CC	E22X32CO
14x18	338x503x320	E14X18CC	E14X18CO	22x34	531x950x490	E22X34CC	E22X34CO
14x20	338x559x360	E14X20CC	E14X20CO	22x36	531x1005x530	E22X36CC	E22X36CO
14x22	338x615x390	E14X22CC	E14X22CO	22x38	531x1062x570	E22X38CC	E22X38CO
14x24	338x671x430	E14X24CC	E14X24CO	22x40	531x1118x610	E22X40CC	E22X40CO
14x26	338x726x470	E14X26CC	E14X26CO	22x42	531x1174x650	E22X42CC	E22X42CO
14x28	338x782x510	E14X28CC	E14X28CO	22x44	531x1230x690	E22X44CC	E22X44CO
14x30	338x838x550	E14X30CC	E14X30CO	24x26	580x726x300	E24X26CC	E24X26CO
14x32	338x894x590	E14X32CC	E14X32CO	24x28	580x782x340	E24X28CC	E24X28CO
14x34	338x950x630	E14X34CC	E14X34CO	24x30	580x838x380	E24X30CC	E24X30CO
14x36	338x1005x670	E14X36CC	E14X36CO	24x32	580x894x420	E24X32CC	E24X32CO
14x38	338x1062x710	E14X38CC	E14X38CO	24x34	580x950x460	E24X34CC	E24X34CO
14x40	338x1118x750	E14X40CC	E14X40CO	24x36	580x1005x500	E24X36CC	E24X36CO
16x18	386x503x280	E16X18CC	E16X18CO	24x38	580x1062x540	E24X38CC	E24X38CO
16x20	386x559x320	E16X20CC	E16X20CO	24x40	580x1118x580	E24X40CC	E24X40CO
16x22	386x615x360	E16X22CC	E16X22CO	24x42	580x1174x620	E24X42CC	E24X42CO
16x24	386x671x400	E16X24CC	E16X24CO	24x44	580x1230x660	E24X44CC	E24X44CO
16x26	386x726x440	E16X26CC	E16X26CO	26x28	627x782x310	E26X28CC	E26X28CO
16x28	386x782x480	E16X28CC	E16X28CO	26x30	627x838x350	E26X30CC	E26X30CO
16x32	386x894x560	E16X32CC	E16X32CO	26x32	627x894x390	E26X32CC	E26X32CO
16x30	386x838x520	E16X30CC	E16X30CO	26x34	627x950x430	E26X34CC	E26X34CO
16x34	386x952x600	E16X34CC	E16X34CO	26x36	627x1005x470	E26X36CC	E26X36CO
16x36	386x1005x630	E16X36CC	E16X36CO	26x38	627x1062x500	E26X38CC	E26X38CO
16x38	386x1062x670	E16X38CC	E16X38CO	26x40	627x1118x540	E26X40CC	E26X40CO
16x40	386x1118x710	E16X40CC	E16X40CO	26x42	627x1174x580	E26X42CC	E26X42CO
18x20	434x559x290	E18X20CC	E18X20CO	26x44	627x1230x620	E26X44CC	E26X44CO
18x22	434x615x330	E18X22CC	E18X22CO	28x30	675x838x310	E28X30CC	E28X30CO
18x24	434x671x370	E18X24CC	E18X24CO	28x32	675x894x350	E28X32CC	E28X32CO
18x26	434x726x400	E18X26CC	E18X26CO	28x34	675x950x390	E28X34CC	E28X34CO
18x28	434x782x440	E18X28CC	E18X28CO	28x36	675x1005x430	E28X36CC	E28X36CO

CO = open version CC = close version

Stainless steel straps included



ESPANSIT FRUSTUM END SEAL Type C

SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE	SIZE (inches)	DIMENSIONS (mm)	CODE FOR CLOSED TYPE	CODE FOR OPENED TYPE
28x38	675x1062x470	E28X38CC	E28X38CO	38x48	917x1342x500	E38X48CC	E38X48CO
28x40	675x1118x510	E28X40CC	E28X40CO	38x52	917x1453x580	E38X52CC	E38X52CO
28x42	675x1174x550	E28X42CC	E28X42CO	38x56	917x1562x650	E38X56CC	E38X56CO
28x44	675x1230x590	E28X44CC	E28X44CO	38x60	917x1676x730	E38X60CC	E38X60CO
28x46	675x1285x630	E28X46CC	E28X46CO	40x42	965x1174x350	E40X42CC	E40X42CO
28x48	675x1342x670	E28X48CC	E28X48CO	40x44	965x1230x390	E40X44CC	E40X44CO
30x32	724x894x320	E30X32CC	E30X32CO	40x46	965x1285x420	E40X46CC	E40X46CO
30x34	724x950x360	E30X34CC	E30X34CO	40x48	965x1342x460	E40X48CC	E40X48CO
30x36	724x1005x400	E30X36CC	E30X36CO	40x52	965x1453x540	E40X52CC	E40X52CO
30x38	724x1062x440	E30X38CC	E30X38CO	40x56	965x1562x620	E40X56CC	E40X56CO
30x40	724x1118x480	E30X40CC	E30X40CO	40x60	965x1676x700	E40X60CC	E40X60CO
30x42	724x1174x520	E30X42CC	E30X42CO	40x64	965x1782x770	E40X64CC	E40X64CO
30x44	724x1230x550	E30X44CC	E30X44CO	42x44	1014x1230x350	E42X44CC	E42X44CO
30x46	724x1285x590	E30X46CC	E30X46CO	42x46	1014x1285x390	E42X46CC	E42X46CO
30x48	724x1342x630	E30X48CC	E30X48CO	42x48	1014x1342x430	E42X48CC	E42X48CO
30x52	724x1453x710	E30X52CC	E30X52CO	42x52	1014x1453x510	E42X52CC	E42X52CO
30x56	724x1562x790	E30X56CC	E30X56CO	42x56	1014x1562x580	E42X56CC	E42X56CO
32x34	772x950x330	E32X34CC	E32X34CO	42x60	1014x1676x660	E42X60CC	E42X60CO
32x36	772x1005x360	E32X36CC	E32X36CO	42x64	1014x1782x740	E42X64CC	E42X64CO
32x38	772x1062x400	E32X38CC	E32X38CO	44x46	1062x1285x360	E44X46CC	E44X46CO
32x40	772x1118x440	E32X40CC	E32X40CO	44x48	1062x1342x400	E44X48CC	E44X48CO
32x42	772x1174x480	E32X42CC	E32X42CO	44x52	1062x1453x470	E44X52CC	E44X52CO
32x44	772x1230x520	E32X44CC	E32X44CO	44x56	1062x1562x550	E44X56CC	E44X56CO
32x46	772x1285x560	E32X46CC	E32X46CO	44x60	1062x1676x630	E44X60CC	E44X60CO
32x48	772x1342x600	E32X48CC	E32X48CO	44x64	1062x1785x700	E44X64CC	E44X64CO
32x52	772x1453x680	E32X52CC	E32X52CO	46x48	1110x1342x360	E46X48CC	E46X48CO
32x56	772x1562x750	E32X56CC	E32X56CO	46x52	1110x1453x440	E46X52CC	E46X52CO
34x36	821x1005x330	E34X36CC	E34X36CO	46x56	1110x1562x520	E46X56CC	E46X56CO
34x38	821x1062x370	E34X38CC	E34X38CO	46x60	1110x1676x600	E46X60CC	E46X60CO
34x40	821x1118x410	E34X40CC	E34X40CO	46x64	1110x1782x670	E46X64CC	E46X64CO
34x42	821x1174x450	E34X42CC	E34X42CO	46x68	1110x1900x750	E46X68CC	E46X68CO
34x44	821x1230x490	E34X44CC	E34X44CO	46x72	1110x2002x830	E46X72CC	E46X72CO
34x46	821x1285x530	E34X46CC	E34X46CO	46x76	1110x2123x910	E46X76CC	E46X76CO
34x48	821x1342x570	E34X48CC	E34X48CO	46x80	1110x2222x980	E46X80CC	E46X80CO
34x52	821x1453x640	E34X52CC	E34X52CO	48x52	1159x1453x410	E48X52CC	E48X52CO
34x56	821x1562x720	E34X56CC	E34X56CO	48x56	1159x1562x480	E48X56CC	E48X56CO
36x38	868x1062x340	E36X38CC	E36X38CO	48x60	1159x1676x560	E48X60CC	E48X60CO
36x40	868x1118x380	E36X40CC	E36X40CO	48x64	1159x1782x640	E48X64CC	E48X64CO
36x42	868x1174x410	E36X42CC	E36X42CO	48x68	1159x1900x720	E48X68CC	E48X68CO
36x44	868x1230x450	E36X44CC	E36X44CO	48x72	1159x2002x790	E48X72CC	E48X72CO
36x46	868x1285x490	E36X46CC	E36X46CO	48x76	1159x2123x880	E48X76CC	E48X76CO
36x48	868x1342x530	E36X48CC	E36X48CO	48x80	1159x2222x940	E48X80CC	E48X80CO
36x52	868x1453x610	E36X52CC	E36X52CO	52x56	1255x1562x420	E52X56CC	E52X56CO
36x56	868x1562x690	E36X56CC	E36X56CO	52x60	1255x1676x500	E52X60CC	E52X60CO
36x60	868x1676x770	E36X60CC	E36X60CO	52x64	1255x1782x570	E52X64CC	E52X64CO
38x40	917x1118x340	E38X40CC	E38X40CO	52x68	1255x1900x650	E52X68CC	E52X68CO
38x42	917x1174x380	E38X42CC	E38X42CO	52x72	1255x2002x720	E52X72CC	E52X72CO
38x44	917x1230x420	E38X44CC	E38X44CO	52x76	1255x2123x810	E52X76CC	E52X76CO
38x46	917x1285x460	E38X46CC	E38X46CO	52x80	1255x2222x880	E52X80CC	E52X80CO

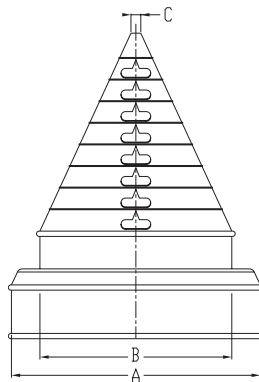
CO = open version CC = close version

Stainless steel straps included

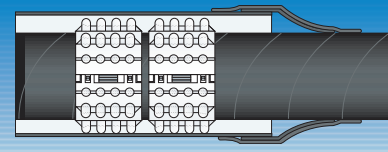


END SEAL Type EKF

SIZE (inches)	SIZE (mm)	DIMENSION (mm) C x B / A	CODE
0-6/8	0-150/200	10x165/215	EKF000X08
2-10/12	50-250/300	60x270/320	EKF020X12
3-14/16	80-350/400	90x350/402	EKF021X16
6-20/24	150-500/600	150x508/610	EKF060X24



Stainless steel straps included



HEATSHRINKABLE END SEAL Type CSK

SIZE (inches)	HEIGHT (mm)	CODE
3x5	650	TCCSK65K05
4x6	650	TCCSK65K06
5x8	650	TCCSK65K08
6x10	650	TCCSK65K10
8x12	650	TCCSK65K12
10x16	650	TCCSK65K16
10x18	650	TCCSK65K18
12x20	650	TCCSK65K20
12x22	650	TCCSK65K22
14x24	650	TCCSK65K24
14x26	650	TCCSK65K26
16x28	650	TCCSK65K28
16x30	650	TCCSK65K30
18x32	900	TCCSK90K32
20x36	900	TCCSK90K36
24x40	900	TCCSK90K40
26x42	900	TCCSK90K42
30x48	900	TCCSK90K48

Customized versions are available on request

Cooling water pipeline
Carrier pipe 1800 mm
Casing pipe 2000 mm
E elements CDE41R
Crossing length: 380 m



One of the mayor crossing
realized with raci spacers:
Carrier 3200 mm Steel
Casing 4000 mm Steel





Warranty

All products are warranted against failure caused by manufacturing defects for a period of one year. Any product found to be so defective and returned within one year from date of shipment will be replaced without charge. The above warranty is made in lieu of, and we disclaim, any and all other warranties, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, and buyer agrees to accept the products without any such warranties. We hereby disclaim any obligation or liability for consequential damages, labor costs or any other claims or liabilities of any kind whatsoever.



iso 9001 certif. n° 0364/2



