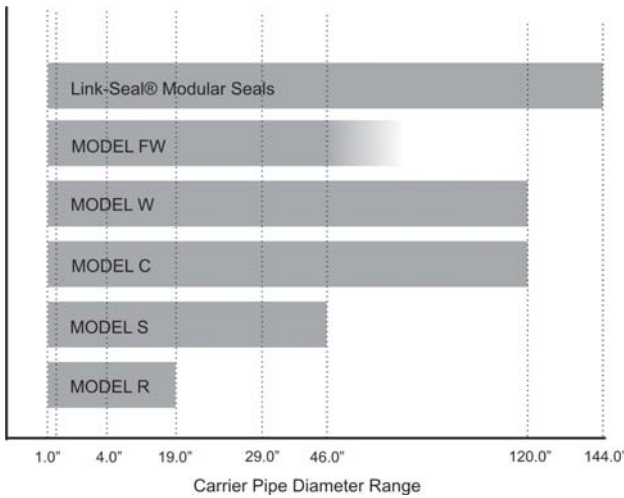


Casing End Seals



Material	Endseal Model					Material Specifications
	C	R	S	W	FW	
EPDM 60	X	X	X	X	*	Thickness = 1/8" (3.18mm) Color = Black Temperature = 250° F. (121° C.)
BUNA-N ¹	X			X	*	Thickness = 1/8" (3.18mm) Color = Black Temperature = 212° F. (100° C.)
NEOPRENE	X			X	*	Thickness = 1/8" (3.18mm)* Color = Black Temperature = 170° F. (77° C.)
NITRILE						X Color = Green Temperature = 210° F. (99° C.)
SILICONE						X Color = Grey Temperature = 400° F. (204° C.)
EPDM						X Color = Black Temperature = 250° F. (121° C.)

NOTES:

Standard casing end seals are designed for below grade applications. For above grade applications please contact PSI.

LS = Link-Seal® Modular Seals.

* = Contact PSI For Material Specifications.

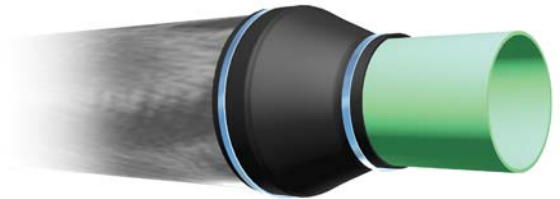
1. High grade Buna-N material available for oil/gas run off.

Model "C" End Seals (For New Installations) Water/Energy Market

Model "C" Custom Pull-on End Seals are designed to accommodate custom carrier/casing diameter combinations. They are made to customer supplied specifications so they may be used for any size casing/carrier differential. Manufactured from 1/8" thick specially compounded synthetic rubber, PSI Model "C" end seals are extremely robust, resistant to wide variations in environmental conditions while eliminating the possibility of foreign material entering the opening between carrier and casing pipes.

Benefits/Features

- Custom Made to Order
- Quick and Easy Installation
- Carrier Pipe Does Not Need To Be Centered Within Casing
- Screwdriver Is Only Tool Required for Installation
- Designed To Last for the Life of the Piping System
- Heavy Duty Stainless Steel Hose Clamps Supplied

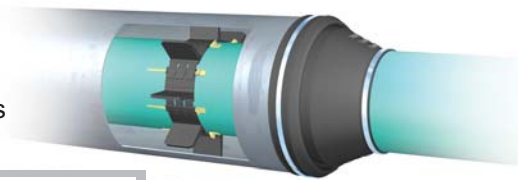


Model "R" End Seals and Night Caps (For New Installations) Water/Energy Market

Model "R" End Seals are available in five (5) different sizes to accommodate a wide range of carrier/casing diameter combinations. A unique "cone" design, with molded-in dimensions, are easily cut to size for a correct fit on the carrier pipe.

Benefits/Features

- Low storage costs, only five end seal sizes to accommodate casings from 4" (10.2cm) to 24" (61.0cm) in diameter with all applicable carrier pipe sizes
- May be easily stocked in 5 model sizes
- Quick and Easy Installation
- Manufactured from 1/8" (3.18mm) thick high quality EPDM rubber
- Casing night cap prevents entry of debris and animals during install
- Sizes are clearly printed on sleeve to simplify cutting to the correct size
- Designed to last for the life of the piping system
- Stainless steel bands for clamping both ends of end seal provided
- May be used for new installations



Five Models From Which To Choose
Select the appropriate size for your casing pipe (C) and carrier pipe (R) from the chart below.

Tip for Installation
Simply cut the seals at the closed end to the measured internal diameter of the carrier pipe. Note: The printed sizes are marked on the end seals. Push the end seal over the outside of the casing pipe and the carrier pipe and fasten with the included stainless steel bands.

Model R EPDM - Material Specification
Material: EPDM 60
Thickness: 1/8" (3.18mm)
Color: Black
Temperature: 250° F. (121° C.)
Hardware: 304 Stainless Steel Bands with Worm Screws
See Customer Specifications

Pipeline Seal and Insulator, Inc.
5222 Collins Street, Houston, TX 77031 U.S.A.
Telephone: 713-742-0264 • Fax: 713-742-0229
Web: www.pipeline-seal.com • Email: info@psi.com

For Model R End Seal sizing, download Model R literature. www.pipeline-seal.com

Casing End Seals
Models C and R

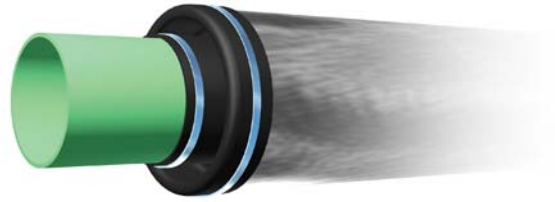
Casing End Seals

Model "S" Standard Pull-on End Seals (For New Installations) **Energy Market**

Model "S" Standard Pull-on End Seals are flexible and easily installed on Nominal Steel & IPS casing/carrier pipe combinations. PSI Model "S" end seals are extremely robust, resistant to wide variations in environmental conditions while eliminating the possibility of foreign material entering the opening between carrier and casing pipes.

Benefits/Features

- Quick and Easy Installation
- May be stocked
- Screwdriver Is Only Tool Required for Installation
- Designed To Last for the Life of the Piping System
- Heavy Duty Stainless Steel Hose Clamps Supplied.



Model "W" Wrap Around End Seals (For New and Existing Installations) **Water/Energy Market**

Model "W" Wrap Around End Seals are designed to accommodate customer supplied specifications so they may be used for any size casing/carrier differential. PSI Model "W" end seals are extremely robust, resistant to wide variations in environmental conditions while eliminating the possibility of foreign material entering the opening between carrier and casing pipes.

Benefits/Features

- Custom Made to Order
- Quick and Easy Installation
- Carrier Pipe Does Not Need To Be Centered Within Casing
- Can be installed on existing casing installations
- Screwdriver Is Only Tool Required for Installation
- Designed To Last for the Life of the Piping System
- Heavy Duty Stainless Steel Hose Clamps Supplied
- Self-Curing Seam - simply remove plastic backing and press together

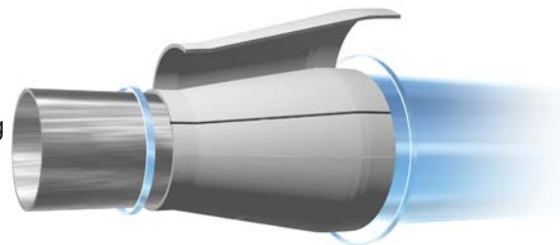


Model "FW" Fire Resistant End Seals (For New and Existing Installations) **Energy Market**

Model "FW" Fire Resistant End Seals have been developed for applications specified as fire prone areas such as tank farms or pipes passing through fire walls. They are ordered to customer supplied specifications so they may be used for any size casing/carrier differential. These seals are excellent for eliminating the possibility of foreign material entering the opening between carrier and casing pipes.

Benefits/Features

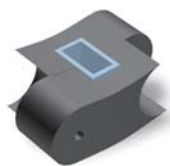
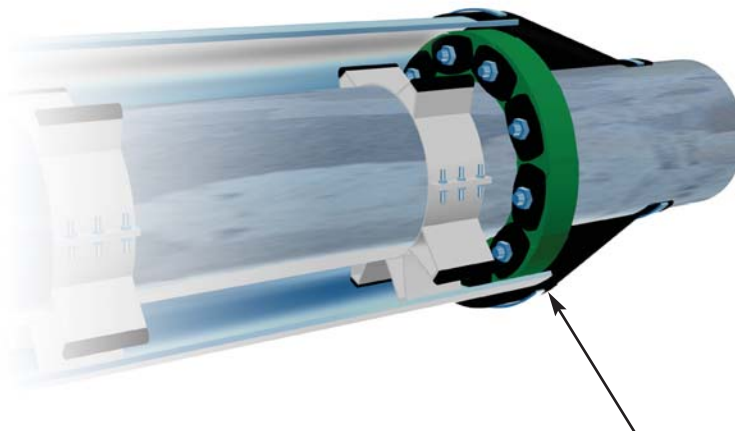
- Custom Made to Order
- Quick and Easy Installation
- Carrier Pipe Does Not Need To Be Centered Within Casing
- Screwdriver Is Only Tool Required for Installation
- Designed To Last for the Life of the Piping System
- Heavy Duty Hose Clamps Supplied



**Standard casing end seals are designed for below grade applications.
For above grade applications please contact PSI.**

Casing End Seals - Link-Seal® Modular Seals

For Double Sealing Pipeline Casing Ends when Carrier Pipe is Centered in Casing



Link-Seal® modular seals with Centering Blocks

Link-Seal® Modular Seals with Reinforced Centering Blocks.

A Link-Seal® modular seal assembly installed at each end of pipeline casings provides positive, hydrostatic protection against the entry of water, soil or other backfill materials and reduces corrosion and ice damage. If casing isolators are not used, starting with 14" diameter assemblies, we suggest Link-Seal® modular seals with "centering blocks" in 25% of the links. These centering blocks fit into molded openings in the Link-Seal® modular seals and are positioned in the lower 90° of each assembly. PSI centered casing isolators should also be placed within two feet of casing ends.

400 Series

For Casings Two Pipe Sizes Larger than Carrier Pipe

CARRIER X CASING PIPE IPS Nominal	COMPLETE CASING SEAL ASSEMBLY CONSISTS OF:			BASIC LINK-SEAL SIZE USED	COMPLETE ASSEMBLY ORDER NO
	PLAIN LINKS	LINKS WITH CENTERING BLOCKS	TOTAL LINKS		
2" X 6"	5	0	5	LS-410	26*
3" X 6"	7	0	7	LS-360	36*
4" X 8"	7	0	7	LS-475	48*
6" X 10"	10	0	10	LS-475	610*
8" X 12"	12	0	12	LS-475	812*
10" X 14"	10	0	10	LS-425	1014*
12" X 16"	12	0	12	LS-425	1216*
14" X 18"	9	4	13	LS-400	1418
16" X 20"	11	4	15	LS-400	1620
18" X 22"	13	4	17	LS-400	1822
20" X 24"	13	5	18	LS-400	2024
22" X 26"	16	5	20	LS-400	2226
24" X 28"	17	5	22	LS-400	2428
26" X 30"	17	6	23	LS-400	2630
28" X 32"	18	7	25	LS-400	2832
30" X 34"	20	7	27	LS-400	3034
32" X 36"	21	8	29	LS-400	3236
34" X 38"	22	8	30	LS-400	3438
36" X 40"	24	8	32	LS-400	3640

* = Centering Blocks are not required and not available for these models. (Maximum coating 3/16" thick - Casing pipe walls should not exceed 0.500" except for casing sizes 12", 14" and 16", which should not have a wall thickness greater than 0.312")

500 Series

For Casings Three Pipe Sizes Larger than Carrier Pipe

CARRIER X CASING PIPE IPS Nominal	COMPLETE CASING SEAL ASSEMBLY CONSISTS OF:			BASIC LINK-SEAL SIZE USED	COMPLETE ASSEMBLY ORDER NO.
	PLAIN LINKS	LINKS WITH CENTERING BLOCKS	TOTAL LINKS		
4" X 10"	6	0	6	LS-500	410**
6" X 12"	7	0	7	LS-500	612**
8" X 14"	11	0	11	LS-575	814**
10" X 16"	7	3	10	LS-525	1016
12" X 18"	9	3	12	LS-525	1218
14" X 20"	9	4	13	LS-500	1420
16" X 22"	11	4	15	LS-500	1622
18" X 24"	12	4	16	LS-500	1824
20" X 26"	13	5	18	LS-500	2026
22" X 28"	14	6	20	LS-500	2228
24" X 30"	15	6	21	LS-500	2430
26" X 32"	17	6	23	LS-500	2632
28" X 34"	18	6	24	LS-500	2834
30" X 36"	19	7	26	LS-500	3036
32" X 38"	21	7	28	LS-500	3238
34" X 40"	21	8	29	LS-500	3440
36" X 42"	23	8	31	LS-500	3642
42" X 48"	27	9	36	LS-500	4248
48" X 54"	30	11	41	LS-500	4854
54" X 60"	34	12	46	LS-500	5460

** = Centering Blocks are not required for these applications. (Maximum coating 3/16" thick - Casing pipe walls should not exceed 0.500" except for casing sizes 16" and 18" which should not have a wall thickness greater than 0.312")

Casing End Seals
Link-Seal® Modular Seals