

# Seal Pipe Penetrations...Fast!



**ADVANCE PRODUCTS & SYSTEMS**



**INNERLYNX<sup>®</sup>**

**Modular Mechanical Seals**



**UL Innerlynx  
Fire Rated  
3 Hour Fire Stop**

ISO-9001 CERTIFIED COMPANY - FM537405

# Why choose Innerlynx®?

- Innerlynx® offer sixteen different sizes for all pipe size diameters ranging from 1/2" – 120".
- Innerlynx® are made from synthetic rubber with heavy-duty UV and ozone resistant plastic pressure plates or all metal plates.
- Innerlynx® help absorb vibrations, shocks, and sound waves and act as a sound dampener.
- Innerlynx® come in five models; EPDM Black, Nitrile Green, Silicone Grey, EPDM Blue & Silicone Red.
- Innerlynx® are completely manufactured in the U.S.A.
- Innerlynx® form a hydrostatic seal up to 40 psig and up to 92.28 feet of head pressure.
- Innerlynx® electrically isolate the inner carrier pipe from the penetrated structure.
- Innerlynx® can be installed easily and quickly by one worker with no special tools. They can be just as easily reinstalled many times over the life of the installation.



## Innerlynx® Applications

- Mechanical Interior Piping Systems
- Floor Penetration Sleeves
- Wall Penetration Sleeves
- Manholes
- Cased Pipeline Road Crossings
- Hospital Mechanical Piping
- Power Generating Plants
- Boiler Room Piping
- Fire Protection Wall Penetrations
- Cased Pipeline Railroad Crossings
- Electrical Isolation of Pipes
- Precast Concrete Manhole Pipe Seals
- Insulated Piping Seals
- High Pressure Tank Guards
- Dual Containment Piping Seals
- Ship Bulkhead Pipe Penetrations
- Noise Dampening Piping Seals
- Electrical Isolation of Pipe Supports for Corrosion Protection
- Quiet Room Piping Seals
- Decorative Fountain System Pipe Seals
- Swimming Pool Piping Penetrations
- Electrical Conduit Pipe Seals
- Water Fountain Piping Seals
- Waste and Water Treatment Plant Piping Wall Penetrations
- Telecommunication Vault or Building Conduit Penetrations
- Refrigeration Building Penetration Piping Seals
- Power Generation Dams
- Underground Steel Tank Piping Penetrations
- Perimeter Berm or Dikes Around Tank Farms
- Noise and Sway Dampener
- Parking Garage Column Protectors
- Cable TV Installation Penetrations
- Bridge Pipeline Crossings
- Septic Tank Piping Seals
- Compressor Stations Pipe Penetrations
- Instrument Lines
- Tunneling Installation Seals
- Offshore Platforms



Cut-away view of Infinity® wall sleeve & Innerlynx®

# Innerlynx® Models and Properties



**Model “C” Innerlynx® Modular Seal** is suitable for most standard applications including: aboveground, direct underground burial, wet conditions and where cathodic protection is desired.  
 Type: Standard  
 Seal Element: EPDM (black)  
 Pressure Plates: Composite  
 Bolts & Nuts: Carbon Steel (Zinc plated)  
 Temp. range: -40° to +250° F

**Model “S-316” Innerlynx® Modular Seal** is suitable for chemical processing and water or wastewater treatment. EPDM rubber is resistant to most inorganic acids and alkalis, some organic chemicals (acetone, alcohol, ketones.)  
 Type: 316 Stainless Steel  
 Seal Element: EPDM (black)  
 Pressure Plates: Composite  
 Bolts & Nuts: Stainless Steel  
 Temp. range: -40° to +250° F



**Model “L” Innerlynx® Modular Seal** is composed of low durometer EPDM rubber suitable for thin walled conduit or copper pipe applications.  
 Type: Standard  
 Seal Element: EPDM (blue)  
 Pressure Plates: Composite  
 Bolts & Nuts: Carbon Steel (Zinc plated)  
 Temp. range: -40° to +250° F

**Model “L-316” Innerlynx® Modular Seal** is composed of low durometer EPDM rubber with stainless steel hardware suitable for corrosion applications.  
 Type: 316 Stainless Steel  
 Seal Element: EPDM (blue)  
 Pressure Plates: Composite  
 Bolts & Nuts: Stainless Steel  
 Temp. range: -40° to +250° F



**Model “O” Innerlynx® Modular Seal** is composed of Nitrile rubber which is suitable for most Hydrocarbons, oils, hydraulic fluids, chemicals and solvents (gasoline, jet fuel, water, motor oil, kerosene, etc.)  
 Type: Oil resistant  
 Seal Element: Nitrile (green)  
 Pressure Plates: Composite  
 Bolts & Nuts: Carbon Steel (Zinc plated)  
 Temp. range: -40° to +210° F

**Model “OS-316” Innerlynx® Modular Seal** is composed of a combination of stainless steel hardware and oil-resistant rubber.  
 Type: Oil resistant, stainless steel  
 Seal Element: Nitrile (green)  
 Pressure Plates: Composite  
 Bolts & Nuts: Stainless Steel  
 Temp. range: -40° to +210° F



**Model “T” Innerlynx® Modular Seal** is composed of silicone rubber which is excellent where temperature extremes are a factor.  
 Type: High/low Temperature  
 Seal Element: Silicone (grey)  
 Pressure Plates: Carbon Steel (Zinc plated)  
 Bolts & Nuts: Carbon Steel (Zinc plated)  
 Temp. range: -67° to +400° F



**Model “UL” Innerlynx® Modular Seal** is composed of proprietary rubber where fire resistance is a must. Two seals must be in place for UL approval.  
 Type: UL approved (3 hr. fire rating)  
 Seal Element: Proprietary Rubber (red)  
 Pressure Plates: Carbon Steel (Zinc plated)  
 Bolts & Nuts: Carbon Steel (Zinc plated)  
 Temp. range: 3 hr. fire rating



## Innerlynx® Modular Seal - Properties

Material Properties for Innerlynx® Modular Seal Elements

Property	ASTM Method	EPDM	Nitrile	Silicone
Hardness	D-2240	46.5	50.5	50.5
Tensile	D-412	1828 psi	1200 psi	860 psi
Elongation	D-412	784%	600%	600%
Compression Set	D-395	25% 22 hrs. @ 158° F	45% 22 hrs. @ 212° F	38% 22 hrs. @ 350° F
Specific Gravity	D-297	1.15	1.42	1.30

Material Properties for Composite Pressure Plates

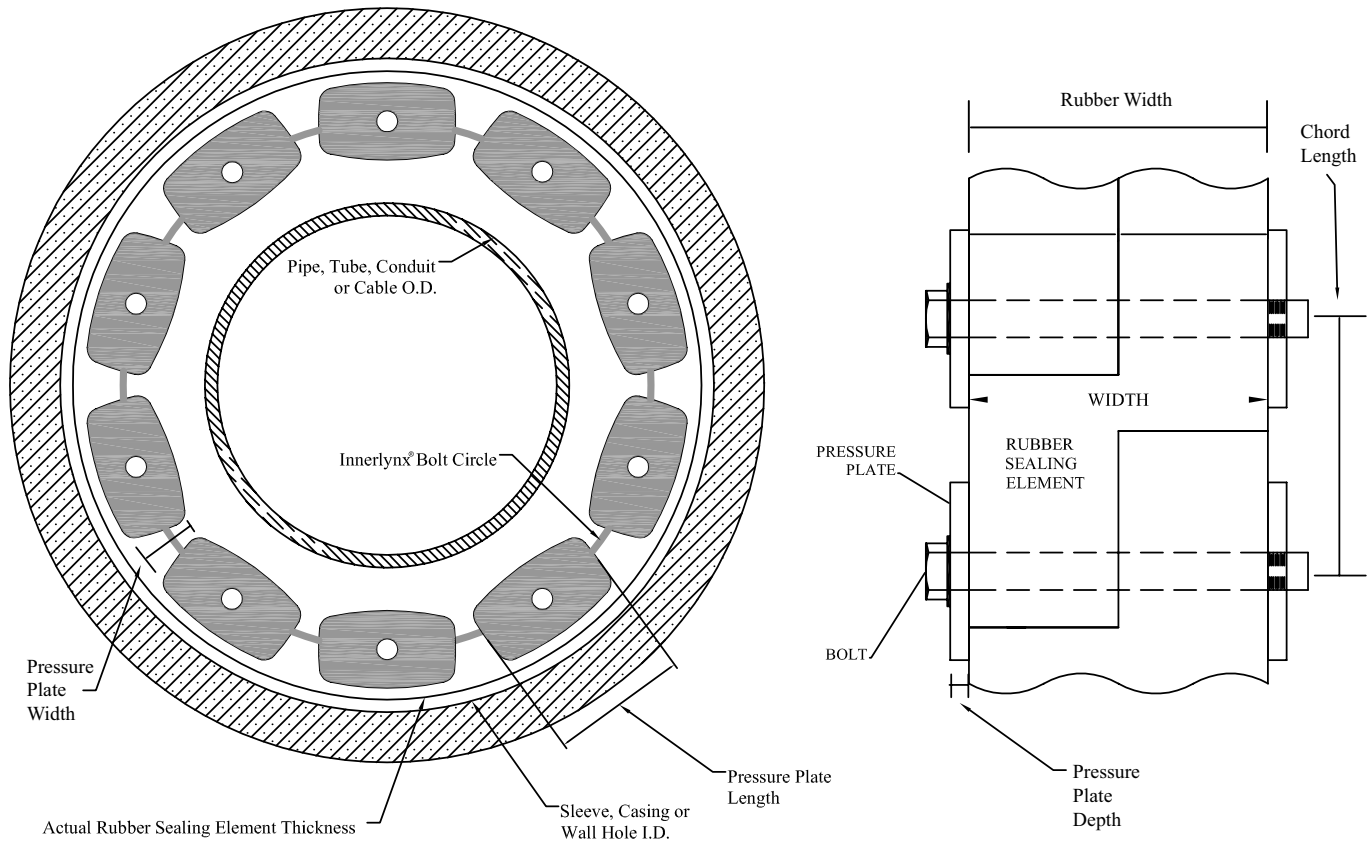
Property	ASTM Method	Value
Tensile Strength	D-638	27,000 psi
Stress at Break	D-638	28,000 psi
Elongation at Break	D-638	3%
Flexural Strength	D-790	40,000 psi
Flexural Modulus	D-790	1,300,000 psi
Izod Impact	D-256	2.0
Specific Gravity	D-792	1.39

### Bolt and Nut Properties

**Carbon Steel**  
 Tensile strength = 60,000 psi

**Stainless Steel: 316 Stainless Steel**  
 Tensile strength = 85,000 psi

# Innerlynx® Dimensions



INNERLYNX® Model No.	RUBBER SEALING ELEMENT			PRESSURE PLATE			BOLT			MIN. WALL THICKNESS	WEIGHT BY PIECE (LBS) appx.
	Actual Thickness	Width	Chord Length	Width	Length	Depth	Hex Across Flats	Thread Size	Length		
IL200	0.50	1.80	1.20	0.45	1.14	0.32	.3125	10/32	2.50	2.25	0.05
IL275	0.62	1.87	0.91	0.63	0.90	0.35	.3125	10/32	2.50	2.25	0.10
IL300	0.71	2.57	1.51	0.68	1.52	0.43	0.50	5/16	3.50	3.00	0.20
IL315	0.82	2.49	1.50	0.79	1.46	0.48	0.50	5/16	3.50	3.00	0.20
IL325	0.95	3.04	3.10	0.81	2.87	0.94	0.50	5/16	5.00	4.00	0.60
IL340	1.00	2.76	1.61	0.95	1.50	0.70	0.50	5/16	5.00	4.00	0.30
IL360	1.23	2.75	2.08	1.12	2.10	0.76	0.50	5/16	5.00	4.00	0.50
IL400	1.43	3.56	3.63	1.33	3.51	1.06	0.56	3/8	6.00	5.00	1.20
IL410	1.41	3.38	2.62	1.42	2.52	0.87	0.56	3/8	5.50	5.00	0.80
IL425	1.13	3.54	3.63	1.03	3.45	1.18	0.56	3/8	6.00	5.00	0.95
IL475	1.62	3.35	2.63	1.48	2.60	0.78	0.56	3/8	5.50	5.00	0.95
IL500	2.37	3.80	3.86	2.17	3.72	1.04	0.75	1/2	6.00	5.00	2.15
IL525	2.18	3.80	3.86	2.00	3.72	1.03	0.75	1/2	6.00	5.00	2.10
IL575	1.83	3.80	3.10	1.79	3.01	1.00	0.75	1/2	6.00	5.00	1.60
IL600	3.20	4.00	6.00	3.07	6.12	1.90	1.125	3/4	8.00	6.00	6.35
IL650	2.67	4.07	4.16	2.17	3.72	0.87	0.75	1/2	6.00	5.50	2.70

\*All dimensions are in inches

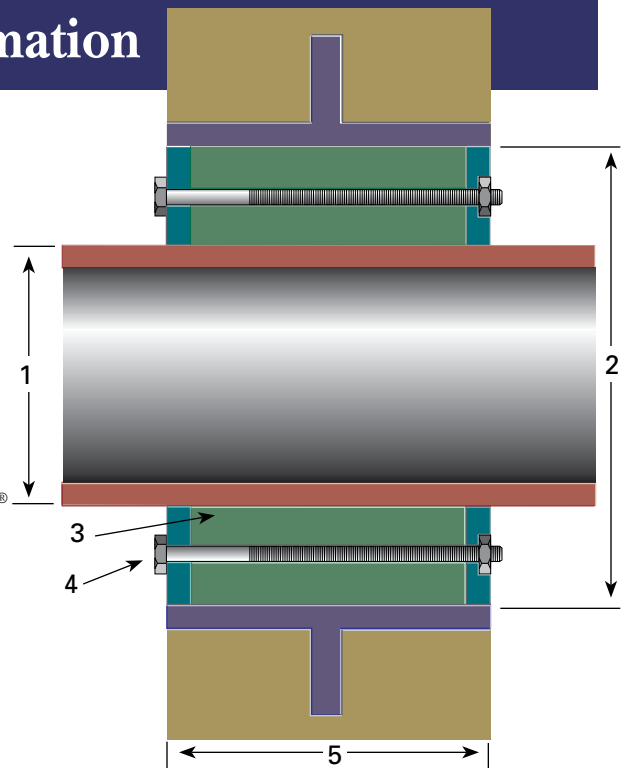
# Innerlynx® Sizing & Ordering Information

## Innerlynx® Standard Sizing

For standard pipe penetrations, use the charts on pages 4, 5, & 6.

- Select the nominal pipe size making sure the O.D. matches the application.
- Select one of the three recommended wall openings. (APS Infinity® Wall Sleeve, APS Steel Wall Sleeve, or Core Drilled Hole).
- Beginning at column heading “Nominal Pipe Size”, read across to the sizing selection for Core Drilled Hole or Sleeve Type. Inside the sizing selection column, the first column identifies the Core Drilled I.D. or Wall Sleeve size. The second column identifies the Innerlynx® model number & the third column provides number of Innerlynx® required to seal the penetration.

NOTE: when following charts on pages 4, 5, & 6, Infinity® & Steel Wall Sleeves do not have the same I.D.s. See page 9 for Infinity® & Steel Wall Sleeve I.D.s.



1. Pipe outside diameter
2. Wall sleeve or core drill inside diameter
3. Model of Innerlynx®
4. Specify steel or stainless steel hardware
5. Wall thickness

**Having trouble sizing Innerlynx®?**  
**Call factory with all information applicable:**  
**1-800-315-6009**

Nominal Pipe Size	Pipe OD (in)	Recommended size for a Core Drilled Hole			Recommended size using APS Infinity® Wall Sleeve			Recommended size using APS Steel Wall Sleeve		
		Core Drill ID (in)	Innerlynx® Size	IL's per Seal	Infinity® Wall Sleeve	Innerlynx® Size	IL's per Seal	Steel Wall Sleeve	Innerlynx® Size	IL's per Seal
<b>Cast Iron Soil Pipe (Extra Heavy)</b>										
2	2.380	4	IL300-**	6	IS-4-*	IL300-**	6	SWSW4-*	IL300-**	6
3	3.500	5	IL300-**	8	IS-5-*	IL315-**	9	SWSW5-*	IL300-**	8
4	4.500	6	IL300-**	10	IS-8-*	IL475-**	8	SWSW6-*	IL300-**	10
5	5.500	8	IL340-**	13	IS-8-*	IL360-**	10	SWSW8-*	IL340-**	13
6	6.500	10	IL475-**	10	IS-8-*	IL315-**	15	SWSW10-*	IL475-**	10
8	8.620	12	IL400-**	9	IS-12-*	IL475-**	12	SWSW12-*	IL400-**	9
10	10.750	14	IL400-**	10	IS-14-*	IL410-**	15	SWSW14-*	IL425-**	10
12	12.750	16	IL400-**	12	IS-16-*	IL475-**	17	SWSW16-*	IL425-**	12
15	15.880	18	IL325-**	17	IS-20-*	IL410-**	21	SWSW20-*	IL475-**	20
<b>Cast Iron Soil Pipe (Service Weight)</b>										
2	2.300	4	IL300-**	6	IS-4-*	IL300-**	6	SWSW4-*	IL300-**	6
3	3.300	5	IL315-**	8	IS-5-*	IL300-**	8	SWSW5-*	IL315-**	8
4	4.300	6	IL315-**	10	IS-6-*	IL300-**	10	SWSW6-*	IL315-**	10
5	5.300	8	IL360-**	9	IS-8-*	IL410-**	8	SWSW8-*	IL360-**	9
6	6.300	8	IL315-**	15	IS-8-*	IL315-**	15	SWSW8-*	IL315-**	15
8	8.380	10	IL300-**	9	IS-10-*	IL325-**	9	SWSW10-*	IL300-**	19
10	10.500	14	IL475-**	14	IS-14-*	IL475-**	14	SWSW14-*	IL425-**	10
12	12.500	16	IL475-**	17	IS-16-*	IL475-**	17	SWSW16-*	IL475-**	10
15	15.620	20	IL340-**	32	IS-18-*	IL475-**	20	SWSW20-*	IL475-**	20

\* Specify length of wall sleeve in inches  
 \*\* Specify (C) carbon or (S) stainless steel hardware

# INNERLYNX® - Model IL - Sizing Specifications - Standard Sizes

Nominal Pipe Size	Pipe O.D. (in)	Recommended size for a Core Drilled Hole			Recommended size using APS Infinity® Wall Sleeve			Recommended size using APS Steel Wall Sleeve		
		Core Drill ID (in)	Innerlynx® Size	IL's Per Seal	Infinity® Wall Sleeve	Innerlynx® Size	IL's Per Seal	Steel Wall Sleeve	Innerlynx® Size	IL's Per Seal

## DI - Ductile Iron Pipe Size, Plastic Pipe Size, or any pipe with same O.D.

2	2.500	4	IL300-**	6	IS-4*	IL300-**	6	SWSW4-*	IL300-**	6
2¼	2.750	4	IL200-**	9	IS-4-*	IL275-**	10	SWSW4-*	IL200-**	9
3	3.960	6	IL315-**	10	IS-6-*	IL340-**	10	SWSW6-*	IL315-**	10
4	4.800	8	IL410-**	7	IS-8-*	IL475-**	8	SWSW8-*	IL410-**	7
6	6.900	10	IL410-**	10	IS-10-*	IL475-**	10	SWSW10-*	IL410-**	10
8	9.050	12	IL400-**	9	IS-12-*	IL400-**	9	SWSW12-*	IL400-**	9
10	11.100	14	IL400-**	10	IS-14-*	IL400-**	10	SWSW14-*	IL325-**	12
12	13.200	16	IL360-**	21	IS-18-*	IL575-**	15	SWSW18-*	IL575-**	15
14	15.300	18	IL425-**	14	IS-20-*	IL475-**	20	SWSW20-*	IL575-**	17
16	17.400	20	IL425-**	16	IS-22-*	IL360-**	28	SWSW22-*	IL575-**	19
18	19.500	24	IL525-**	17	IS-24-*	IL400-**	18	SWSW24-*	IL475-**	25
20	21.600	26	IL525-**	19	IS-25-*	IL400-**	20	SWSW26-*	IL475-**	27
24	25.800	28	IL425-**	23				SWSW30-*	IL400-**	23
30	32.000	36	IL575-**	34				SWSW36-*	IL400-**	29
36	38.300	42	IL575-**	40				SWSW44-*	IL500-**	33
42	44.500	50	IL500-**	38				SWSW50-*	IL500-**	38
48	50.800	56	IL500-**	43				SWSW57-*	IL500-**	43
60	61.610	66	IL575-**	64				SWSW69-*	IL600-**	34

## Copper Tubing Pipe

½	.625	2	IL275-**	4	IS-2-*	IL275-**	4	SWSW2-*	IL275-**	4
¾	0.875	2	IL200-**	4	IS-2-*	IL200-**	4	SWSW2-*	IL200-**	4
1	1.125	3	IL315-**	4	IS-3-*	IL315-**	4	SWSW2.5-*	IL275-**	6
1¼	1.375	3	IL300-**	4	IS-3-*	IL275-**	8	SWSW2.5-*	IL200-**	5
1½	1.625	3	IL275-**	7	IS-3-*	IL275-**	7	SWSW3-*	IL275-**	7
2	2.125	4	IL315-**	6	IS-4-*	IL315-**	6	SWSW4-*	IL315-**	6
2½	2.625	4	IL275-**	11	IS-4-*	IL275-**	11	SWSW4-*	IL275-**	11
3	3.125	5	IL315-**	8	IS-5-*	IL340-**	8	SWSW5-*	IL315-**	8
4	4.125	6	IL315-**	10	IS-6-*	IL315-**	11	SWSW6-*	IL315-**	10
6	6.125	8	IL315-**	15	IS-8-*	IL315-**	15	SWSW8-*	IL315-**	15
8	8.125	10	IL315-**	18	IS-12-*	IL575-**	10	SWSW12-*	IL575-**	10
10	10.125	14	IL575-**	12	IS-12-*	IL340-**	22	SWSW14-*	IL400-**	10
12	12.125	16	IL575-**	14	IS-16-*	IL575-**	14	SWSW16-*	IL400-**	12

## EMT - Thin Wall Steel Conduit

¾	0.922	2	IL200-**	4	IS-2-*	IL275-**	4	SWSW2-*	IL200-**	4
1	1.163	3	IL315-**	4	IS-3-*	IL315-**	4	SWSW2.5-*	IL275-**	6
1¼	1.510	3	IL300-**	4	IS-3-*	IL300-**	4	SWSW3-*	IL300-**	4
1½	1.740	3.5	IL315-**	5	IS-3.5-*	IL315-**	5	SWSW3.5-*	IL315-**	5
2	2.197	4	IL315-**	6	IS-4-*	IL315-**	6	SWSW4-*	IL315-**	6
2½	2.875	4	IL200-**	9	IS-4-*	IL200-**	9	SWSW4-*	IL200-**	9
3	3.500	5	IL300-**	8	IS-5-*	IL315-**	9	SWSW6-*	IL300-**	8
4	4.500	6	IL300-**	10	IS-8-*	IL475-**	8	SWSW6-*	IL300-**	10

\* Specify length of wall sleeve in inches  
 \*\* Specify (C) carbon or (S) stainless steel hardware

Nominal Pipe Size	Pipe O.D. (in)	Recommended size for a Core Drilled Hole			Recommended size using APS Infinity® Wall Sleeve			Recommended size using APS Steel Wall Sleeve		
		Core Drill ID (in)	Innerlynx® Size	IL's Per Seal	Infinity® Wall Sleeve	Innerlynx® Size	IL's Per Seal	Steel Wall Sleeve	Innerlynx® Size	IL's Per Seal

**IPS - Iron Pipe Size, Plastic Pipe Size, API Pipe Size, Electrical Conduit Size, or any pipe with same O.D.**

½	0.840	2	IL200-**	4	IS-2-*	IL200-**	4	SWSW2-*	IL200-**	4
¾	1.050	2.5	IL275-**	5	IS-3-*	IL315-**	4	SWSW2.5-*	IL275-**	5
1	1.315	2.5	IL200-**	5	IS-3-*	IL300-**	4	SWSW2.5-*	IL200-**	5
1¼	1.660	3	IL275-**	7	IS-3-*	IL275-**	7	SWSW3-*	IL275-**	7
1½	1.900	3.5	IL300-**	5	IS-3.5-*	IL300-**	5	SWSW3.5-*	IL300-**	5
2	2.375	4	IL300-**	6	IS-4-*	IL300-**	6	SWSW4-*	IL300-**	6
2½	2.875	4	IL200-**	9	IS-4-*	IL200-**	9	SWSW4-*	IL200-**	9
3	3.500	5	IL300-**	8	IS-5-*	IL300-**	8	SWSW5-*	IL300-**	8
3½	4.000	6	IL315-**	10	IS-6-*	IL340-**	10	SWSW6-*	IL315-**	10
4	4.500	6	IL300-**	10	IS-6-*	IL300-**	10	SWSW6-*	IL300-**	10
5	5.563	8	IL340-**	13	IS-8-*	IL360-**	10	SWSW8-*	IL340-**	13
6	6.625	10	IL400-**	7	IS-10-*	IL475-**	10	SWSW10-*	IL400-**	7
8	8.625	12	IL400-**	9	IS-12-*	IL475-**	12	SWSW12-*	IL400-**	9
10	10.750	14	IL400-**	10	IS-14-*	IL410-**	15	SWSW14-*	IL425-**	10
12	12.750	16	IL400-**	12	IS-16-*	IL475-**	17	SWSW16-*	IL425-**	12
14	14.000	18	IL575-**	16	IS-16-*	IL340-**	30	SWSW18-*	IL400-**	13
16	16.000	20	IL575-**	18	IS-20-*	IL410-**	21	SWSW20-*	IL400-**	15
18	18.000	22	IL575-**	20	IS-22-*	IL340-**	38	SWSW22-*	IL400-**	17
20	20.000	24	IL575-**	22	IS-25-*	IL500-**	18	SWSW24-*	IL400-**	18
22	22.000	26	IL575-**	24	IS-25-*	IL360-**	34	SWSW26-*	IL400-**	20
24	24.000	28	IL575-**	26				SWSW28-*	IL400-**	22
26	26.000	30	IL575-**	28				SWSW30-*	IL400-**	24
28	28.000	32	IL575-**	30				SWSW32-*	IL400-**	25
30	30.000	34	IL575-**	32				SWSW34-*	IL400-**	27
32	32.000	36	IL575-**	34				SWSW36-*	IL400-**	29
34	34.000	38	IL575-**	36				SWSW40-*	IL500-**	29
36	36.000	40	IL575-**	38				SWSW42-*	IL500-**	31
42	42.000	46	IL575-**	44				SWSW48-*	IL500-**	36
48	48.000	52	IL575-**	50				SWSW54-*	IL500-**	41

**SDR-35 - or pipe with same O.D.**

4	4.22	6	IL315-**	10	IS-6-*	IL315-**	11	SWSW6-*	IL315-**	10
6	6.28	8	IL315-**	14	IS-8-*	IL315-**	15	SWSW8-*	IL315-**	14
8	8.40	10	IL300-**	19	IS-10-*	IL325-**	9	SWSW10-*	IL300-**	19
10	10.50	14	IL475-**	14	IS-14-*	IL475-**	14	SWSW14-*	IL425-**	10
12	12.50	16	IL475-**	17	IS-18-*	IL500-**	12	SWSW16-*	IL425-**	12
15	15.30	18	IL425-**	14	IS-20-*	IL475-**	20	SWSW20-*	IL575-**	17
18	18.70	22	IL400-**	17	IS-24-*	IL575-**	21	SWSW22-*	IL425-**	17
21	22.05	26	IL575-**	24				SWSW26-*	IL400-**	20
24	24.80	28	IL400-**	23				SWSW28-*	IL425-**	22
27	27.95	32	IL575-**	30				SWSW32-*	IL400-**	25
30	32.00	36	IL575-**	34				SWSW36-*	IL400-**	29

\* Specify length of wall sleeve in inches  
 \*\* Specify (C) carbon or (S) stainless steel hardware

# Non-Standard Sizes

How to figure sizes and number of Innerlynx® needed to make a penetration seal:

## Part 1

To figure which IL style number is needed to seal the annular space

$$\text{I.D. of casing/core drilled hole} - \text{O.D. of carrier pipe} = Y$$

$$Y \div 2 = \text{Sealing Range}$$

Find the correct sealing range and the corresponding style number on the chart adjacent. If there is more than one IL size to choose from, choose the IL size that is closer to the untightened seal range.

## Part 2

To figure out how many Innerlynx® are needed to seal the penetration:

$$\text{I.D. of casing/core drilled hole} + \text{O.D. of carrier pipe} = Y$$

$$Y \div 2 = \text{Bolt Circle}$$

$$\text{Bolt Circle} \times 3.14 = \text{Circumference of bolt circle}$$

$$\text{Circumference of bolt circle} \div \text{chord length} = \text{Innerlynx® per seal}$$

Use the chord length matched with proper Innerlynx® number

## Example:

8" Ductile Iron Pipe into a 12" core drilled hole

### Part 1:

$$12 - 9.05 = 2.95$$

$$2.95 \div 2 = 1.475 \text{ seal range}$$

1.475 falls between the range for IL 400

### Part 2:

$$12 + 9.05 = 21.05$$

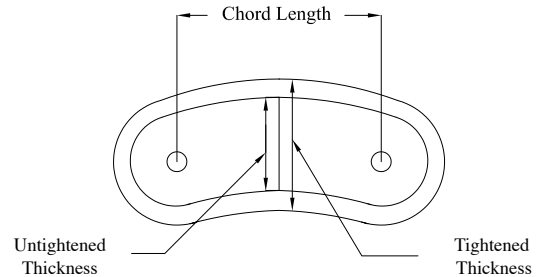
$$21.05 \div 2 = 10.525 \text{ Bolt Circle}$$

$$10.525 \times 3.14 = 33.0485 \text{ Circumference Bolt Circle}$$

$$33.0485 \div 3.63 = 9.10427 \text{ Number of Innerlynx®}$$

**Answer: 9 IL400**

Note: If the calculation ends in .79 or lower, round **down** to the nearest whole number. If the calculation ends in .80 or higher round **up** to the nearest whole number.



Innerlynx® Size	Sealing range		Chord Length
	Untightened	Tightened	
IL200	0.500	0.625	1.13
IL275	0.650	0.781	0.91
IL300	0.690	0.875	1.51
IL315	0.820	1.033	1.47
IL325	0.940	1.187	3.10
IL340	1.000	1.320	1.61
IL360	1.230	1.650	2.08
IL400	1.437	1.812	3.63
IL410	1.410	1.810	2.62
IL425	1.125	1.500	3.63
IL475	1.630	2.000	2.63
IL500	2.380	2.812	3.86
IL525	2.190	2.500	3.86
IL575	1.850	2.352	3.10
IL600	3.200	4.000	6.00
IL650	2.670	3.200	4.16

For your convenience

**APS**

can send you the

**INNERLYNX® CALCULATOR**

on CD-Rom.

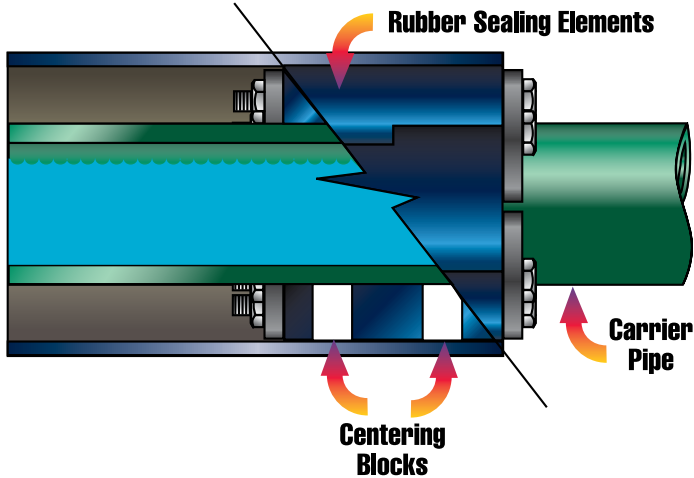
This calculator automatically determines the quantity of Innerlynx® required by entering in the O.D. and I.D.

Having trouble determining sizes,  
please call 1-800-315-6009.

## Innerlynx® Centering Blocks

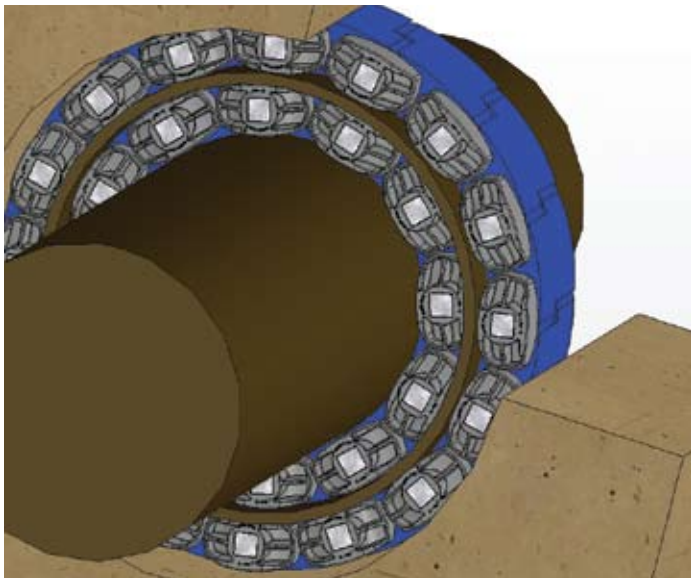
Centering blocks are UHMW support block reinforcements positioned in the bottom 25% of the Innerlynx® assembly. Centering blocks assure a penetrating pipe will stay “centered” within its casing and adds extra support against heavy loads. This and the fact that, unlike pipeline boots, they are set within the inner casing and protected from sharp aggregate and equipment, make them a perfect endseal for pipelines.

The recommended quantity of Centering Blocks are listed on the chart adjacent.



## Double Sealing Applications

When an annular space is larger than the expanded thickness of a single Innerlynx®, it is necessary to use an intermediate sleeve and another Innerlynx® assembly as seen in the example below. Call the factory for sizing assistance at 1-800-315-6009.



Double seals require an intermediate sleeve between each wrap of Innerlynx®. Even triple installations can be accomplished successfully.

## Centering Blocks Sizing Chart

Centering Blocks are for sealing carrier pipes installed on casing, such as under highways, railroads and bridge crossings. They fit between the I.D. of the casing pipe and the O.D. of the carrier to form a watertight seal. Ordering information: See IL sizing specifications on chart below. For large sizes, please call. All dimensions are assumed to be IPS.

IPS Carrier Pipe Size (normal)	IPS Casing Pipe Size (normal)	IL Number	Qty. of IL	Qty. of ILs with Centering Blocks Included
½"	2"	IL200-**	4	0
¾"	2½"	IL275-**	5	0
1"	2½"	IL200-**	5	0
1¼"	3"	IL275-**	7	0
1½"	3½"	IL300-**	5	0
2"	4"	IL300-**	6	0
2½"	4"	IL200-**	9	0
3"	5"	IL300-**	8	0
3½"	6"	IL315-**	10	0
4"	6"	IL300-**	10	0
4"	8"	IL400-**	5	0
6"	10"	IL400-**	7	0
8"	12"	IL400-**	9	0
10"	14"	IL425-**	10	0
12"	16"	IL425-**	12	0
14"	18"	IL400-**	13	4
16"	20"	IL400-**	15	4
18"	22"	IL400-**	17	4
20"	24"	IL400-**	18	5
22"	26"	IL400-**	20	5
24"	28"	IL400-**	22	5
26"	30"	IL400-**	24	6
28"	32"	IL400-**	25	7
30"	34"	IL400-**	27	7
32"	36"	IL400-**	29	8
34"	40"	IL500-**	29	8
36"	42"	IL500-**	31	8
42"	48"	IL500-**	36	9
48"	54"	IL500-**	41	11
54"	60"	IL500-**	46	12

\*\* Specify (C) carbon or (S) stainless steel hardware

# Wall Sleeves

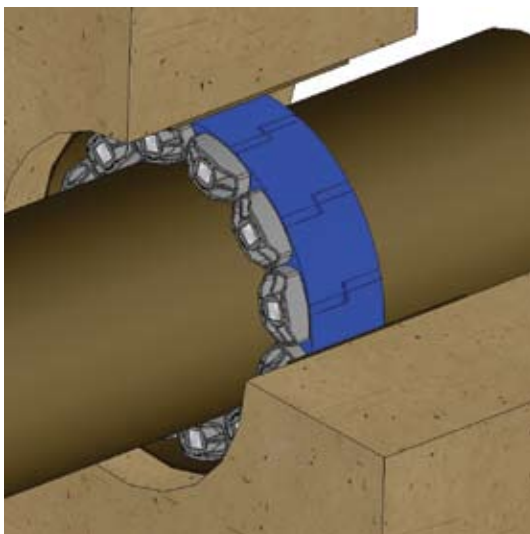
## Why use Wall Sleeves

Protect your investment using APS wall sleeves to provide a better seal than a core drilled hole. In the absence of wall sleeves, mechanical/utility piping vibration can cause costly damage. In addition, wall sleeves make it easier to repair piping without damaging the wall.

APS offers three types of wall sleeves designed to mate with the Innerlynx® for leak free performance.

All standard sizes of pipe-to-hole or pipe-to-sleeve combinations are shown in the charts on pages 4, 5 & 6. However, there are many other combinations which will also work. To calculate other types of pipe not listed in the standard size charts, refer to the non-standard size formula on page 7.

Each model is available with a 2" water stop that anchors the sleeve to prevent thrust movement and ensure positive water sealing. APS standard water stops are centered, unless otherwise specified.



Infinity® Wall Sleeves		
Model	I.D. (in.)	lbs.
IS-2	1.98	0.70
IS-3	2.94	1.30
IS-3.5	3.38	1.50
IS-4	4.03	2.00
IS-5	5.14	2.80
IS-6	6.14	3.60
IS-8	8.21	4.80
IS-10	10.19	6.40
IS-12	12.26	7.20
IS-14	14.14	11.20
IS-16	16.18	12.00
IS-18	17.45	15.50
IS-20	19.12	17.50
IS-22	20.32	21.00
IS-24	22.76	22.00
IS-25	24.81	23.00

Steel Wall Sleeves	
Nominal Size	Sleeve I.D.
2	2.067
2½	2.469
3	3.068
3½	3.548
4	4.026
5	5.050
6	6.065
8	7.981
10	10.020
12	12.000
14	13.250
16	15.250
18	17.250
20	19.250
22	21.250
24	23.250
26	25.250
28	27.250
30	29.250
32	31.250
34	33.250
36	35.250
38	37.250
40	39.250
42	41.250
48	47.250

## Infinity® Wall Sleeve Features

High Density Polyethylene (HDPE)

- Excellent resistance to acids, alkalis and other organic solvents
- Positive hydrostatic seal
- 16 sizes - 2" to 25"
- Lighter than steel
- Resists water migration
- Adjust to wall thickness
- Locator caps make installation easier



## Steel Wall Sleeve Features

MODEL: SWSW made of steel with a welded steel water stop.

- More durable than plastic
- Ensures positive water sealing
- Repair piping without damaging wall
- Lifetime leak proof performance
- Available in 2" to 120" diameter

\* Available in galvanized also

## Gal-Vo-Plast® Wall Sleeve Features

MODEL: GPWSW are made of steel with a welded steel water stop with Gal-vo-plast coating.

- Less expensive than galvanized
- More corrosion resistant
- Faster availability, especially for custom wall sleeves
- Longer installation life
- All coating performed in house
- Considerably more economical
- Available in 2" to 120" diameter



# Innerlynx® Installation Instructions



1. Center the pipe, cable or conduit in wall sleeve, casing or core drilled hole. Make sure the pipe will be adequately supported on both ends. Innerlynx® are not intended to support the weight of the pipe.



2. Connect both ends of the belt assembly around the pipe.



3. Check to be sure all bolt heads are facing the installer. Extra slack or sag is normal. Do not remove Innerlynx®. Note: On smaller diameter pipe links may need to be stretched.



4. With a hand tool, pre tighten the belt assembly by giving each bolt about 2 turns.



5. Slide bolt assembly into annular space.



6. Start at 12 o'clock and tighten bolt until rubber begins to "bulge." Do not tighten any bolt more than 4 turns at a time. Continue in clockwise manner until Innerlynx® have been uniformly compressed. (Approx. 2 to 4 rotations)



7. Make 2 or 3 more passes with 3 turns per bolt, tightening all bolts clockwise.



8. Installation is complete. If the seal doesn't appear to be correct using the instructions provided, call Advance Products & Systems, Inc. at 800-315-6009



## INNERLYNX® Check List

1. Make sure Innerlynx® assembly and pipe surfaces are free from dirt.
2. Make sure pipe is centered in wall sleeve or cored hole.
3. Check correct Innerlynx® sizes and quantity with sizing chart.
4. Make sure pressure plates are all facing correct direction.
5. Check to make sure pipe is supported properly during backfill operations. Note: Innerlynx® are not intended to support the weight of the pipe and other attachments.



## INNERLYNX® Don'ts

1. Do not use power tools, air impacts, etc. on Innerlynx® bolts.
2. Do not install the Innerlynx® belt with pressure plates facing opposite directions.
3. Do not torque each bolt completely before moving onto the next.
4. Do not install Innerlynx® where obstruction such as weld beads may occur without consideration of the sealing requirements.
5. Do not use high-speed power tools on Innerlynx® stainless steel bolts.

## OTHER PRODUCTS AVAILABLE

- Flange Isolation Gasket Kits
- Radolid® Nut & Bolt Protector Caps
- U-Bolt Cote®
- Casing Spacers and End Seals
- Kleerband® Flange Protectors
- Safety Spray Shields
- Foreman Nite Caps, temporary pipe plugs

BSI Management  
Systems America, Inc.

ISO 9001:2008  
REGISTERED  
COMPANY

CERTIFICATE # FM 537405  
FORMERLY QMI # 1041990



## ADVANCE PRODUCTS & SYSTEMS, INC.

PO Box 60399 • Lafayette, Louisiana 70596-0399

800-315-6009 • 337-233-6116 • FAX 337-232-3860

E-Mail: [sales@apsonline.com](mailto:sales@apsonline.com) • Website: [www.apsonline.com](http://www.apsonline.com)

Distributed by:



Made in USA

Advance Products & Systems, Inc. is not responsible for errors printed in this brochure.

Advance Products & Systems, Inc. shall repair or replace (within the limitations of such applicable express written warranty as may be issued by it) any product or portions thereof, which prove to be defective in workmanship or material for a period of 12 months from shipment date. The foregoing in lieu of all warranties, express or implied, and all other obligations or liabilities on the part of APS, on account of the product which it may sell. In no event shall APS be liable for consequential or special damages: nor except as it may otherwise specifically agree in writing, installation, or other work which may be done upon or in connection with the product by APS/ the distribution / dealer or others. THE LIMITED WARRANTIES PROVIDED IN THIS AGREEMENT AND THE OBLIGATIONS AND LIABILITIES OF APS ARE THE ONLY WARRANTIES MADE BY APS AS TO THE PRODUCT. APS MAKES NO EXPRESS OR OTHER IMPLIED WARRANTIES, BY COURSE OF DEALING, USAGE OF TRADE, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE (WHETHER GENERAL OR SPECIFIC), OR OTHERWISE.