

Seal Pipe Penetrations...Fast!



UL Innerlynx
Fire Rated
3 Hour Fire Stop

5
New Sizes
Available



ADVANCE PRODUCTS & SYSTEMS

INNERLYNX
Modular Mechanical Seals

ISO 9001 CERTIFIED COMPANY - FM537405

Why choose Innerlynx®?

- Innerlynx® offer twenty one different sizes for all pipe diameters ranging from 1/2" – 144".
- 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: Low Durometer
 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: Low Durometer
 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, Gas & Fuel 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 & Gas resistant
 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	46.50	50.50	50.50
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

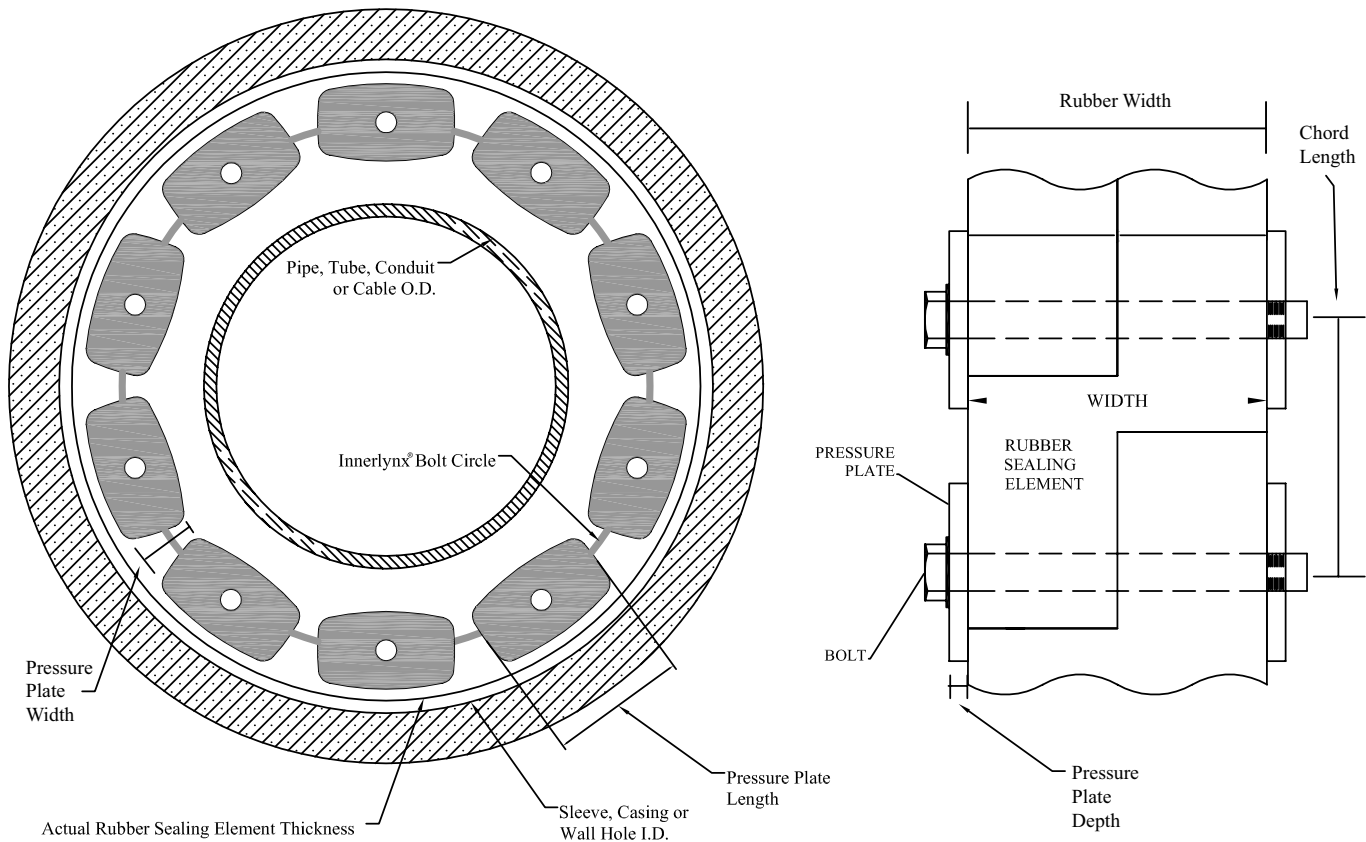
Property	ASTM Method	Value
Tensile Strength	D-638	27,000 psi
Stress at Break	D-638	28,000 psi
Elongation at Break	D-638	11.07%
Flexural Strength	D-790	40,000 psi
Flexural Modulus	D-790	1,300,000 psi
Izod Impact	D-256	2.0
Specific Gravity	D-792	1.39

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	Thread Size	Length		
IL200	0.50	1.80	1.15	0.45	1.14	0.32	10/32	2.50	2.25	0.05
IL265	0.59	1.77	1.58	0.56	1.49	0.37	5 mm	2.75	2.25	0.11
IL275	0.63	1.80	0.89	0.63	0.90	0.35	10/32	2.50	2.25	0.10
IL300	0.70	2.57	1.50	0.68	1.52	0.43	5/16	3.50	3.00	0.20
IL310	0.65	2.40	2.22	0.63	2.00	0.50	6 mm	3.50	3.00	0.22
IL315	0.83	2.49	1.47	0.79	1.46	0.48	5/16	3.50	3.00	0.20
IL325	0.95	3.04	3.15	0.81	2.87	0.94	5/16	5.00	4.00	0.60
IL340	1.00	2.76	1.52	0.95	1.50	0.70	5/16	4.50	4.00	0.30
IL360	1.23	2.80	2.08	1.12	2.10	0.76	5/16	4.50	4.00	0.50
IL400	1.41	3.56	3.63	1.33	3.51	1.06	3/8	6.00	5.00	1.20
IL410	1.41	3.38	2.62	1.42	2.52	0.87	3/8	5.50	5.00	0.80
IL425	1.13	3.54	3.60	1.03	3.45	1.18	3/8	6.00	5.00	0.95
IL440	1.73	3.36	3.94	1.52	3.54	0.96	10 mm	6.00	5.00	1.47
IL475	1.61	3.16	2.68	1.48	2.60	0.78	3/8	5.50	5.00	0.95
IL500	2.39	3.90	3.90	2.17	3.72	1.04	1/2	6.00	5.00	2.15
IL525	2.20	3.80	3.95	2.00	3.72	1.03	1/2	6.00	5.00	2.10
IL575	1.81	3.78	3.16	1.79	3.01	1.00	1/2	6.00	5.00	1.60
IL600	3.22	4.08	6.07	3.07	6.12	1.90	3/4	8.00	6.00	6.35
IL625	3.27	4.02	4.09	3.08	3.93	1.18	12 mm	7.00	5.50	3.27
IL650	2.68	4.07	4.16	2.17	3.72	0.87	1/2	6.00	5.50	2.70
IL700	3.70	3.98	6.02	3.58	5.85	1.12	12 mm	7.00	5.50	5.26

*All dimensions are in inches

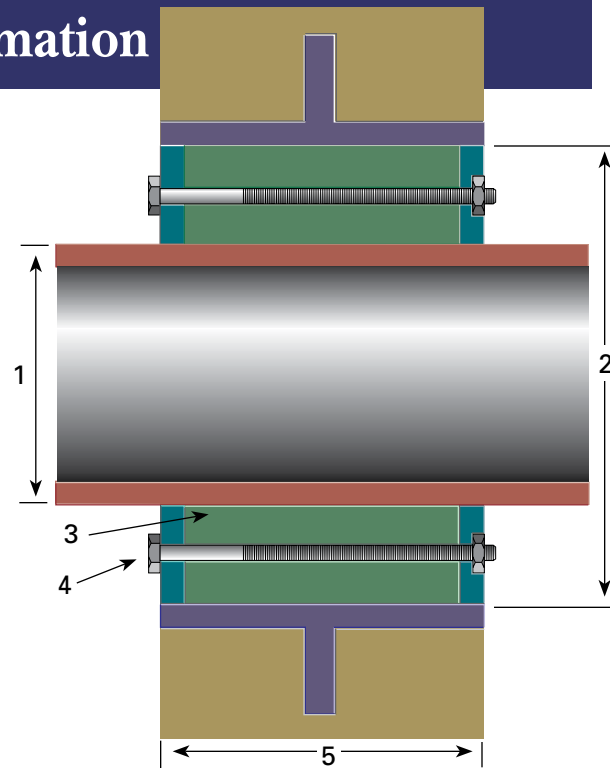
Innerlynx® Sizing & Ordering Information

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
Cast Iron Soil Pipe (Extra Heavy)										
2	2.38	4	IL300-**	6	IS-4-*	IL300-**	6	SWSW4-*	IL300-**	6
3	3.50	5	IL265-**	8	IS-5-*	IL300-**	8	SWSW5-*	IL265-**	8
4	4.50	6	IL265-**	10	IS-8-*	IL475-**	7	SWSW6-*	IL265-**	10
5	5.50	8	IL340-**	13	IS-8-*	IL360-**	10	SWSW8-*	IL340-**	13
6	6.50	10	IL475-**	9	IS-8-*	IL310-**	10	SWSW10-*	IL475-**	9
8	8.62	12	IL400-**	8	IS-12-*	IL400-**	8	SWSW12-*	IL400-**	8
10	10.75	14	IL400-**	10	IS-14-*	IL400-**	10	SWSW14-*	IL425-**	10
12	12.75	16	IL400-**	12	IS-16-*	IL400-**	12	SWSW16-*	IL425-**	12
15	15.88	18	IL325-**	17	IS-20-*	IL400-**	15	SWSW18-*	IL400-**	15
Cast Iron Soil Pipe (Service Weight)										
2	2.30	4	IL300-**	6	IS-4-*	IL200-**	7	SWSW4-*	IL300-**	6
3	3.30	5	IL300-**	8	IS-5-*	IL315-**	8	SWSW5-*	IL315-**	8
4	4.30	6	IL300-**	10	IS-6-*	IL315-**	10	SWSW6-*	IL315-**	10
5	5.30	8	IL360-**	10	IS-8-*	IL360-**	10	SWSW8-*	IL360-**	10
6	6.30	8	IL310-**	10	IS-8-*	IL315-**	15	SWSW8-*	IL310-**	10
8	8.30	10	IL310-**	12	IS-10-*	IL310-**	10	SWSW10-*	IL310-**	13
10	10.50	14	IL400-**	10	IS-14-*	IL400-**	10	SWSW14-*	IL425-**	10
12	12.50	16	IL400-**	12	IS-16-*	IL440-**	11	SWSW16-*	IL425-**	12
15	15.62	20	IL575-**	18	IS-18-*	IL400-**	19	SWSW20-*	IL440-**	13

* 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	2.50	4	IL265-**	6	IS-4*	IL265	6	SWSW4-*	IL265-**	6
2 1/4	2.75	4	IL265-**	6	IS-4-*	IL200	8	SWSW4-*	IL265-**	6
3	3.96	6	IL315-**	10	IS-6-*	IL340	9	SWSW6-*	IL340-**	9
4	4.80	8	IL360-**	9	IS-8-*	IL475	7	SWSW8-*	IL360-**	9
6	6.90	10	IL410-**	10	IS-10-*	IL410	10	SWSW10-*	IL410-**	10
8	9.05	12	IL400-**	9	IS-12-*	IL400	9	SWSW12-*	IL400-**	9
10	11.10	14	IL400-**	10	IS-14-*	IL425	10	SWSW14-*	IL352-**	12
12	13.20	16	IL425-**	12	IS-18-*	IL440	12	SWSW18-*	IL440-**	12
14	15.30	18	IL425-**	14	IS-20-*	IL440	13	SWSW20-*	IL575-**	17
16	17.40	20	IL425-**	16	IS-22-*	IL425	16	SWSW22-*	IL575-**	19
18	19.50	24	IL575-**	22	IS-24-*	IL400	18	SWSW24-*	IL575-**	21
20	21.60	26	IL575-**	24	IS-25-*	IL400	20	SWSW26-*	IL440-**	18
24	25.80	28	IL325-**	27				SWSW30-*	IL400-**	23
30	32.00	36	IL575-**	34				SWSW36-*	IL400-**	29
36	38.30	42	IL575-**	40				SWSW44-*	IL525-**	33
42	44.50	50	IL650-**	35				SWSW50-*	IL525-**	38
48	50.80	56	IL500-**	43				SWSW57-*	IL650-**	40
60	61.61	66	IL575-**	64				SWSW69-*	IL600-**	34

Copper Tubing Pipe

1/2	0.63	2	IL275-**	4	IS-2-*	IL275-**	4	SWSW2-*	IL275-**	4
3/4	0.88	2	IL200-**	4	IS-2-*	IL200-**	4	SWSW2-*	IL315-**	4
1	1.13	3	IL315-**	4	IS-3-*	IL315-**	4	SWSW2.5-*	IL265-**	4
1 1/4	1.38	3	IL300-**	4	IS-3-*	IL300-**	4	SWSW2.5-*	IL200-**	5
1 1/2	1.63	3	IL265-**	4	IS-3-*	IL265-**	4	SWSW3-*	IL300-**	4
2	2.13	4	IL315-**	6	IS-4-*	IL315-**	6	SWSW4-*	IL315-**	6
2 1/2	2.63	4	IL265-**	6	IS-4-*	IL265-**	6	SWSW4-*	IL265-**	6
3	3.13	5	IL315-**	8	IS-5-*	IL315-**	8	SWSW5-*	IL315-**	8
4	4.13	6	IL315-**	10	IS-6-*	IL315-**	10	SWSW6-*	IL315-**	10
6	6.13	8	IL315-**	14	IS-8-*	IL315-**	14	SWSW8-*	IL315-**	14
8	8.13	10	IL315-**	18	IS-12-*	IL475-**	12	SWSW12-*	IL475-**	12
10	10.13	14	IL440-**	9	IS-12-*	IL325-**	11	SWSW14-*	IL400-**	10
12	12.13	16	IL440-**	11	IS-16-*	IL440-**	11	SWSW16-*	IL400-**	11

EMT - Thin Wall Steel Conduit

3/4	0.92	2	IL200-**	4	IS-2-*	IL200-**	4	SWSW2-*	IL200-**	4
1	1.16	3	IL315-**	4	IS-3-*	IL300-**	4	SWSW2.5-*	IL275-**	6
1 1/4	1.51	3	IL300-**	4	IS-3-*	IL275-**	7	SWSW3-*	IL300-**	4
1 1/2	1.74	3.5	IL315-**	5	IS-3.5-*	IL300-**	5	SWSW3.5-*	IL315-**	5
2	2.20	4	IL315-**	6	IS-4-*	IL315-**	6	SWSW4-*	IL315-**	6
2 1/2	2.88	4	IL200-**	9	IS-4-*	IL200-**	8	SWSW4-*	IL200-**	9
3	3.50	5	IL265-**	8	IS-5-*	IL300-**	8	SWSW6-*	IL340-**	9
4	4.50	6	IL265-**	10	IS-8-*	IL475-**	7	SWSW6-*	IL265-**	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.										
1/2	0.84	2	IL200-**	4	IS-2-*	IL200-**	4	SWSW2-*	IL200-**	4
3/4	1.05	2.5	IL275-**	6	IS-3-*	IL315-**	4	SWSW2.5-*	IL275-**	6
1	1.32	2.5	IL200-**	5	IS-3-*	IL300-**	4	SWSW2.5-*	IL200-**	4
1 1/4	1.66	3	IL265-**	4	IS-3-*	IL200-**	5	SWSW3-*	IL275-**	8
1 1/2	1.90	3.5	IL300-**	5	IS-3.5-*	IL300-**	5	SWSW3.5-*	IL300-**	5
2	2.38	4	IL300-**	6	IS-4-*	IL300-**	6	SWSW4-*	IL300-**	6
2 1/2	2.88	4	IL200-**	9	IS-4-*	IL200-**	8	SWSW4-*	IL200-**	9
3	3.50	5	IL265-**	8	IS-5-*	IL300-**	8	SWSW5-*	IL265-**	8
3 1/2	4.00	6	IL315-**	10	IS-6-*	IL340-**	10	SWSW6-*	IL315-**	10
4	4.50	6	IL265-**	10	IS-6-*	IL300-**	11	SWSW6-*	IL265-**	10
5	5.56	8	IL340-**	13	IS-8-*	IL360-**	10	SWSW8-*	IL340-**	13
6	6.63	10	IL475-**	9	IS-10-*	IL410-**	10	SWSW10-*	IL410-**	10
8	8.63	12	IL400-**	8	IS-12-*	IL400-**	8	SWSW12-*	IL410-**	12
10	10.75	14	IL400-**	10	IS-14-*	IL400-**	10	SWSW14-*	IL425-**	10
12	12.75	16	IL400-**	12	IS-16-*	IL400-**	12	SWSW16-*	IL425-**	12
14	14.00	18	IL440-**	12	IS-16-*	IL325-**	15	SWSW18-*	IL400-**	13
16	16.00	20	IL575-**	18	IS-20-*	IL400-**	15	SWSW20-*	IL400-**	15
18	18.00	22	IL575-**	20	IS-22-*	IL325-**	19	SWSW22-*	IL400-**	16
20	20.00	24	IL575-**	22	IS-25-*	IL525-**	18	SWSW24-*	IL400-**	18
22	22.00	26	IL575-**	24	IS-25-*	IL425-**	20	SWSW26-*	IL400-**	20
24	24.00	28	IL575-**	26				SWSW28-*	IL400-*	22
26	26.00	30	IL575-**	28				SWSW30-*	IL400-**	23
28	28.00	32	IL575-**	30				SWSW32-*	IL400-**	25
30	30.00	34	IL575-**	32				SWSW34-*	IL400-**	27
32	32.00	36	IL575-**	34				SWSW36-*	IL400-**	29
34	34.00	38	IL575-**	36				SWSW40-*	IL500-**	29
36	36.00	40	IL575-**	38				SWSW42-*	IL500-**	31
42	42.00	46	IL575-**	44				SWSW48-*	IL500-**	36
48	48.00	52	IL575-**	50				SWSW54-*	IL500-**	41
SDR-35 - or pipe with same O.D.										
4	4.22	6	IL315-**	10	IS-6-*	IL315-**	10	SWSW6-*	IL315-**	10
6	6.28	8	IL310-**	10	IS-8-*	IL315-**	15	SWSW8-*	IL310-**	10
8	8.40	10	IL310-**	13	IS-10-*	IL310-**	13	SWSW10-*	IL310-**	13
10	10.50	14	IL400-**	10	IS-14-*	IL400-**	10	SWSW14-*	IL425-**	10
12	12.50	16	IL400-**	12	IS-18-*	IL525-**	12	SWSW16-*	IL425-**	12
15	15.30	18	IL425-**	14	IS-20-*	IL440-**	13	SWSW20-*	IL575-**	17
18	18.70	22	IL400-**	17	IS-24-*	IL575-**	20	SWSW22-*	IL425-**	17
21	22.05	26	IL575-**	24				SWSW26-*	IL400-**	20
24	24.80	28	IL400-**	22				SWSW28-*	IL400-**	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

I.D. of casing/core drilled hole - 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:

I.D. of casing/core drilled hole + O.D. of carrier pipe = Y

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

Bolt Circle x 3.14 = Circumference of bolt circle

Circumference of bolt circle ÷ chord length = 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:

$$12 + 9.05 = 21.05$$

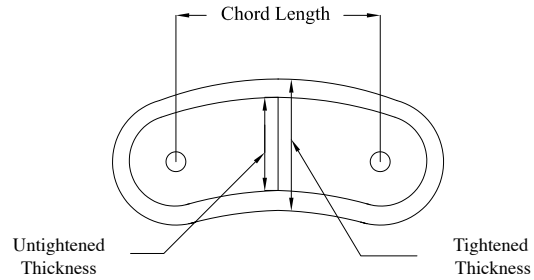
$$21.05 \div 2 = 10.525 \text{ Bolt Circle}$$

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

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

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	0.50	0.63	1.15
IL265	0.59	0.79	1.58
IL275	0.63	0.78	0.89
IL300	0.70	0.88	1.50
IL310	0.65	0.88	2.22
IL315	0.83	1.03	1.47
IL325	0.93	1.19	3.15
IL340	1.02	1.32	1.52
IL360	1.25	1.65	2.08
IL400	1.41	1.81	3.63
IL410	1.41	1.81	2.62
IL425	1.13	1.50	3.60
IL440	1.74	2.19	3.94
IL475	1.61	2.00	2.68
IL500	2.39	2.81	3.90
IL525	2.20	2.50	3.95
IL575	1.81	2.35	3.16
IL600	3.20	4.00	6.06
IL625	3.28	4.00	4.09
IL650	2.67	3.20	4.16
IL700	3.74	4.32	6.02

For your convenience

APS

can send you the

INNERLYNX® CALCULATOR

on CD-Rom.

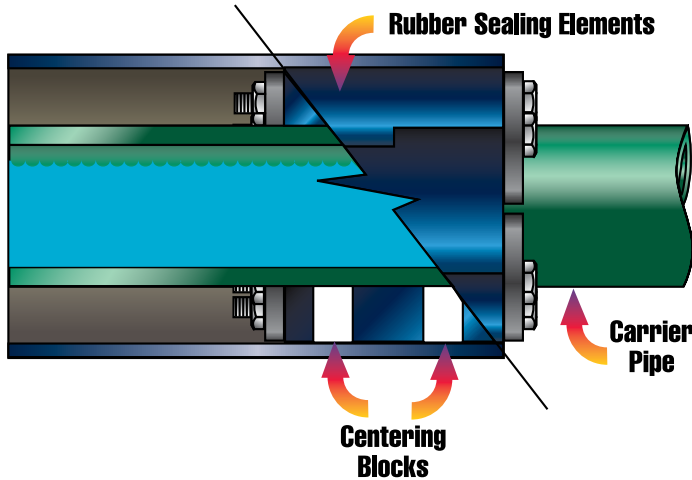
This calculator automatically determines the quantity of Innerlynx® required by entering in the O.D. and I.D.

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

Innerlynx® Centering Blocks

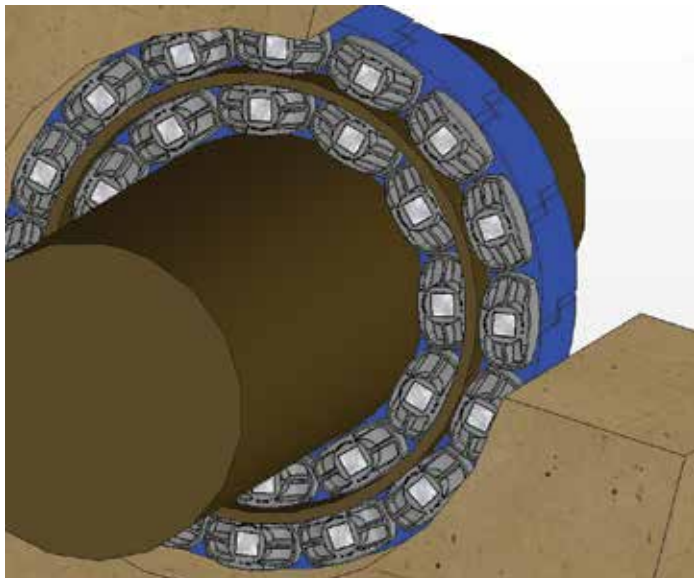
Centering blocks are UHMW support block reinforcements positioned in the bottom 25% of the Innerlynx® assembly. Centering blocks assure a penetrating pipe will stay “centered” within its casing and adds extra support against heavy loads. This and the fact that, unlike pipeline boots, they are set within 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

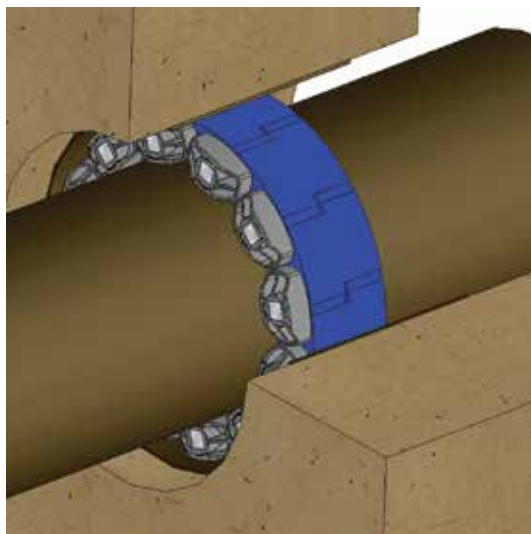
Why use Wall Sleeves

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	1.95	0.70
IS-3	2.89	1.30
IS-3.5	3.36	1.50
IS-4	3.97	2.00
IS-5	5.11	2.80
IS-6	6.11	3.60
IS-8	8.12	4.80
IS-10	10.09	6.40
IS-12	12.07	7.02
IS-14	13.93	11.20
IS-16	16.05	12.00
IS-18	17.22	15.50
IS-20	18.92	17.50
IS-22	20.13	21.00
IS-24	22.56	22.00
IS-25	24.75	23.00

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 Sleeves	
Nominal Size	Sleeve I.D.
2	2.07
2½	2.47
3	3.07
3½	3.55
4	4.03
5	5.05
6	6.07
8	7.98
10	10.02
12	12.00
14	13.25
16	15.25
18	17.25
20	19.25
22	21.25
24	23.25
26	25.25
28	27.25
30	29.25
32	31.25
34	33.25
36	35.25
38	37.25
40	39.25
42	41.25
48	47.25

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



ISO 9001
FM 537405



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