

# LINK SEALS

A modular, elastomer sealing system that creates a permanent, hydrostatic seal for nearly any cylindrical object as it passes through a barrier.

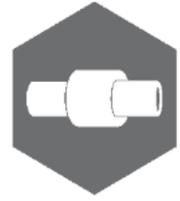
LINK-SEAL® modular seals are considered to be the premier method for permanently sealing pipes of any size passing through walls, floors and ceilings. In fact, any cylindrical object may be quickly, easily and permanently sealed against the entry of water, soil or backfill material.

For the system approach, metal or non-conductive Century-Line™ sleeves with water stops may be ordered with LINK-SEAL® modular seals to ensure correct positioning and a water tight seal of the installation within poured concrete walls.

## DATASHEET

### 2.8

#### LINK SEALS



#### Features and Benefits

- Install in up to 75% less time compared to lead-oakum joints, hand-fitted flashings, mastics, or casing boots.
- Rated at 20 psig (40ft of head), which exceeds the performance requirements of most applications.
- Designed for use as a permanent seal. Seal elements are specially compounded to resist aging and attack from ozone, sunlight, water, and a wide range of chemicals.
- Standard fasteners have a two-part zinc dichromate and proprietary corrosion inhibiting coating. Corrosion resistant 316 stainless steel available for maximum corrosion protection.
- NSF 61 and Factory Mutual Fire Approved materials available. Also carry a wide variety of approvals from various Federal agencies, associations, code groups, laboratories, and organizations.
- Manufactured in an ISO 9001 certified facility.
- 16 sizes, color-coded EPDM, Nitrile, and Silicone elastomers may be used with various hardware options to match performance characteristics with service conditions.

**BAC**®

CORROSION CONTROL

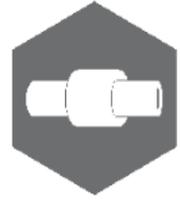
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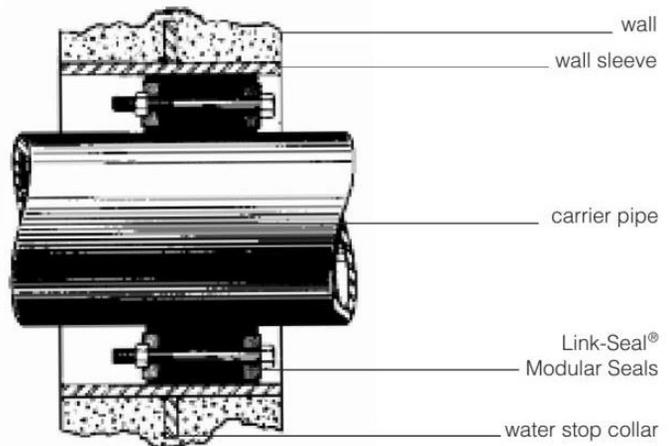
### LINK SEALS



#### Material Properties

Temperature resistance	Standard version black Type T, grey Type O, green	-40° C up to +80° C -55° C up to +230° C -40° C up to +70° C
Oil, jet fuel resistance	Type O	
Special version for plastic pipes	blue EPDM	Shore 40 ± 5
Pressure tightness	up to 5 bar (TÜV and Lloyd's registered) Original Link-Seal® up to 3 bar (Lloyd's registered) Original Link-Seal® Typ BC and BS316 up to 2 bar (Lloyd's registered) Type S-LS	
Cathodic protection	Dielectrical strength 500 V/mm	

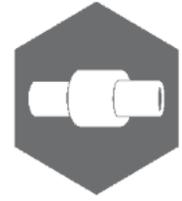
#### Sectional drawing of a Link-Seal® Modular Seals



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## LINK SEALS



### Available in these versions:

Type C: Rubber EPDM (black standard), screws galvanized  
 Type BC: Rubber EPDM (blue, extra soft for plastic pipe)  
 Type S316: Rubber EPDM (black), screws V4A-stainless steel  
 Type BS316: Rubber EPDM (blue, extra soft for plastic pipe), screws V4A-stainless steel  
 Type O: Rubber Nitril (green, oil-resistant), screws galvanized. Price on request.  
 Type OS316: Rubber Nitril (green, oil-resistant), screws V4A-stainless steel. Price on request.

Type	Version	Sealing Element	Pressure Plates	Bolts and Nuts	Temperature Range	Application
<b>C</b>	Standard	EPDM-rubber black	Reinforced Nylon Polymer	Carbon steel zinc dichromated	-40° C up to + 80° C	General application at normal atmosphere, in water or a humid environment. Suitable for electrical insulation and cathodic protection.
<b>B</b>	Shore 40±5	EPDM-rubber blue	Reinforced Nylon Polymer	Carbon steel zinc dichromated	-40° C up to + 80° C	See under type „C“, especially for plastic pipes
<b>S 316</b>	Standard stainless steel	EPDM-rubber black	Reinforced Nylon Polymer	stainless steel	-40° C up to + 80° C	High resistance against water, most other inorganic substances (acids and alkalis) and against most organic substances (e.g. acetic, acid, acetone).
<b>O</b>	Oil resistant	NITRILE-rubber green	Reinforced Nylon Polymer	Carbon steel zinc dichromated	-40° C up to + 70° C	Good resistance against oil, aromatic fuels, solvents and other mineral oil base products.
<b>BS 316</b>	Shore 40±5	EPDM-rubber blue	Reinforced Nylon Polymer	stainless steel	-40° C up to + 80° C	See type „S 316“, especially for plastic pipes
<b>OS 316</b>	Oil resistant	NITRILE-rubber green	Reinforced Nylon Polymer	stainless steel	-40° C up to + 70° C	Good resistance against oil, aromatic fuels, solvents and other mineral oil base products.
<b>KTW</b>	Shore 45±5	EPDM-rubber black incl. KTW-Stamp*	Reinforced Nylon Polymer blue	stainless steel	- 40° C up to + 80° C	Appropriate for drinking water applications
<b>T**</b>	High and low temperature	SILICONE-rubber grey	St 37 zinc dichromated	Carbon steel zinc dichromated	- 55° C up to + 230° C	No insulating properties, especially suitable for extreme temperatures.

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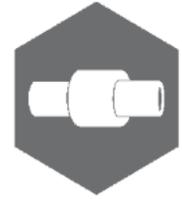
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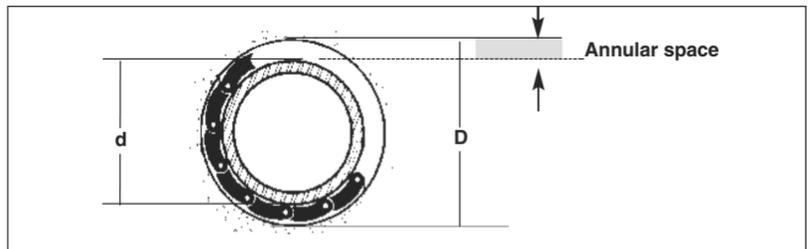
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### LINK SEALS



#### 1. Which type is suitable?

Calculate the annular space. The annular space is half the difference between your pipe size and the wall opening diameter. Use the following formula:



<b>Wall opening I.D. (D)</b>		<b>Actual Pipe O.D. (d)</b>			
<input style="width: 90%;" type="text"/>	-	<input style="width: 90%;" type="text"/>	=	<input style="width: 90%;" type="text"/>	<b>Annular space</b>
<b>2</b>					

From the adjacent chart, select the size closest to the annular space calculated in step 1. You have selected the correct size Link-Seal® modular seal if the free state thickness is less than the annular space and the expanded state thickness is greater than the annular space.

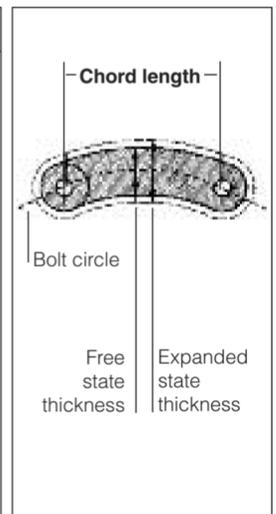
Type	Free state thickness	Annular space	Expanded state thickness	Necessary wall thickness
LS 200	12,7 mm		15,7 mm	75 mm
LS 265	16,0 mm		20,0 mm	75 mm
LS 275	16,0 mm		20,0 mm	75 mm
LS 300	18,0 mm		22,5 mm	100 mm
LS 310	18,0 mm		22,5 mm	100 mm
LS 315	21,1 mm		26,0 mm	100 mm
LS 325	23,2 mm		30,0 mm	120 mm
LS 340	25,5 mm		34,0 mm	120 mm
LS 360	32,0 mm		42,0 mm	120 mm
LS 400	36,3 mm		46,0 mm	140 mm
LS 410	37,0 mm		48,5 mm	140 mm
LS 425	28,4 mm		37,0 mm	140 mm
LS 440	44,0 mm		55,0 mm	140 mm
LS 475	41,3 mm		48,5 mm	140 mm
LS 500	60,3 mm		71,5 mm	150 mm
LS 525	55,4 mm		63,5 mm	150 mm
LS 575	48,0 mm		58,0 mm	150 mm
LS 615 <sup>a</sup>	81,6 mm		102,0 mm	150 mm
LS 625	83,0 mm		102,0 mm	150 mm
LS 650	69,0 mm		84,0 mm	150 mm
LS 700	95,0 mm		110,0 mm	150 mm

**Type:**

#### 2. How many links do you need?

Calculate the number of links required to fit around the pipe and seal the annular space. Determine the bolt circle for Link-Seal® modular seal assembly by using the formula below.

Type	Chord length	Carrier Pipe O.D. min.	Carrier Pipe O.D. max.	min. No. of Segm.
LS 200	30,0 mm	from 21,3 mm	up to 323,9 mm <sup>1</sup>	4
LS 265	41,0 mm	from 50,0 mm	up to 406,4 mm <sup>1</sup>	5
LS 275	25,6 mm	from 0,0 mm	up to 90,0 mm	4
LS 300	41,0 mm	from 44,5 mm	up to 250,0 mm <sup>1</sup>	5
LS 310	57,5 mm	from 60,3 mm	up to 406,4 mm <sup>2</sup>	5
LS 315	38,4 mm	from 37,0 mm	up to 315,0 mm	5
LS 325	79,8 mm	from 133,0 mm	up to 711,0 mm	6
LS 340	41,4 mm	from 14,0 mm	up to 323,9 mm	4
LS 360	55,1 mm	from 40,0 mm	up to 406,4 mm	5
LS 400	93,1 mm	from 139,7 mm	up to 1220,0 mm	6
LS 410	67,6 mm	from 60,3 mm	up to 323,9 mm	5
LS 425	93,1 mm	from 144,0 mm	up to 1220,0 mm	6
LS 440	99,0 mm	from 100,0 mm	up to 1220,0 mm	5
LS 475	68,6 mm	from 60,3 mm	up to 1220,0 mm	5
LS 500	99,8 mm	from 100,0 mm	up to 1220,0 mm	5
LS 525	99,8 mm	from 133,0 mm	up to 1220,0 mm	6
LS 575	79,5 mm	from 130,0 mm	up to 1220,0 mm	5
LS 615 <sup>a</sup>	155,5 mm	from 219,0 mm	up to 3000,0 mm	6
LS 625	106,7 mm	from 133,0 mm	up to 2000,0 mm	5
LS 650	106,7 mm	from 133,0 mm	up to 2000,0 mm	5
LS 700	155,5 mm	from 219,0 mm	up to 3000,0 mm	6



<sup>1</sup> As from O.D. of 150 mm we recommend to enlarge your coredrill to install Link-Seal Type 310.

<sup>2</sup> As from O.D. of 300 mm we recommend to enlarge your coredrill to install Link-Seal Type 325.

<sup>3</sup> LS 615 NOT suitable for plastic pipes.