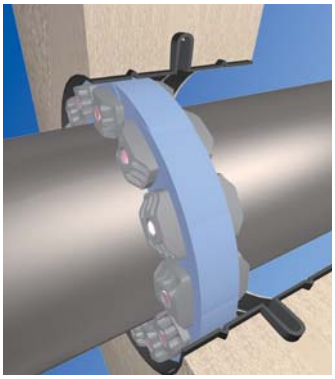
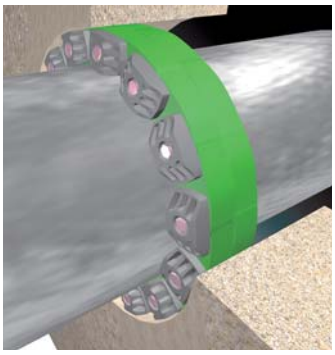
Three Techniques Used to Create Through Wall Hole Penetrations in Combination with various Link-Seal® Modular Seal Options.

Century-Line® Model CS Sleeves in Combinantion with “low durometer” EPDM (blue) Link-Seal® Modular Seals



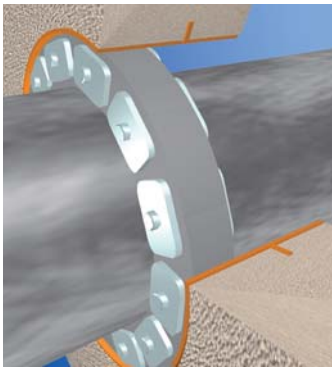
Century-Line® Model CS Sleeves are ideal for poured wall construction. Made of HDPE thermoplastic, they are lightweight and easy to handle. Molded-in waterstop and reinforcing ribs serve to anchor the sleeve in the wall and resist pour forces. Nailer end caps are provided to make placement in forms simple and accurate. Sleeves are available in 16 diameters, up to 25”, and any length. In the event of a field change they can be shortened with ordinary hand tools.

Pre-cast or Cored Wall Openings in Combination with Nitrile (green) Link-Seal® Modular Seals



Link-Seal Modular Seals are also commonly installed in cored wall openings or pre-cast openings such as those formed by use of Cell-Cast® Disks for pipe penetration hole forms. See Cell-Cast Disk (page 4) or contact PSI for more information.

Model WS Steel Sleeves in Combination with Silicone (grey) Link-Seal® Modular Seals



Model WS Steel Sleeves are made from heavy-wall welded or seamless pipe. A full circle waterstop plate acts as positive water seal and anchor to prevent thrust movement. The 2” collar (water-stop) is continuously welded on both sides. Model WS is available in a wide range of diameters and any length. Sleeves are protected by a coating of red primer. Hot dip galvanizing is available on request.

A combination of Century-Line® Sleeves and Link-Seal® Modular Seals perform a “No Leak Solution” for this pump room application.

Features

Saves time and money...
Link-Seal modular seals install in up to 75% less time compared to lead-oakum joints, hand fitted flashings, mastics or casing boots.

Positive hydrostatic seal...
Link-Seal modular seals are rated at 20 psig (40 feet of head), which exceeds the performance requirements of most applications.

Long seal life...
Link-Seal modular seals are 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.

Maximum protection against corrosion...
Standard fasteners have a two-part zinc dichromate and proprietary corrosion inhibiting coating. Corrosion resistant 316 stainless steel available for maximum corrosion protection.

Certification/Approvals...
Factory Mutual Fire Approvals. Also a wide variety of approvals from various Federal agencies, associations, code groups, laboratories and organizations.

ISO Quality Assurance...
Link-Seal modular seals are manufactured in an ISO 9001:2000 certified facility.

Configure a Link-Seal modular seal to match your application...
16 sizes, color coded EPDM, Nitrile, & Silicone elastomers may be used with various hardware options to match performance characteristics with service conditions.

Certificate No. NACB7895

Certificate No. 10125

Link-Seal® Modular Seal Model Options

with EPDM Seal Elements

EPDM (Black)
EPDM (Blue) Low Durometer

Model "C" or "L" Link-Seal Modular Seal

Suitable for use in water, direct ground burial and atmospheric conditions. Provides electrical isolation where cathodic protection is required.
Type: Standard
Seal Element: EPDM (Black) or EPDM (Blue)
Pressure Plates: Reinforced Nylon Polymer
Bolts & Nuts: Steel with 2-part Zinc Dichromate & proprietary corrosion inhibiting coating.
Temp. Range: -40 to +250ºF (-40 to +121ºC)*

Model "S-316" Link-Seal Modular Seal

For chemical processing & waste water treatment. EPDM rubber is resistant to most inorganic acids and alkalis, some organic chemicals (acetone, alcohol, ketones).
Type: Stainless
Seal Element: EPDM (Black) or EPDM (Blue)
Pressure Plates: Reinforced Nylon Polymer
Bolts & Nuts: 316 Stainless Steel
Temp. Range: -40 to +250ºF (-40 to +121ºC)*

* = Sustained operation near temperature limits may affect life expectancy.

with Nitrile Seal Elements

Nitrile (Green)

Model "O" Link-Seal Modular Seal

Nitrile rubber is resistant to oils, fuel and many solvents (gasoline, motor oil, kerosene, methane, jet fuel, hydraulic fluid, water, etc.).
Type: Oil Resistant
Seal Element: Nitrile (Green) Note: Not U.V resistant.
Pressure Plates: Reinforced Nylon Polymer
Bolts & Nuts: Steel with 2-part Zinc Dichromate & proprietary corrosion inhibiting coating.
Temp. Range: -40 to +210ºF (-40 to +99ºC)*

Model "OS-316" Link-Seal Modular Seal

Combination of oil resistant rubber and stainless steel hardware.
Type: Oil Resistant
Seal Element: Nitrile (Green) Note: Not U.V resistant.
Pressure Plates: Reinforced Nylon Polymer
Bolts & Nuts: 316 Stainless Steel
Temp. Range: -40 to +210 ºF (-40 to +99ºC)*

* = Sustained operation near temperature limits may affect life expectancy.

with Silicone Seal Elements

Silicone (Grey)

Model "T" Link-Seal Modular Seal

Silicone rubber is ideal for temperature extremes. The "T" model is one-hour Factory Mutual approved.
Type: High/Low Temperature
Seal Element: Silicone (Grey)
Pressure Plates: Steel Zinc Dichromate
Bolts: Steel with 2-part Zinc Dichromate & proprietary corrosion inhibiting coating.
Temp. Range: -67 to +400ºF (-55 to +204ºC)*

Model "FD/FS" Link-Seal Modular Seal

Double seal for added protection.
Type: Fire Seals
Seal Element: Silicone (Grey)
Pressure Plates: Steel zinc dichromate
Bolts: Steel with 2-part Zinc Dichromate proprietary corrosion inhibiting coating.
Temp. Range: -67 to +400ºF (-55 to +204ºC)*

NOTE: Sustains a constant temp. of 325ºF. (163º C.)
* = Sustained operation near temperature limits may affect life expectancy.

Material Properties of Link-Seal Modular Seal Elements

PROPERTY	ASTM METHOD	EPDM (EPDM L)	NITRILE	SILICONE
Hardness (shore A)	D-2240	50 ±5 (40 ±5)	50 ±5	50 ±5
Tensile	D-412	1450 psi	1300 psi	860 psi
Elongation	D-412	400%	300%	250%
Compression Set	S-395	15% 22 hrs. @ 158ºF (70ºC)	45% 22 hrs. @ 212ºF (100ºC)	40% 22 hrs. @ 350ºF (177ºC)
Specific Gravity	D-297	1.10	1.15	1.40

Material Properties of Composite Pressure Plates

PROPERTY	ASTM METHOD	VALUE
Izod Impact - Notched	D-256	2.05 ft-lb/in
Tensile Strength @ Yield	D-638	20,000 psi
Tensile Strength - Break	D-638	20,250 psi
Flexural Strength @ Yield	D-790	30,750 psi
Flexural Modulus	D-790	1,124,000 psi
Elongation, Break	D-638	11.07%
Specific Gravity	D-792	1.38
Moisture Content	--	0.18%

Bolt & Nut Specifications

Standard: Carbon Steel
Carbon steel, zinc dichromated per ASTM B633, with an additional corrosion inhibiting proprietary organic coating. (passes 1470 hour salt spray test)
Tensile Strength = 60,000 psi, minimum.

Option: Stainless Steel
ANSI Type = 316, Per ASTM F593-95
Tensile Strength = 85,000 psi, average.