The O-Z/Gedney™ Thruwall and Floor Seals provide a positive means of sealing pipe, conduit or tube where they pass through a concrete foundation of a structure below grade or below ground water level or at entry points through a concrete wall or floor which must be sealed. The usual methods of making installations, such as using straight sleeves or pitch pockets, are generally not satisfactory for their effectiveness depends upon the skill and care of the installer. If the installation is not effective, leakage will occur. Considerable time and effort may be required to remake the seal. The O-Z/Gedney™ Thruwall and Floor Seals assure watertight installations by providing the following features:

I. Prevention of Seepage
   • Seepage is eliminated between A and B by the blockage points C created by the shrinkage of the concrete on the body fins.

II. Pressure Tight Seal
   a) When the extra thick Neoprene Grommet 4 is compressed, it provides a watertight seal between the Body 5 and the entering pipe, conduit or tube withstandings pressures in excess of a 50 ft. head of water without leakage.
   b) The Neoprene Grommet compensates for a plus or minus variation in the outside diameter of the entering pipe, conduit or tube.
   c) The Neoprene Grommet will provide a proper seal even if the entering pipe, conduit or tube is forced off the center line of the fitting or is tilted because of the pressure exerted on the pipe by the back fill.

Features:

III. Pressure Tight and Concrete-Tight Housing
   • To further insure a pressure tight and concrete-tight housing a neoprene ring 2 is provided to effect a seal between the Body 5 and the Oversize Sleeve 7.

IV. Easy to Install
   a) Nail holes are provided for attaching the fitting to the concrete forms, or the fitting can be installed by the use of positioning rods which pass through the forms and the inside of the fitting.
   b) To accommodate walls or floors of varying thicknesses the Oversize Sleeve 7 can be field-cut by using Marker Strip 8.
   c) Small hand wrenches are used to tighten the exposed hex head bolts 6 to compress the sealing assembly. No special wrenches are required. Hand wrenches allow tightening when space is limited. They also facilitate retightening if they were insufficiently tightened initially.
   d) An easy means of attaching a ground wire 3 is available, if required.

Features:

NEC/CEC:
Rated for Ordinary Locations

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Order of Assembly

Fig. 1

A If wall or floor thickness is less than 14”, cut length of oversize sleeve to suit. Use marker strip provided.

B Secure assembly of body and oversize sleeve to concrete forms by using the nail holes provided, or by using positioning rods which pass thru the forms and the inside of the fitting.

C If fitting is to be grounded, attach grounding wire using ground pad assembly which is furnished only when specified.

Note: The sealing assembly parts, which are used later in Step F, are contained in a separate package and should be stored until they are needed.

Fig. 2

D After concrete has been poured and the forms have been taken down, remove the protective cover from the fitting. (This cover is installed temporarily to keep concrete out of tapped holes and out of fitting.)

E Pass cable, conduit or tube thru the fitting.

Typical Installation Instructions

F Slip one of the pressure rings, the neoprene sealing grommet, the other pressure ring and the pressure clamp over the end of entering cable, conduit or tube as shown and insert these parts into the end of the body.

G Insert hex head cap screws into screw holes, and tighten until neoprene sealing grommet is sufficiently squeezed between the two pressure rings to seal around the cable, conduit or tube and the inside of body.

H DO NOT OVER TIGHTEN. At a later date if it is found that the sealing Assembly was not tightened sufficiently, it may be retightened to stop leakage or seepage.

Supplementary Instructions for Installing Sealing Ring

- Sealing ring is coated with rubber lubricant at factory to ease the passage of the oversize sleeve. If the oversize sleeve should be difficult to insert, apply additional rubber lubricant to the sealing ring and/or chamfer the end of the sleeve.

Note: Installation instructions are included with each fitting.
Thru Wall Floor Seals
For New Installation

NEC/CEC:
Rated for Ordinary Locations

General Information

Design

The Thruwall and Floor Seal performs two functions:
1) TO PROVIDE A WATERTIGHT BLOCKAGE BETWEEN POURED CONCRETE AND THE FITTING BODY. Watertight blockage is accomplished by special designed fins cast on the outside of the Body, which permit the concrete, when it cures, to shrink around these fins, preventing water from creeping along the outside of the body.

2) TO PROVIDE A PRESSURE SEAL BETWEEN THE FITTING BODY AND THE OUTSIDE DIAMETER OF ANY ROUND CASING PENETRATING A WALL, FLOOR OR CEILING. Pressure sealing is based on an engineering principle that solid rubber-like materials are incompressible. If properly selected material is confined and is compressed, the material will flow to fill all voids, providing a very effective, long lasting seal. The sealing grommet is a shock absorber between the fitting and the casing. It allows axial movement of the casing, removing stresses from the casing. The PVC coated steel rings provide cathodic protection as it insulates the sealing fitting from the casing.

Applications

- Type FSK and WSK Thruwall Sealing Fittings are used where a single casing penetrates the fitting. The FSC and WSC Thruwall Sealing fittings are used where multiple casings penetrate through one fitting.

- The Type FSK and Type FSC fittings are used for most sealing applications. They consist of a body and sealing assembly located on the inside of the structure, and an oversized sleeve which extends from the fitting to the outside of the structure wall. After the foundation is poured, the concrete forms are removed and the round casing is inserted into the body, providing a pressure-tight seal between the round casing and the body of the fitting. The sealing assembly is always available on the inside of the structure for retightening, in the event that sufficient tightening was not utilized during the initial installation.

- The WSK and the WSC fittings are the same as the Type FSK and FSC fittings except that they have a body and sealing assembly on both sides of the oversized sleeve. This provides a pressure seal on both sides of the wall. The Type WSK and WSC fittings can be used on applications where a seal is required on each side of the wall. The body and sealing assembly on the outside of the wall can also be used as a throttle to limit the pressure on the sealing assembly on the inside of the structure. This practice is used where applications require future provisions for replacing the inside sealing assembly when there is a high pressure on the outside wall.

- Another purpose for the Type WSK and WSC fitting is to keep the round casing in the center of the fitting and not have it deflect in the oversized sleeve in the event of earth movement in the back fill.

- Sealing grommets have an expected life in excess of 20 years.
General Information

Material Specifications

1) BODIES AND PRESSURE CLAMPS are high strength malleable or ductile iron coated with a high organic zinc sacrificial conductive epoxy coating.

Exception: Bodies of FSK 60 and larger are cast iron, malleable iron and cast iron are both inherently corrosion resistant.

2) PRESSURE RINGS are closely sized to fitting inside diameter and outside diameter of casing. They are thick steel plates that have a heavy durable PVC coating, utilizing the very effective fluid bed process. PVC coating provides an insulation between the sealing assembly, and the casing to provide cathodic protection by eliminating stray electrical currents from flowing between the fitting and the casing.

Exception: Multi-hole Type FSC and WSC sealing assemblies are furnished with low water-absorbing high-impact thick phenolic plates in electrical applications to eliminate eddy current effect when single conductor AC currents pass through magnetic metal.

3) BOLTS are - Hex head cap bolts zinc electroplated.

4) NEOPRENE SEALING GROMMETS are molded or drilled to accommodate casing outside diameters. The neoprene is specifically compounded for the following very desirable operating characteristics:

• Low compression modulus (the ability of the neoprene sealing ring to flow with low-tightening force).
• Very low compression set (maintain seal over extended period without having to retighten).
• Anti-oxidant (resistant to ozone attack).
• Anti-oxidant (resistance to weathering).
• Low crystallization (suitable for use at low temperatures).
• Fire retardant (will not support combustion).

5) OVERSIZE SLEEVES have a marker strip to facilitate field-cutting of sleeves to accommodate walls or floors of varying thicknesses and are furnished in the following material:

• On FSK10 through FSK40 - High strength, high-impact, durable PVC pipe.
• On FSK60 - Steel pipe coated with a high organic zinc conductive Epoxy coating.
• On FSK100 and larger - High strength, high-impact, thick polyethylene pipe.

Special Features Available at Price Addition

1) Bodies and pressure clamps can be furnished hot dip galvanized.

2) Pressure rings can be furnished in Type 304 stainless steel, uncoated or coated with PVC.

3) Sealing grommets can be furnished in materials other than Neoprene; such as Silicone, for high temperature hot water and steam pipe applications to 400°F.

4) Oversize sleeves, other than standard, can be furnished in other materials that are available having the same outside diameter as the sleeves used. Oversize sleeves longer than standard are also available.

5) Tightening bolts can be furnished in steel with hot dip galvanized finish, or Stainless Steel Type 316 (standard zinc plated steel).

6) Provisions for connecting grounding wire.

7) FSKA Adapters (used on oversize sleeve with type FSK and FSC) to clamp membrane material around casing penetration.

8) Adapters to clamp membrane to Thruwall and Floor Seal body when the membrane is on the same side of the wall or floor as the Body.

WARNING Blank fittings are intended for use as abandonment plugs and for sealings openings reserved for future use. DO NOT FIELD DRILL. O-Z/Gedney™ will not be responsible for any device that has been modified in the field.
Thru Wall Floor Seals
For New Installation

Order of Assembly
1 Bodies and oversize sleeve as a unit is mounted in concrete forms.
2 Pour concrete.
3 Remove forms, pass conduit thru fitting and install sealing assembly parts.

Applications
- Where conduit, pipe or tubing enters a building through the concrete foundation below grade or ground water level, or where it is necessary to seal around a conduit, pipe or tubing where it passes through a concrete floor or wall.
- These fittings are designed so that each body size will accept several different size sealing assemblies which are made to fit the standard sizes of conduit, steel or cast iron pipe, or copper tubing.
- If desired, this design permits the purchase of the fitting less the sealing assembly for mounting in the concrete forms before the concrete is poured.
- At a later date the sealing assembly can be ordered and the installation completed.

Features
- The installation of these fittings is simplified by the use of hex head screws on the sealing assembly.
- Ordinary wrenches are used for tightening, which is desirable especially where space is limited.
- The standard fittings up to the "FSK-40-450" are furnished with a PVC oversize sleeve and the "FSK-60-480" thru "FSK-60-663" sizes have a steel sleeve. (Steel sleeves can be furnished on the sizes up to FSK-40-450.)
- All the standard sleeves will accommodate a wall or floor up to 14" thick and a marker strip, divided in inches, is provided on the sleeve to facilitate field cutting for wall less than 14".
- Longer sleeves for use in walls or floors of greater thickness are available.

Standard Materials
- Castings - malleable or ductile iron
- FSK 60 Series bodies - cast iron
- Grommet - neoprene
- Pressure rings - steel

Standard Finishes
- Castings - alkyd enamel coating, hot dip galvanized available
- Pressure rings - PVC coated

WARNING: Blank Fittings are intended as abandonment plugs. DO NOT FIELD DRILL.

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## Thru Wall Floor Seals

For New Installation

**NEC/CEC:**

Rated for Ordinary Locations

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For Thruwall Seals for LARGE SIZE MECHANICAL PIPES up to 14” O.D., please see Type FSK and WSK - For Large Size Mechanical Pipes.

Grounding connection on one end can be furnished if required. Please refer to Commercial Products - Type G Cable Supports, for ordering information. Ground Lug must be ordered on separate line immediately following FSK.

1. Oversize sleeve can be ordered to accommodate wall thickness over 14”. To order, specify actual wall thickness (not desired sleeve length).
2. “Fitting Only” consists of the following parts, malleable or ductile iron bodies, oversize sleeve and sealing rings. (Except FSK 60 Series.)
3. Furnished with a “Sealing Assembly” consisting of the following parts: pressure clamp, hex head cap screws, pressure rings and sealing grommet.
4. A set of pressure rings and sealing grommet only is available separately.
Thru Wall Floor Seals
For New Installation

Order of Assembly
1. Bodies and oversize sleeve as a unit is mounted in concrete forms.
2. Pour concrete.
3. Remove forms, pass conduit thru fitting and install sealing assembly parts.

Applications
- Where conduit, pipe or tubing enters a building through the concrete foundation below grade or ground water level, or where it is necessary to seal around a conduit, pipe or tubing where it passes through a concrete floor or wall.
- These fittings are designed so that each body size will accept several different size sealing assemblies which are made to fit the standard sizes of conduit, steel or cast iron pipe, or copper tubing.
- If desired, this design permits the purchase of the fitting less the sealing assembly for mounting in the concrete forms before the concrete is poured.
- At a later date the sealing assembly can be ordered and the installation completed.

Features
- The installation of these fittings is simplified by the use of hex head screws on the sealing assembly.
- Ordinary wrenches are used for tightening, which is desirable especially where space is limited.
- The standard fittings up to the "WSK-40-450" are furnished with a PVC oversize sleeve and the "WSK-60-480" through "WSK-60-663" sizes have a steel sleeve. (Steel sleeves can be furnished on the sizes up to WSK-40-450.)
- All the standard sleeves will accommodate a wall or floor up to 16" thick and a marker strip, divided in inches, is provided on the sleeve to facilitate field cutting for walls less than 16".
- Longer sleeves for use in walls or floors of greater thickness are available.

Standard Materials
- Castings - malleable or ductile iron
- WSK 60 Series bodies - cast iron
- Grommet - neoprene
- Pressure rings - steel

Standard Finishes
- Castings - alkyd enamel coating, hot dip galvanized available
- Pressure rings - PVC coated

WARNING: Blank Fittings are intended as abandonment plugs. DO NOT FIELD DRILL.

TO ORDER SPECIFY:
1. Catalog Number
2. Size and O.D. of conduit, pipe or tubing
3. Wall thickness if greater than 16"
4. Special features where required
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For Thru Wall Floor Seals for LARGE SIZE MECHANICAL PIPES up to 14" O.D., please see Type FSK and WSK - For Large Size Mechanical Pipes.

Grounding connection on one end can be furnished if required. Please refer to Commercial Products - Type G Cable Supports, for ordering information. Ground Lug must be ordered on separate line immediately following FSK.

1 Oversize sleeve can be ordered to accommodate wall thickness over 14". To order, specify actual wall thickness (not desired sleeve length).
2 “Fitting Only” consists of the following parts, malleable or ductile iron bodies, oversize sleeve and sealing rings. (Except FSK 60 Series.)
3 Furnished with a “Sealing Assembly” consisting of the following parts: pressure clamp, hex head cap screws, pressure rings and sealing grommet.
4 A set of pressure rings and sealing grommet only is available separately.
Thru Wall Floor Seals
For New Installation

NEC/CEC:
Rated for Ordinary Locations

Application
- Where direct burial cables located below grade or ground water level enter a building through the concrete foundation or for sealing around exposes cables passing through a concrete wall.
- If desired, this design permits the purchase of the fitting less sealing assembly, for mounting in the concrete forms before the concrete is poured.
- At a later date, the sealing assemblies to accommodate the specific size and number of wires can be ordered and the installation completed.

Features
- The installation of these fittings is simplified by the use of hex head screws on the sealing assembly.
- Ordinary wrenches are used for tightening, which is desirable especially where space is limited.
- Where it is desirable or convenient to have a sealing assembly on both sides of the wall Type “WSCS” should be specified.
- The standard fittings up to the “FSC 5055” and “WSC 5055” are furnished with PVC sleeve and the “FSC 7080” and “WSC 7080” sizes have a steel sleeve. (Steel sleeves can be furnished on the sizes up to “FSC 5055” and “WSC 5055” at an additional charge.)
- The standard sleeve will accommodate a wall or floor up to 14” thick on the Type “FSC” fittings and up to 16” thick on the Type “WSC” fittings and a marker strip, divided in inches is provided on the sleeve to facilitate field cutting for walls or floors less than 14” or 16” thick.
- Longer sleeves for fittings for use in walls or floors of greater thickness are available at an additional charge.

Standard Materials
- Castings - malleable or ductile iron
- FSCS 7080 Series bodies - cast iron
- Pressure rings - phenolic

Standard Finishes
- Castings - alkyd enamel coating, hot dip galvanized available

WARNING: Blank Fittings are intended as abandonment plugs. DO NOT FIELD DRILL.

TO ORDER SPECIFY:
1. Catalog Number
2. Number of Cables
3. Diameter over Insulation of Individual conductors
4. Wall thickness if greater than 14” on Type FSCS or 16” on Type WSCS
5. Special features where required
### Type FSCS

<table>
<thead>
<tr>
<th>1 Wire</th>
<th>2 Wires</th>
<th>3 Wires</th>
<th>4 Wires</th>
<th>Min. Wall Thick.</th>
<th>Max. Dia.</th>
<th>Sleeve Catalog No.</th>
<th>Oversize No. of Clamp Screws</th>
<th>Fitting Complete with Sealing Assembly</th>
<th>Fitting Only</th>
<th>Sealing Assembly Only</th>
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</table>

For sizes other than those shown above, consult factory.

Grounding Connection on one end can be furnished if required. Ground Lug must be ordered on separate line immediately following FSK.

- Oversize sleeve can be ordered to accommodate wall thickness over 14”. To order, specify actual wall thickness (not desired sleeve length).
- "Fitting Only" consists of the following parts, malleable or ductile iron body (2 on type “WSCS”). Sealing ring(s) and oversize sleeve.
- "Sealing Assembly" consists of the following parts: pressure clamp, hex head cap screws, pressure rings and sealing grommet. The type “WSCS” is furnished with two sealing assemblies.
- Clamp, hex head cap screws, pressure rings and sealing grommet. The type “WSCS” is furnished with two sealing assemblies.
- If a single alternating current conductor is used, a non-ferrous fitting must be specified. Refer to factory.
- Fittings can be furnished for more than four wires or for wires of varying sizes.

### Type WSCS

<table>
<thead>
<tr>
<th>1 Wire</th>
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<th>3 Wires</th>
<th>4 Wires</th>
<th>Min. Wall Thick.</th>
<th>Max. Dia.</th>
<th>Sleeve Catalog No.</th>
<th>Oversize No. of Clamp Screws</th>
<th>Fitting Complete with Sealing Assembly</th>
<th>Fitting Only</th>
<th>Sealing Assembly Only</th>
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</tbody>
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For sizes other than those shown above, consult factory.

Grounding Connection on one end can be furnished if required. Ground Lug must be ordered on separate line immediately following FSK.

- Oversize sleeve can be ordered to accommodate wall thickness over 14”. To order, specify actual wall thickness (not desired sleeve length).
- "Fitting Only" consists of the following parts, malleable or ductile iron body (2 on type “WSCS”). Sealing ring(s) and oversize sleeve.
- "Sealing Assembly" consists of the following parts: pressure clamp, hex head cap screws, pressure rings and sealing grommet. The type “WSCS” is furnished with two sealing assemblies.
- Clamp, hex head cap screws, pressure rings and sealing grommet. The type “WSCS” is furnished with two sealing assemblies.
- If a single alternating current conductor is used, a non-ferrous fitting must be specified. Refer to factory.
- Fittings can be furnished for more than four wires or for wires of varying sizes.
Thru Wall Floor Seals
Controlled Environment Vault Cable Seal
For Cable Penetrations of Underground Vaults

**NEC/CEC:**
*Rated for Ordinary Locations*

### Applications
- To seal cable penetration of controlled environment vaults.
- For use as a future use fitting.

### Features:
- Cast iron durability.
- Integral water barrier.
- Seals tightened with standard 3/4" wrench.
- Easy, craft friendly installation.
- Hub with NPT thread.
- Withstands 50 ft. head of water pressure without leakage.
- Fitting seal always accessible for retightening.

### Standard Materials
- Sealing grommet - low compression modulus neoprene
- Hex head bolts: zinc plated steel
- Pressure discs: steel

### Standard Finishes
- Pressure discs - PVC coated

### Options
- Pressure Discs - stainless steel PVC coated
- Bolts - galvanized or stainless steel
- Sealing grommet available for multiple cables of varying sizes

### Cable Sealing Assembly Consists of
- Two pressure discs drilled to size
- One sealing grommet to fit cable O.D.

---

**Grommet Characteristics**
- Neoprene sealing grommets are molded or drilled to accommodate cable outside diameters.
- The Neoprene is specifically compounded for the following very desirable operating characteristics:
  - Low compression modulus (the ability of the neoprene to flow with low-tightening force)
  - Very low compression set (maintain seal over extended period without having to retighten)
  - Anti-oxidant (resistance to weathering and ozone attack)
  - Low crystallization (suitable for use at low temperatures)
  - Fire retardant (will not support combustion)
  - An expected life in excess of 20 years

**WARNING:** Blank fittings are intended as abandonment and future use devices. DO NOT FIELD DRILL.

---

**TO ORDER SPECIFY:**
1. Catalog Number
2. Number of Cables
3. Maximum Diameter of Individual Cables
4. Optional Material, if required

### Max. Diameter of Cable Permitted – Millimeters (Inches)

<table>
<thead>
<tr>
<th>1 Cable</th>
<th>2 Cables</th>
<th>3 Cables</th>
<th>4 Cables</th>
<th>Max. Dia.</th>
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### Thru Wall Floor Seals

For Sealing Around a Conduit Pipe or Tube Passing through a Wall or Floor

**NEC/CEC:**

Rated for Ordinary Locations

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</tbody>
</table>

| Type FSK |

**Order of Assembly:**

1. Body and oversize sleeve as a unit is mounted to concrete forms
2. Pour concrete
3. Remove Forms, pass conduit through fitting and install sealing assembly parts

---

**Existing Conduit**
## Thru Wall Floor Seals

For Sealing Around Conduit Passing through a Wall or Floor

**NEC/CEC:**
Rated for Ordinary Locations

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### Table: Thru Wall Floor Seals Specifications

<table>
<thead>
<tr>
<th>Steel Pipe or Conduit</th>
<th>Cast Iron Pipe</th>
<th>Copper Tubing</th>
<th>Wall Thickness Range</th>
<th>A Max. Dia.</th>
<th>B Oversize Sleeve Size</th>
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<th>O.D.</th>
<th>C No. of Clamp Screws</th>
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<th>Fitting Only</th>
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<tr>
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<td><strong>O.D.</strong></td>
<td><strong>Nom. I.D.</strong></td>
<td><strong>O.D.</strong></td>
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<td><strong>O.D.</strong></td>
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<td><strong>Max.</strong></td>
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</tbody>
</table>

### Order of Assembly:

1. Body and oversize sleeve as a unit is mounted to concrete forms
2. Pour concrete
3. Remove Forms, pass conduit through fitting and install sealing assembly parts

---

**Type FSK**

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**Commercial and Industrial Fittings: Rigid and IMC Conduit Fittings**

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