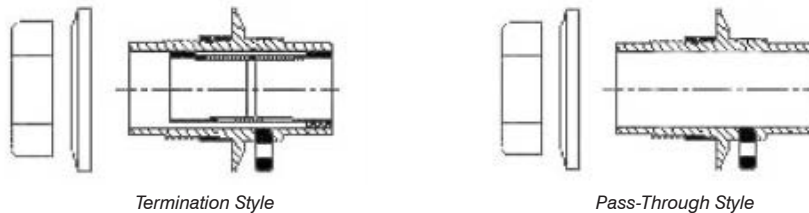


Dualoy Sump Penetration Fitting for Secondary Containment Piping Systems

Description

The Dualoy sump penetration fitting provides a superior means of routing contained fuel handling systems through standard flat sided fiberglass tank sumps or dispenser sumps (single or double wall). The standard fitting consists of a body that mounts through the sump wall, a washer, and a threaded nut that engages from the outside to hold the assembly in place. The body of the fitting, the washer and the nut are fabricated from corrosion-resistant, chemically inert, fiberglass-reinforced epoxy resins. The inside diameter of the fitting accommodates the primary line; the outside diameter is sized to make up to the next size larger Dualoy 3000/L pipe or the same size of LCX, by use of a half coupling. The standard penetration fitting permits the annular space between the primary line and the containment to communicate with the space inside the sump, by means of a pipe nipple. The fittings can also be used with continuous monitoring systems, such as vacuum, pressure or hydrostatic sump wall, a washer, and a threaded nut that engages from the outside to hold the assembly in place. The body of the fitting, the washer and the nut are fabricated from corrosion-resistant, chemically inert, fiberglass-reinforced epoxy resins. The inside diameter of the fitting accommodates the primary line; the outside diameter is sized to make up to the next size larger Dualoy 3000/L pipe or the same size of LCX, by use of a half coupling. The standard penetration fitting permits the annular space between the primary line and the containment to communicate with the space inside of the sump, by means of a pipe nipple. The fittings can also be used with continuous monitoring systems, such as vacuum, pressure or hydrostatic.

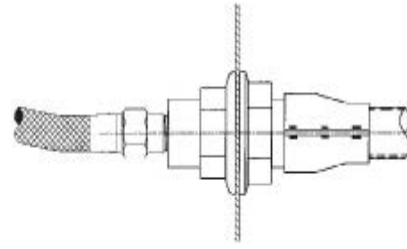


Advantages

The Dualoy penetration fitting offers a number of benefits to both contractor and user:

- **Corrosion-resistant construction** — The standard sump penetration fitting is fabricated from chemically inert, fiberglass-reinforced epoxy resins throughout.
- **Positive, adhesive seal at riser wall** — The Dualoy penetration fitting is joined to the sump wall using PSX™ •20 epoxy adhesive and does not rely on rubber or thermoplastic grommets, cuffs or flashings to protect the inside of the riser or sump from intrusion of ground water or soil contaminants.
- **Simple installation** — The penetration can be mounted in place with the same tools used to install any Dualoy 3000/L contained piping system and a hole saw.
- **Variety of sizes** — The Dualoy sump penetration fitting is available in 2-inch, 3-inch and 4-inch sizes. These sizes designate the size of the primary pipe and the secondary pipe would be one size larger or, in the case of Dualoy 3000/LCX, the same nominal size.
- **Variety of configurations** — The Dualoy sump penetration fitting is available in two configurations:
 - The **Termination Style** fitting has a primary coupling installed in the body of the fitting. When the fitting is installed, the primary pipe is joined to this coupling from outside the sump. A threaded reducer bushing or a spigot end adapter is joined to the coupling from inside the sump. A flex connector can be attached to the bushing or adapter. Alternately, a pipe nipple can be bonded to the primary coupling inside the sump, with a primary fitting (usually a 90° elbow) bonded to the other end. A half coupling is then installed on the end outside the sump using the appropriate size to connect the containment pipe onto the outside of the fitting. A test port is provided on the fitting to allow easy testing from inside the sump.

- A second configuration involves the fitting without an internal coupling (**Pass-Through Style**). Using the proper size pipe, this allows the primary pipe or LCX coaxial pipe to travel through the fitting to a primary elbow or tee. If a tee is used, the pipe can continue on through another penetration fitting in the opposite wall of the sump (for series layouts). The secondary pipe outside the sump is again attached to the fitting using the correct half coupling. The containment can be left open inside the sump (for inspection), can be terminated at each end (to create "zones" in the containment) or can be continuous through the sump.



Assembly of Termination Style Fitting
with Flex Connector

Tapered Alignment Rings

The Dualoy sump penetration fittings are designed to be installed with 3000/L or LCX pipe at a 90° angle from the existing sump wall. Installation of the system should begin at each sump with length and fit adjustments made in the "middle" of the pipe run. If for any reason the pipe cannot maintain a 90° angle, or a slope beyond the flexibility of the pipe wall is needed, NOV Fiber Glass Systems has tapered alignment rings available. These rings, used in pairs, will adjust the angle of the penetration fitting and allow for up to 5° articulation of the fitting and pipe. The rings are fiberglass and are installed using standard adhesive.

| Sump Penetration Fittings Part Numbers for use with | Termination Style | Pass-Through Style |
|---|-------------------|--------------------|
| 2" 3000/LCX or 3" over 2" 3000/L | 22856821 | 22856822 |
| 3" 3000/LCX or 4" over 3" 3000/L | 33856821 | 33856822 |
| 4" 3000/LCX or 6" over 4" 3000/L | 44856821 | 44856822 |

| Alignment Rings Part Numbers | |
|------------------------------|----------|
| 3" | 22359224 |
| 4" | 33359224 |
| 6" | 44359224 |

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