



Dual Containment Piping Systems

characteristics

Dual-containment is suitable for many applications, especially where requirements include high chemical resistance:

- Wide range of materials, sizes and combinations to suit each application
- Materials can be changed partway through a system to suit media and pressure changes throughout the entire system
- Wide range of high-quality fittings designed to maintain system alignment and assist installation
- Butt welding system eliminates the use of costly electrofusion couplings
- Specialty fittings and components enhance ease of installation and utilization of the system

applications

- Industrial and chemical processing waste lines
- Pressurized transfer lines
- Pharmaceutical plants
- Steel mills and plating shops
- Waste treatment
- Sulfuric acid or caustic soda
- Bulk storage of chemicals such as sodium hydroxide and aluminum nitrate
- Sulfuric, nitric, and hydrofluoric acids for wet stations in semiconductor plants
- Sewage systems for pharmaceutical wastewater

temperature range

Refer to individual material brochures for specific operating temperatures.

Dual Containment systems are engineered to protect our eco-system from the dangers of exposed aggressive chemicals. These systems should be specified in areas where there are chemicals transported above work stations, underground or for any other potential safety hazards due to exposure to the media. Dual containment is available in combinations of welded PE100RC, PP, PVDF and ECTFE for containment (outer) pipes and carrier (inner) pipes. This mix and match feature allows system designers to specify pipe material and ratings based on media and pressure changes throughout an entire system. PE, PVC and CPVC unified containment/carrier systems are also available in welded or cemented versions for chemical drainage applications

connection methods

The connection method depends on the combination of containment versus carrier pipe materials. Welding is used for PE100RC, PP, PVDF and ECTFE, whether on carrier or containment pipe. The particular combination will result in either simultaneous or staggered welding. Cementing is used on PVC and CPVC dual containment systems in the same way as for single piping systems.

system components

Containment Pipe – Provides leak protection

Carrier Pipe – Transportation of the media

Anular Space – Area between the carrier and containment pipes where leak detection takes place

Leak Detection System – Sensor and indicator

leak detection

An important aspect of dual-containment systems is the specification for leak detection, especially in buried systems. Pressurized systems should have automated leak detection wired to shut-off valves in case a leak is detected. Drainage system should have at least a manual leak-detection system in place.

Leak Detection Systems Types:

Manual – Manual operation, locates leaks within a zone, is cost effective and relatively simple engineering

Electronic Low-Point – Automated operation, locates leaks within a zone, is cost effective and relatively simple engineering

Continuous Cable – Precise automated detection for leaks and requires more engineering for installation



PE100 RC

PP

PVDF

ECTFE

SERIES: welded dual containment

SIZES: 3x1 to 20x160

RATINGS: 150 psi & drainage

Suitable for manual, low-point or continuous cable leak detection



PP

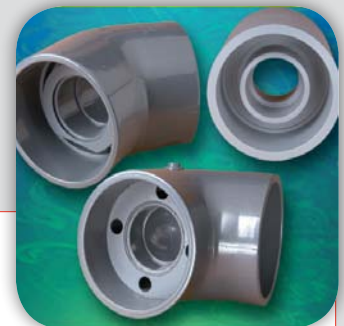
PE100 RC

SERIES: dual extruded dual containment

SIZES: 2x1 to 6x4

RATINGS: 100 psi & drainage

Suitable for manual and low-point leak detection



PVC

CPVC

SERIES: cemented dual containment

SIZES: 2x1/2 to 8x4

RATINGS: Schedule 40x40, 80x40 & 80x80

Suitable for manual, low-point or continuous cable leak detection