

THE CUSTOMGUARD OPTION

CustomGuard®

Custom-designed and fabricated double containment systems including dissimilar material systems, CustomGuard is unlike other systems that try to run everything through the same material. Our specialists will recommend and provide the absolute best system for each individual application, looking not only at chemical compatibility but also at cost (material and installation), life expectancy and turn around time.

For applications with more demanding mechanical, chemical and/or thermal requirements, IPEX has developed our CustomGuard offering. CustomGuard includes a variety of different system choices ranging from Fluoropolymers (e.g. PVDF), Thermosets (FRP); and carbon and stainless steel to hybrid combinations. Applications that require such materials are obviously complex, each demanding expertise and specialized knowledge to design an effective system. The CustomGuard option includes material selection, design, specification support (if needed) and fabrication of pre-assembled spooled pieces to minimize installation time and field joints.



DID YOU KNOW?

Together with Encase and Guardian, Custom Guard sets IPEX apart from any other double containment system. Custom Guard is available in several different materials. Unlike other manufacturers, IPEX is not constrained by a limited material selection. This variety enables IPEX to provide customers with the best solution for their double containment needs.

| Material | Carrier | Containment |
|-----------------------|------------|-------------|
| FRP/Metals/Dissimilar | 1/2" - 20" | 2" - 26" |

FOR PRICING CONTACT YOUR IPEX REPRESENTATIVE.

SPECIFICATIONS

Material Selection

Carbon and stainless steel, copper, fiberglass (polyester and vinyl ester resins), PVDF, PP and dissimilar materials, are all available in CustomGuard® systems. This comprehensive offering, unmatched by any one company, gives IPEX the unique ability to examine just about any double containment requirement and truly offer the best suited, most cost-effective system. While other manufacturers have vested interests in recommending their one and only material/system, IPEX isn't confined by that limitation.

Design

Drawing on more than 25 years of experience in double containment, IPEX has developed a variety of product-specific designs to maximize efficiency and reduce installation costs. As with all our containment systems, our own patented Centra-Guard™ point-of-collection or cable leak detection systems are also available.

General

Each contained piping system shall consist of Schedule 40 A-53 Carbon Steel primary piping system supported within a UL FRP secondary containment housing. Each system shall be provided with suitable drains and vents and be designed to provide complete drainage of both the primary and secondary containment piping. Interstitial supporting devices shall be made from Polypropylene Centra-Guide supports and shall be provided within the secondary containment pipe, and shall be designed to allow continuous drainage in the annular space to the drain points. Drain fittings shall be designed to allow a valve attachment to be made so that the secondary containment compartment may be readily drained and manually checked for leaks.

ENCASE ACID WASTE PP DOUBLE CONTAINMENT

1-1/2" - 12"



At the heart of our patented Encase polypro system is its electrofusion fitting with a groundbreaking heavy-gauge resistance wire molded into the socket. The result is a premier system that offers considerable reduction of installation time and the highest quality bubble-tight joints available.



DID YOU KNOW?

Encase is a polypropylene piping system that uses proven Enfusion joining methods to provide an easy-to-install, safe, reliable and cost-effective method to convey chemical waste under gravity-flow conditions.

ADVANTAGES

- 1 Polypropylene Material**
 - 30 years of success in chemical waste applications
 - High corrosion resistance
 - Wide temperature range
 - Excellent chemical resistance
- 2 Same Material Inside and Out**
 - Eliminates differential expansion problems
 - Chemical resistance is the same for the entire piping system
 - System integrity is maintained in the event of a primary pipe leak
- 3 Restrained System**
 - Expansion anchor plates are installed on each fitting to control expansion
 - No expansion loops necessary
- 4 Full Product Range**
 - 1-1/2" to 8" primary sizes available
 - Manufactured in both non-flame retardant as well as flame retardant material for above ground installation
- 5 Drainage Pattern Fittings**
 - Ensures smooth chemical flow.
 - Enfield piping has been used for chemical waste for over 23 years
- 6 Modular Design**
 - Components are factory fabricated. The only site joining necessary is the fusion of couplings to pipes and fittings
 - Reduces labor costs
- 7 Fast Joining Method**
 - All site joints are made by electrofusion using an Enfusion Hand Held Unit.
 - Quick and simple to make without the need for costly and cumbersome butt fusion machines
 - Proven technology
 - Narrower trench widths than for butt fusion, resulting in quicker and cheaper installation
 - Joints can be made in the trench which reduces installation time
 - Automatic microprocessor-controlled Enfusion unit ensures joint repeatability
- 8 Easy System Testing**
 - The primary pipe can be inspected and tested prior to closing the secondary joint (impossible with butt-welded systems)
 - Any suspect primary joints can be re-fused prior to final closure of the secondary pipe
- 9 Leak Detection Compatible**
 - Encase is compatible with all common types of leak detection systems
 - Upon request, pipe is furnished with knot-free twine to allow insertion of a pull rope for leak detection cable installation minimizing installation time.
- 10 Full Product Backup**
 - Expert personnel are available to assist in every facet of the Encase product



SHORT FORM SPECIFICATIONS

GENERAL

Acid waste double containment drain lines shall be Encase, manufactured by IPEX, with no substitutions. Pipe and fittings shall be manufactured from Schedule 40 polypropylene and joined by the Enfusion method.

MATERIAL

Pipe, fittings, internal pipe supports and anchor plates shall be manufactured from Type 1 homopolymer or Type 2 copolymer polypropylene material as described in ASTM D4101.

PIPE AND FITTINGS – CONSTRUCTION

All pipe fittings shall be factory assembled and of unitized construction, with the primary and secondary components integrally anchored together to prevent movement of the primary pipe/fitting with in the containment pipe/fitting. All piping components shall be manufactured to Schedule 40 dimensions. The primary pipe shall be adequately supported by means of support plates welded to the primary pipe. Anchor plates shall be provided at each end of the pipe/fitting section to restrain pipe expansion. All anchor plates must be mechanically located in a machined recess on the inside of each secondary pipe/fitting and welded to both the primary and secondary pipe/fitting sections.

FACTORY WELDED JOINTS

All factory joints shall be made either by butt fusion or Enfusion. Joining by means of fillet welding is expressly forbidden.

SITE JOINTS

All site joints shall be made using Enfusion couplings, manufactured from polypropylene with a nickel/chrome resistance wire, molded in place. Components with copper wire elements are prohibited. Solvent, butt-welded or fillet-welded site joints are also prohibited.

INSTALLATION

Installation shall be in accordance with the contract drawings, the manufacturer's recommendations and the local plumbing code. The entire installation shall be installed in proper alignment and free of stress.

TESTING

The system shall be tested in accordance with the manufacturer's recommendations and the local plumbing code. The primary pipe shall be tested prior to making the secondary joints. If Secondary pipe cannot be hydro-tested, as determined by the engineer or authority having jurisdiction, then the use of nitrogen or air at a MAXIMUM 5 psi (gauge) shall be allowed. It is imperative that a working-pressure regulator be used during the pneumatic test to ensure that over-pressurization of the PVC, beyond 5 psi, cannot occur. The following must also be noted: Air or nitrogen under pressure is compressed and therefore poses a potential hazard. If a failure of the pipe or fitting occurs during such test, the air exits at the failure point and expands rapidly. This increase in velocity can cause the system to fail in a catastrophic mode. Therefore during such air test all personnel involved in the test or present in the test surrounding area must be aware of such a possibility and take all necessary precautions. Precautions include, but are not limited to, taking extreme care not to impact or damage the system in any way. Such procedure is a limited exception to IPEX standard policy which forbids the use of its rigid systems with any compressed gases.

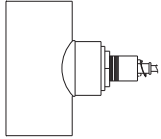
| Material | Carrier | Containment |
|----------|-------------|-------------|
| PP | 1-1/2" - 8" | 4" - 12" |



PRODUCT SELECTION CHART – ENCASE

| Dimension inches | | significant Number | Product Code |
|------------------|-----------|--------------------|--------------|
| Primary | Secondary | | |

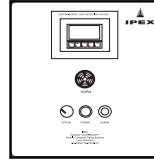
Above Ground Leak Detection Station with Sensor



| | | | |
|----|---|--------|--------|
| 4 | - | 231834 | 231834 |
| 6 | - | 231835 | 231835 |
| 8 | - | 231836 | 231836 |
| 10 | - | 231837 | 231837 |

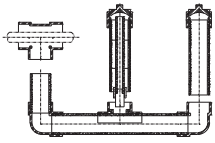
| Dimension inches | | significant Number | Product Code |
|------------------|-----------|--------------------|--------------|
| Primary | Secondary | | |

8 Zone Micro Processor Panel



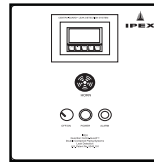
| | | | |
|---|---|--------|--------|
| - | - | 631188 | 631248 |
|---|---|--------|--------|

Below Ground Leak Detection Station with Sensor



| | | | |
|----|---|--------|--------|
| 4 | - | 231838 | 231838 |
| 6 | - | 231839 | 231839 |
| 8 | - | 231840 | 231840 |
| 10 | - | 231841 | 231841 |
| 12 | - | 231842 | 231842 |

16 Zone Micro Processor Panel



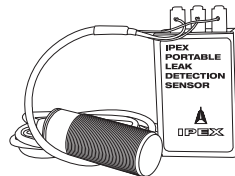
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| - | - | - | 631249 |
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Leak Detection Jumper Cable



| | | | |
|---|---|---|--------|
| - | - | - | 631186 |
|---|---|---|--------|

Portable Leak Detection Sensor



| | | | |
|---|---|---|--------|
| - | - | - | 631253 |
|---|---|---|--------|

Encase components should only be joined using IPEX Control Units.
NFRPP is the standard material of construction for all Encase components. FRPP is available on request