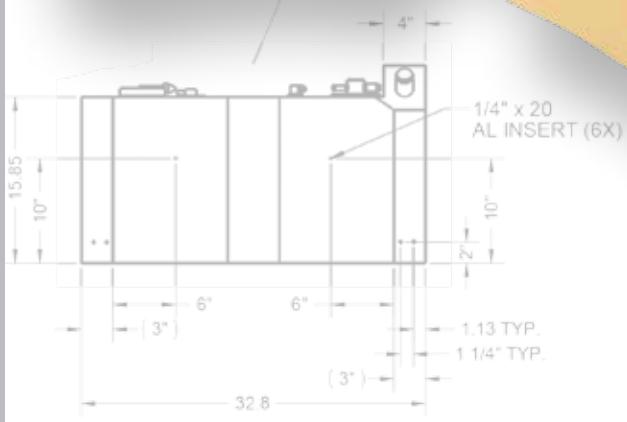
INCA
MOLDED PRODUCTS

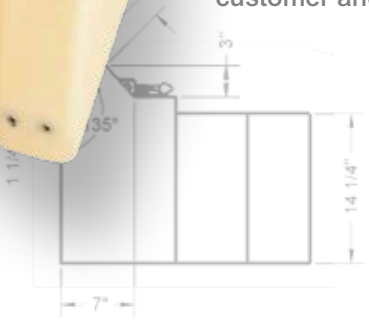
CUSTOM ROTATIONALLY MOLDED PRODUCTS

SEASTAR SOLUTIONS®

WHAT IS ROTATIONAL MOLDING?

Rotational plastic molding is an extremely versatile and economic process that relies on bi-axial rotation and heat to produce parts with exceptional strength. The finished result is a stress-free, lightweight and seamless design that is very durable.





3D solid modeling

RotoLoPerm® - Multi-Layer Marine Fuel Tank Technology

RotoLoPerm® is Your Best Evaporative Emissions Solution To Reach Marine Fuel Tank Compliance.

INCA Molded Products has an exclusive marine licensing agreement with Centro Inc. of North Liberty, Iowa, to produce marine fuel tanks using its patented multi-layer RotoLoPerm process.

RotoLoPerm® Multi-Layer Tank technology

RotoLoPerm® complies with Clean Air Act and Marine Fuel Tank Permeation regulations.

INCA Molded Products customizes the application of RotoLoPerm® to the precise manufacturing specifications of each customer and has in-house engineering expertise to assist in developing the best design with special fittings for each marine fuel tank manufactured.

A variety of plastic resins are available to use, depending upon the product specifications, strength requirements and resistance to other substances required. Materials that may be selected include polyethylene, nylon, polycarbonate, polypropylene, polyvinylchloride (PVC) and custom formulated compounds. Multi-layer options combine various materials to open more applications

The flexibility of INCA's process allows for a wide range of shapes and sizes to be manufactured. The company also offers products in a wide range of colors. In addition, graphics can be molded directly in the product.

RotoLoPerm® Advantages

The RotoLoPerm® patented process XLPE/Barrier/XLPE combination technology offers these advantages over the traditional plastic marine fuel tank, metal fuel tank, and other competing low permeation technologies:

- Ultra-low permeation levels
- Successfully passed standard marine fire test
- Excellent hot and low temperature impact strength properties
- Abrasion resistance
- Moldability
- Uses same rotomolding tooling with minor adjustments
- Cost-effective
- Retains the overall value of proven crosslink polyethylene fuel tank technology

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WHY USE ROTATIONAL MOLDING?

Many advantages make rotational molding the best choice for fuel tanks. One of the greatest advantages is the reduced cost of tooling. The cost of having a mold built for rotomolding is significantly less than for most other plastics processes.

Other benefits of rotational molding include:

- Capable of meeting EPA/CARB requirements
- Design flexibility to meet specifications
- One-piece seamless construction
- Metal inserts and fittings as integral parts
- Uniform wall thickness
- Resistance to corrosion
- Ribs and cones for stiffening
- Variety of colors and finishes
- Lightweight
- Excellent load-bearing properties
- U.V. resistance
- Molded-in graphics, such as logos, and embossing
- Product longevity

DESIGN

flexibility

INCA MOLDED PRODUCTS

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What is RotoLoPerm®?

The RotoLoPerm® technology uses a special barrier layer between inner and outer layers of crosslinked polyethylene.

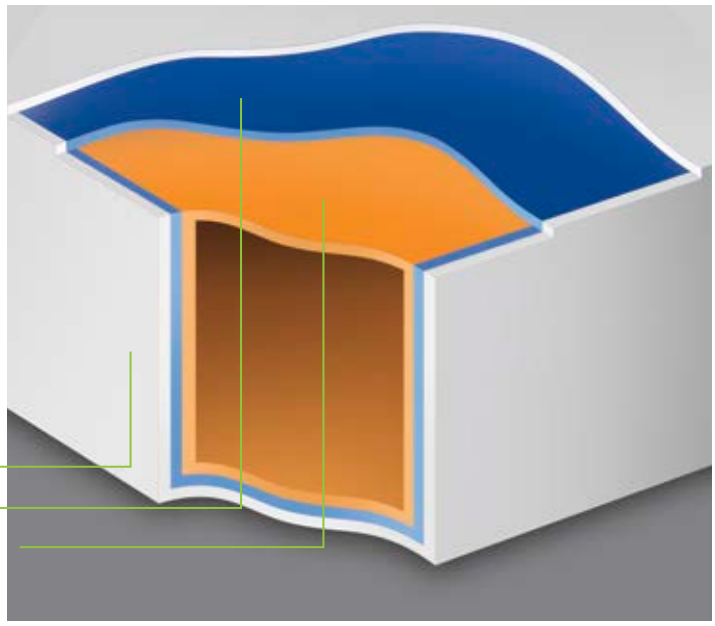
This material meets these standards for marine fuel tanks:

- EPA Evaporative Emissions standard
- CARB Executive Order
- U.S. Coast Guard and ABYC requirements

No additional permeation testing is needed for marine fuel tanks using RotoLoPerm®.

RotoLoPerm® Layers:

1 Outer XLPE Layer — UV/abrasion resistance
2 Middle Barrier Layer — Permeation resistance
3 Inner XLPE Layer — Impact/moisture and fuel resistance



Custom tank configuration

3 LAYERS

understanding liquids

WEIGHT, BALANCE AND BALLAST

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Crosslink Polyethylene Advantages

INCA Molded Products pioneered the development of custom rotationally molded plastic fuel tanks for the marine industry. Today, INCA has manufactured over 1.5 million fuel tanks for marine, agricultural, and industrial use. With fuel tanks manufactured in all sizes and shapes, the company has produced fuel tanks ranging in size from 1 gallon to 195 gallons.

The Crosslink Polyethylene tank technology offers many advantages over fuel tanks made of metal or other materials:

- Custom design and engineering, using Solid Works 3D Solid Modeling
- Design flexibility and configured to customers' requirements
- Uniform wall thickness
- Crosslink Polyethylene Resin (XLPE)—For fuel tanks of all types, gas and oil storage tank—to improve impact strength, provide higher stress crack resistance and enhance weatherability. (Contains a crosslinking agent that interacts in the molding cycle to form a crosslinked molecular structure that is ideal for gas and oil storage tanks, as well as trash containers and parts requiring maximum toughness or durability in cold temperatures. This material meets U.S.Coast Guard fire test requirements.)
- Impact strength
- Environmental stress-crack resistance
- UV stabilization for long-term outdoor protection
- Inserts and fittings able to be incorporated as integral components
- Integrally molded fill and vent
- Variety of colors and textures

ready for installation

- Mold-in graphics and embossing
- Economical tooling cost
- Hold down features
- Design-based testing—Fire test, shock test, pressure impulse test
- 100% (3 psi) pressure check on all tanks
- Product longevity
- Ready for finishing and installation

PRODUCT LONGEVITY

Warranty

INCA offers a two year warranty on each fuel tank.
INCA will repair all emissions-related components at no charge to the customer.

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INTEGRATED FUEL SYSTEMS

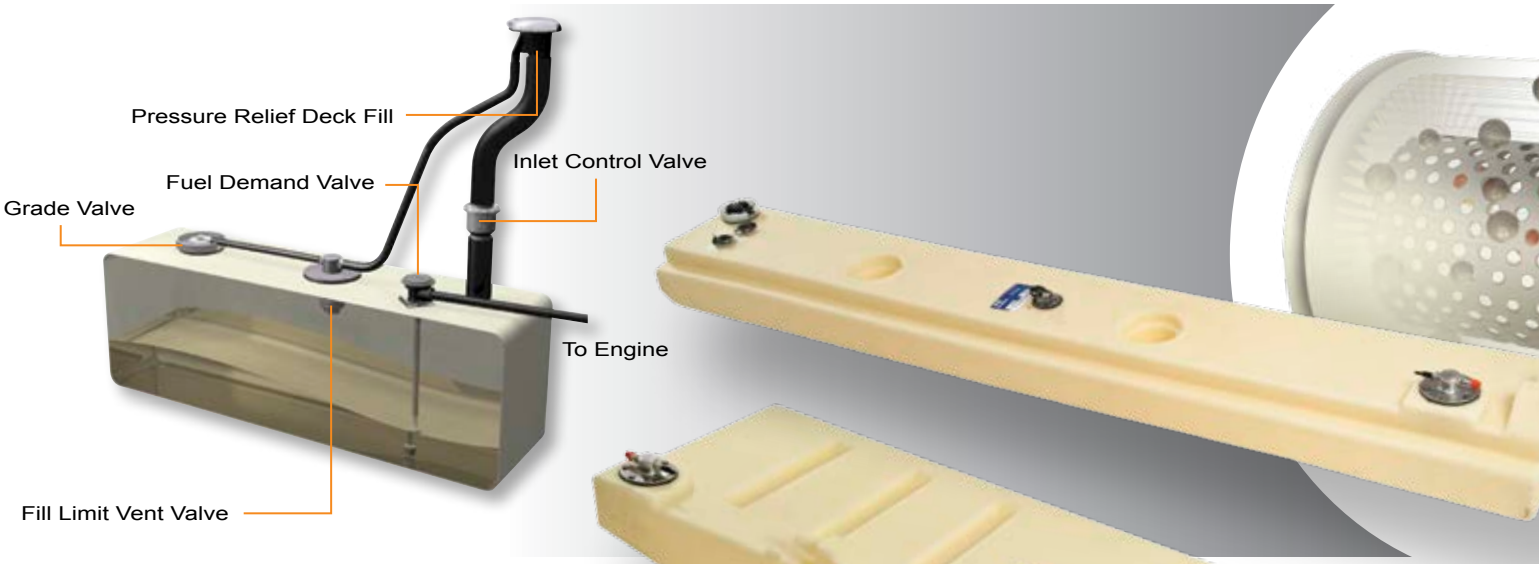
An integrated fuel system consists of:

- A low permeation fuel tank, RotoLoPerm®.
- Tank mounted grade rollover valve(s).
- Tank mounted fluid level vent valve.
- Inlet check valve.
- Carbon canister system or pressure relief system (fuel demand valve).

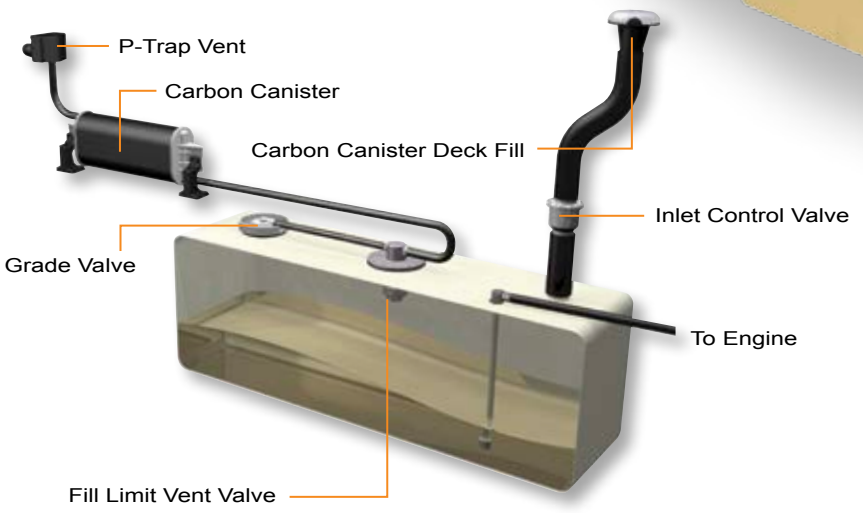
This system controls diurnal emissions as well as the fuel level of the tank. Overfilling of the tank, fuel spit back through the fill neck and vent tube are eliminated. These systems meet the requirements of the EPA, CARB, and ABYC H-24.
INCA works with all of the major fuel system integrators to develop compliant integrated fuel systems.

- Automotive style refueling, automatic nozzle shut-off, fuel nozzle retention and CARB Phase II compatibility.
- Maximum engine fuel flow and minimize hot fuel handling issues.
- Overfill protection is included with each system, preventing the possibility of accidental system over-pressurization.
- Each system is engineered to ensure a lifetime of performance and virtually eliminate service and maintenance.

New Pressure Relief Fuel Systems Components



New Carbon Canister Fuel Systems Components



Custom Fuel Lines also available

Courtesy of Attwood®

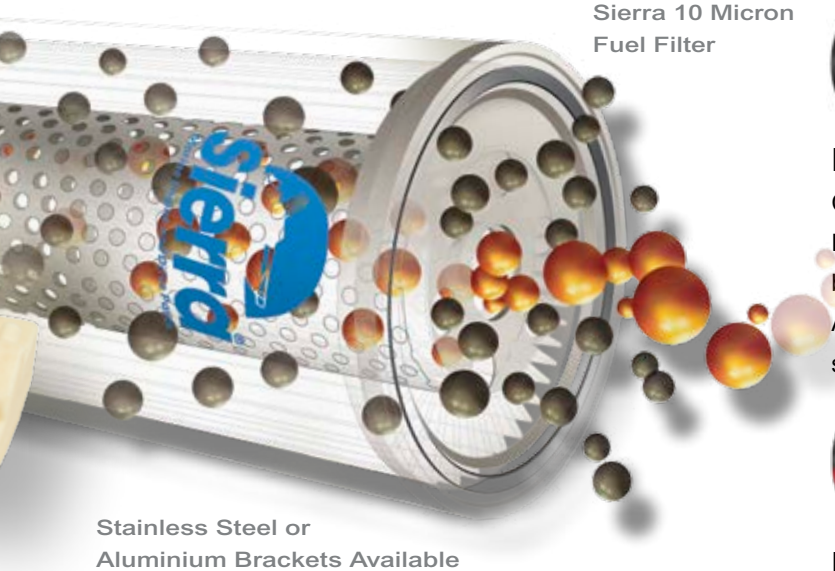
HOSE AND FUEL WATER SEPARATORS

Sierra fuel water separator filters.

Today's marine engines work in a demanding environment. Increased levels of sophistication, coupled with ethanol fuel blends, necessitate the use of a high quality fuel filter. Engineered for today's stern drive and inboard engines, along with 2-cycle and 4-cycle outboard high and low pressure fuel systems; Sierra filters are the best in the business. Sierra filters are engineered to offer the ultimate in filtration, separation of water from the fuel supply and provide maximum fuel flow.

10 Micron Filtration – Over 90% Efficiency

Efficiency rating relates to the percentage of particles at a given size that a filter can capture. The higher the efficiency, the higher the percentage of dirt retained by the filter. Many filter manufacturers claim 10 micron filtration but do not guarantee the efficiency. Sierra does.



Sierra 10 Micron Fuel Filter

Stainless Steel or Aluminium Brackets Available

EPA/CARB Compliant Primer Bulbs

Sierra's EP series of primer bulbs are manufactured utilizing a special Floroelastomer compound which allows it to exceed the EPA's mandated 15g/m2/24hrs rating.

Stainless Fuel Water Separator Bracket

Fuel Filter

Size 5/8"

Fire-Acol Fuel Vent Hose - Series 369

Shields Fire-Acol Fuel Vent hose resists gasoline/alcohol blended fuel and is fire resistant. It features a weather/UV resistant NBR/PVC cover. Meets USCG type A2, SAE J1527 type A2, ISO 7840 type A2 and NMMA/CE type accepted standards.

Size range: 1/4"- 1/2"

Low Permeation Marine Fuel Hose - Series 368

Complies with EPA and CARB very low permeation requirements. Fuel feed (gasoline up to 85% ethanol blended fuels/diesel/all bio-diesel blends). Meets USCG type A1 15, SAE J1527 type A1-15, ISO 7840 type A1, and NMMA/CE type accepted standards.

Size range: 1 1/2" - 2 3/8"

Fuel Fill Hose - Series 350/355

Meets SAE J1527 type A2 and ISO 7840 type A2 NMMA/CE type accepted standards.

Size range: 5/16" - 3/8"

Silverado Fuel Hose - Series 337

Silverado 4000 fuel line is constructed with a non-permeable THV barrier layer, polyester reinforcement, and a CPE weather and UV resistant cover. Meets all current EPA and CARB standards. Meets SAE J1527 type B1-15.

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The OnBoard Rewards Program is an online based listing of dealers that install, stock and service OnBoard Reward Alliance Partner products. We want to recognize dealers for the work they do on behalf of our brand. Our goal is to make it fun, easy - and rewarding - for a dealer to build a good relationship with SeaStar Solutions, our partners and with our products.

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