



LEADING THE WAY IN POLYCARBONATE ENCLOSURES



POLYCARBONATE

# INTEGRA GIVES YOU AN EDGE IN PROTECTION



# POLYCARBONATE FEATURES & BENEFITS

- Improved Impact Resistance
- Lighter Weight
- Greater UV Resistance
- Ease of Modification
- More Eco-Friendly
- Rarely Damaged from Shipping & Handling



Integra's enclosure is not like anyone else's. Our superior design, including our use of polycarbonate material, provides an enclosure that is durable, seals tight, supports easy component installation, and looks great.

Integra also maintains an extensive, on hand inventory to support your delivery.

Superior design, fast shipment, and competitive pricing are three benefits that make Integra Enclosures a smart choice for your electrical and telecommunication enclosure needs.

Call us at 440.269.4966 or visit our website www.integraenclosures.com to learn more about Integra Enclosures.

- UL / c-UL Listed
- NEMA 4X, 6P, 12, 13 & Marine Use
- Patent No. 6,604,798
- CE & IP 66/68 Protection
- RoHS
- ATEX (contact factory)



# POLYCARBONATE, THE BETTER TECHNOLOGY.



Technology continues to improve at a very rapid pace. The ability to send and receive information has greatly improved the ability to monitor or control all sorts of applications, creating more applications needing a more advanced electrical enclosure. Just as

electronics has evolved, so has enclosure technology. Polycarbonate represents the next step in the evolution of technology for outdoor, wireless, wastewater treatment, solar, broadband over powerline (BPL), smart grid, and all the traditional non-metallic applications.



## POLYCARBONATE APPLICATIONS

Polycarbonate enclosures are a superior choice for a wide range of outdoor applications and environments:

- Remote Monitoring For remote placement of monitoring or networking devices/components
- Alternative Energy From solar to wind, keep systems safe from the environment
- Water Treatment Water/wastewater treatment and sprinkler systems are well-protected in polycarbonate
- Utility & Electrical Utility applications that are housed outdoor are ideally enclosed in polycarbonate
- Marine & Marina Whether on-ship or at the dock, guard against corrosive salt water and sun

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# THE UNSURPASSED ADVANTAGES OF POLYCARBONATE ENCLOSURES



## **UV Protection**

Fiberglass enclosures will "bloom" when exposed to sunlight and moisture. In fact, manufacturers of FRP

enclosures recommend painting their products. This is not necessary with Integra thermoplastic enclosures.

Outdoor UV exposure ratings for both the Premium and Impact lines are F1. See Engineering Properties on page 48 for more details.



## Impact Resistance

The engineered thermoplastic enclosure has dramatically

better impact resistance. For example, fiberglass typically has an impact resistance of less than 220 lb/in, while the Premium and Impact line enclosures have an impact resistance of over 900 lb/in.



## **Ease Of Modification**

Thermoplastic enclosures are much easier and safer to machine, with none of the dust and splintering associated with fiberglass.

# THE INTEGRA STORY





## Why Integra

If you are working on a new design that requires a NEMA 12/4X/6P, UL listed enclosure, here are some reasons you will want to consider Integra...

- Our aesthetics will provide a unique new look for your products, making them stand out from the competition.
- At Integra, all we do is thermoplastic enclosures.
   We are focused on your specific requirements.
- Integra offers a full range of modification services, delivering enclosures to you ready to install components.
- Available factory-direct, Integra enclosures are shipped on your schedule.



Manufactured, Assembled and stocked in Mentor, OH, USA

Integra Enclosures manufactures and markets engineered thermoplastic enclosures designed for use in electrical construction, water treatment, car wash, telecommunication, instrumentation, utility, machine building, HVAC, or any other application requiring enclosures which are non-corrosive, non-conductive, easy to install and modify, and competitively priced.

Integra Premium Line Enclosures all share the patented Integra Panel Suspension System which allows infinite range of motion of a panel within the enclosure. This feature, along with several other design improvements over existing products, makes Integra an exciting alternative to the traditional suppliers in the market.

Offering the best designs coupled with superior customer service, Integra is uniquely positioned to serve your enclosure needs.







# THE MOST WELL THOUGHT OUT **ENCLOSURE AVAILABLE**

Super versatile, the enclosure panel suspension system in all of the Premium Line enclosures offers unsurpassed options for mounting back panels, face plates, circuit boards or any other component that needs to be secured. This feature, along with a wide selection of off-the-shelf accessories, allows extreme customization using standard products. Additional features:

- Rear-mounting bosses
- Swing panel
- Foot or flange mounting
- Clear lids
- Removable enclosure door
- Panel suspension
- DIN rails pre-cut for each enclosure size
- · Vents for air flow
- Many other options

# **FACTORY MODIFICATIONS.**

OUR PRODUCT, THE WAY YOU LIKE IT.



At Integra, most of our customers prefer to let us modify their enclosures

to shipment on our CNC Machines. Drawings of all standard products are available for downloadable off the

Integra website.

Our newly-expanded manufacturing facility can handle your needs for:

- Drilling Holes
- CNC machine cut outs
- Silkscreen
- Graphic panels
- Custom enclosures
- Custom colors (minimum quantity)
- Custom back panels



# **STANDARD PRODUCTS**



# **MODIFIED PRODUCTS**



# SPECIAL PRODUCTS Minimum quantity may apply



# CUSTOM PRODUCTS Minimum quantity may apply









## **POLYCARBONATE & FIBERGLASS. WHICH IS BETTER?**

POLICANDONATE & FIDENGLASS, WITCH IS DETTER:			
Feature	Polycarbonate	Fiberglass	
Impact resistanc	e 🚺	<b>%</b>	The average fiberglass enclosure tensile strength is approximately 220 in/lb. Polycarbonate has a tensile strength of 900 in/lb. Polycarbonate is over 4 times the impact resistance of fiberglass.
Weight		<b>%</b>	Whether it is saving on shipping cost or the ability for one person to carry and install a product in an enclosure, weight is increasingly important. <b>Polycarbonate is up to 40% lighter than fiberglass.</b>
UV resistance		<b>(X)</b>	Fiberglass UV protection is offered as a shield or other coating that attempts to protect the fibers from the inevitable deterioration or even failure of the exterior coating. With polycarbonate, the UV inhibitor is in the formulation and is uniformly integral to the enclosure.
Ease of modification		<b>※</b>	Fiberglass is tough on tools and often chips while machining, leaving sharp, unsightly edges. Also, fiberglass, upon drilling or cutting gives off a very fine dust that is difficult to clean up and is a skin and lung irritant. Integra polycarbonate enclosures are easy to modify, do not give off dust and leave a clean, attractive surface with no sharp edges.
Eco-friendly	<b>⊘</b>	<b>(X)</b>	Whether during the manufacturing process or at the end of the enclosure's life, fiberglass material cannot be reused and is destined for landfills. Polycarbonate in the manufacturing process or at the end of its usable life is recyclable.
Damage from		(X)	Fiberglass is a very brittle material, to the point that it risks damage

## STOP SETTLING FOR OUTDATED MATERIALS AND UPGRADE TO TODAY'S TECHNOLOGY.

Why stop there? Polycarbonate can be used to replace your steel, stainless steel or aluminum enclosures also. Durable, aesthetically pleasing, pad-lockable, and extremely versatile, Integra Enclosures are an upgrade to all but the most demanding metal enclosure applications.

anytime it is dropped or mishandled in any way. Because of it's durability,

polycarbonate is rarely damaged from shipping or handling.

shipping/handling



# **INTEGRA STANDARD PRODUCTS OFFERING**







# **PREMIUM LINE**

- Integra's traditional high impact polycarbonate enclosure offering including eleven sizes from 6x6x4 through 18x16x10
- Light gray in color with high gloss finish
- Available in four configurations including screw cover, hinged w/ two screws, hinged w/four screws and hinged with locking latch
- All sizes and configurations are available in clear or opaque lid
- All sizes and configurations include enclosure foot mount or flange mount system
- Features Integra's unique T-Rail mounting system (brackets are option) for face plates, swing panels, layering back panels and/or infinitely variable back panel height
- Brass inserts for securing mounting feet or flange, optional back panel and lid
- UL/C-UL-50 listed Nema 2,3,3R,3S, 4, 4X, 5,12,13 and "ST" series and "HT-P" series are Nema 6/6P, marine use rated

# **IMPACT LINE**

- Integra's more recent high impact polycarbonate enclosure offering including four sizes
- Light gray in color with high gloss finish
- Available in two hinge styles standard or low profile (9082 standard only)
- Available in two latch styles, integrated or stainless steel locking latch (9082 integrated only)
- Available sizes and styles available in clear or opaque lid
- Integrated mounting flanges
- Advanced interior mounting system for circuit boards, face plates, swing panels, etc.
- Self-tapping screws and molded-in bosses to secure optional back panel
- UL/C-UL-50 listed Nema 2,3,3R,3S, 4, 4X,5,6/6P,12,13 rated (locking latch not 6/6P rated)

# **GENESIS LINE**

- The MULTIple configurations for MAXimum options rail system provide unlimited mounting potential for your application. These rails mount vertically by attaching to the rear wall of the enclosure and to the Multi-Max frame. They can be used all around the interior of the enclosure to create three dimensional use of all of the space inside the enclosure. Uses for these
- A Multi-Max frame ring secures just inside the lip of the base with four Multi Max rails and combines with other molded features to provide un-matched rigidity to the Genesis enclosures.
- The genesis swing panel has an aluminum piano style hinge to support the weight of the typical larger enclosure applications. The swing panel attaches to the Multi Max rails and provides rigid smooth operation
- Multiple Latching Options
  - Three point latch
  - Quarter turn latch
  - Non-metallic latch
- UL/C-UL-50 listed Nema
   2,3,3R,3S, 4, 4X,5,6/6P,12,13 rated

**ALL LINES ALSO AVAILABLE IN ABS & PPO (CONSULT FACTORY)** 

# **PREMIUM LINE**





# PREMIUM LINE OVERVIEW

#### ■ 900 inlb Impact Resistance

Polycarbonate is known for it's high impact resistance and that is why we chose to use it as the material for our Premium Line Enclosures

#### ■ Wide Operating Temperature Range

Polycarbonate is stable and holds it's tensile strength better than other non metallic materials over a temperature range from -40 deg F to 265 deg F.

### Crystal Clear Covers

Clear covers are a superior alternative to mechanically affixed window kits.

## ■ EZ Hinge

Integra's standard hinges allow easy door removal or replacement while permitting a full 225 degree door swing.

## ■ Unique T-Rail Panel Suspension System

The optional brackets that attach to the T-Rails allow our customers to mount an individual mounting panel at any height in the enclosure or to even have multiple back panels at different heights. Who says you can't put more into an Integra enclosure?

#### Molded in Mounting Bosses

All of the Premium line enclosures have extra mounting bosses molded into the rear wall to

permit #10 self tapping screws to secure din rail, circuit board, or any other device or component into the enclosure.

#### Stainless Steel Latch Securely Attached

The "HL" Premium enclosures include stainless steel latches that are bolted in place for a more secure system than pop rivets or slide on latches

#### Modifications

Full modifications services are available at Integra, including machining holes for displays, cable connectors, multi-pin connectors, antennae, etc. Call us to discuss your unique requirements.

### Customization

Custom colors, custom back panels, silk screening, sub assembly of your product, or any other tailoring of our product to your need is our job. (Minimums may apply)

### Packaging

Standard packaging is one unit per carton, packed to ensure safe delivery to your location. Or, if you have any special requirements for shipping, call us and we can work to meet your requirements.









**EZ HINGE** 





**DIN RAILS** 



CUSTOMIZATION



PANEL SUSPENSION



WINDOW KITS



AIR VENTS / FAN SHROUDS



POLE MOUNTING KITS

