

ADVANTEC ADVANTAGE **3 YEAR** ASSLE-FREE WARRANTY



WE ARE PASSIONATE ABOUT DELIVERING RELIABLE SOLUTIONS SUPERIOR **OUALITY** WORLD-CLASS SUPPORT

# **PRODUCT CATALOG**



FM FREEMAN



PACIFIC COAST



45601

MANLY

U.S. COAST GUARD



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Proudly part of the AdvanTec family of brands

ADVANTEC ADVANTAGE



WE ARE PASSIONATE ABOUT DELIVERING RELIABLE **SOLUTIONS** SUPERIOR **QUALITY** WORLD-CLASS **SUPPORT** 

### **OPENING THE FUTURE TO SECURITY AT SEA**

3 YEAR

HASSLE-FREE WARRANTY

#### **CRAFTSMAN TRAINING AND CERTIFICATION**

Freeman Marine craftsmen participate regularly in training and certification programs to gain new skills, update capabilities and certify compliance with industry standards for design, machining, welding, fabrication, painting and other specialized skills. Our goal is to constantly improve not only its products but also the quality of life and work of its valued employees.

#### **ADVANTEC MANUFACTURING USA - FACTORY APPROVALS**

CERTIFICATE OF MANUFACTURING ASSESSMENT BV MODE II | ISO 9001:2015

FREEMAN CLOSURES HAVE RECEIVED ACCEPTANCE:

DNV - Det Norske Veritas

• GL - Germanisher Lloyds

• USCG - US Coast Guard

• BV - Bureau Veritas

• LR - Lloyds Register of Shipping

ABS-American Bureau of Shipping

MCA - Maritime Coastguard Agency

• CCG - Canadian Coast Guard (Transport Canada)



#### **TYPE APPROVALS**

2400 Series Watertight Hatches: Cert # 23-2417921-PDA

2400 Series Watertight Hatches: Cert # LR23366654TA

1212 & 1662 Watertight & Weathertight: Cert # 23-2402820-PDA

1212 Watertight Door: Cert # 23-2402821-PDA

3212 Raised Watertight Hatches: Cert # 23-2402822-PDA

3211 Flush Watertight Hatches: Cert # 23-2402819-PDA



#### **OUR WARRANTY**

#### All Non-Powered Equipment:

• Platinum Warranty - 3 years from date of shipment

#### All Powered Equipment:

- Standard Warranty 2 years from date of shipment
- 1 year extension Onsite commissioning required by AdvanTec Marine or certified technician

#### Scan for more information



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FREEMAN MARINE

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### DOORS

### **STANDARD DUTY WEATHERTIGHT**

#### 1111, 1511 & 1611 SERIES

The Freeman Marine Standard Duty Series Door is an aluminum weathertight door that offers a balance of simplicity and flexibility. It can be configured to meet specific needs, making it a versatile choice for various applications. The door is compatible with different bulkhead constructions and offers choices for door frames in aluminum, steel, or stainless steel materials. It's ready for clamp-in, bolt-in, or weld-in installations. This door is a practical and reliable choice for those seeking quality and adaptability.

#### CONSTRUCTION

- Marine grade aluminum .080" to .160" panel thickness outside and inside bonded with Plexus® structural adhesive
- Welded aluminum, steel or stainless steel frame options with radius or mitered corners
- Neoprene black 35 durometer gasket, weathertight compression sealing
- Glass filled striker wedges with isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Foil-Faced Foam is a rigid polyisocyanurate foam that provides exceptional heat, sound and moisture resistance

- Stainless-steel butt hinges
- Black nylon individual dogs
- TrioVing locksets
- Neoprene black gasket
- 6mm Clear DiamondTemp
- Buffed aluminum finish

Concealed or hidden hinge

- Flush aluminum or pocket dogs
- Polished stainless steel dogs
- Keyless entry or GSA approved lock
- EMI gasketing

**IDGRADED FEATURES** 

- Manual hold-open
  - Painted Awlgraft 2000 finish

### **STANDARD DUTY WEATHERTIGHT**

1111 SERIES



### 1511 SERIES

INTERIOR

EXTERIOR







### HEAVY DUTY WEATHERTIGHT

#### 1120, 1520 & 1620 SERIES

Doors designed for use on commercial workboats, military vessels, and passenger ferries, boast a sturdier construction. These doors are crafted from marine-grade materials that meet class-approved standards, and they feature robust welded construction with added internal reinforcements. With no exposed seams, these doors ensure a rugged and durable closure that is built to withstand the test of time, promising a lifetime of reliability.

#### CONSTRUCTION

- Marine graded aluminum panel thickness of .160" or .250" welded design with interior bonded panel
- Foil-Faced Foam is a rigid polyisocyanurate foam that provides exceptional heat, sound and moisture resistance
- Internal welded stiffeners added strength
- Glass filled striker wedges with isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Neoprene black 35 durometer gasket, weathertight compression sealing
- Weld-in, clamp-in or bolt-in frame options with fixed and or adjustable compression gasket carriers
- Radius or mitered corners available

- 3/8" Clear DiamondTemp glass
- TrioVing lockset
- Neoprene 35 durometer
- Aluminum individual dogs
- Buffed aluminum finish

UDGRADED FEATURES

- Keyless entry or GSA approved lock
- EMI gasket or high heat
- Single lever quick-acting dogs
- Heat trace artic climate vessels
- Door closer or hold opens
- Painted Awlcraft 2000



### HEAVY DUTY WEATHERTIGHT

#### **1120 SERIES**



#### **1520 SERIES**







1620 SERIES FRENCH PANEL

### HEAVY DUTY STEEL WEATHERTIGHT

#### 1223, 1523 & 1623 SERIES

This product represents more than just an ordinary door; it embodies a robust and substantial construction, featuring a removable interior door panel. It's specifically engineered for demanding commercial applications, including workboats, military vessels, and specialized civil engineering projects. Crafted from A36 steel or 304/316 stainless steel, this door is built to withstand heavy usage, making it an ideal choice for high-traffic access points. It adheres to class-approved design standards, making it the preferred option for the US Navy.

#### CONSTRUCTION

- ABS grade 11 gauge A36 steel, 304 stainless or 316L stainless welded exterior door panel design with 16 gauge removable inner panel
- Foil-Faced Foam is a rigid polyisocyanurate foam that provides exceptional heat, sound and moisture resistance
- Internal welded stiffeners added strength
- Glass filled striker wedges with isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Neoprene black 35 durometer gasket, weathertight compression sealing
- Weld-in, clamp-in or bolt-in frame options with fixed and or adjustable compression gasket carriers
- Radius or mitered corners available

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- 3/8" Clear DiamondTemp glass
- TrioVing lockset
- Neoprene 35 durometer
- Heavy duty 4.5" x 4.5" butt hinges
- Aluminum or forge steel individual dogs
- Primed or buffed finish

- AO, A15, A30 & A60 Fire Rated • MED Certified / DNV GL
- EMI Specialized or high heat
- Keyless Entry or GSA approved lock
- EMI gasket or high heat
- Single lever quick-acting dogs

UDGRADED FEATURES

- Welded blade hinges
- Heat trace artic climate vessels
- Door closer or hold opens
- Painted Awlcraft 2000
- DiamondLam or specialized glazing

### HEAVY DUTY STEEL WEATHERTIGHT

1223 SERIES











**1523 SERIES** 



### HEAVY DUTY STEEL 1213 SERIES

The 1213 Series Door is not just built, but meticulously crafted. It features a class-approved design construction, ensuring it meets the highest standards of quality and safety. The door is break-formed and boasts full seam welded construction, carried out by certified welders. This attention to detail results in a robust and durable structure that stands up to the test of time.

#### CONSTRUCTION

- ABS grade 11gauge A36 steel, 304 stainless or 316L stainless welded door panel design
- Foil-Faced Foam Sheathing Board, which is a rigid polyisocyanurate foam sheathing that provides exceptional heat, sound and moisture resistance
- Internal welded stiffeners added strength
- Glass filled striker wedges with isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Neoprene black 35 durometer gasket, weathertight compression sealing
- Radius or mitered corners available
- Weld-in, clamp-in or bolt-in frame options with fixed and or adjustable compression gasket carriers



# STANDARD FEATURES

- 3/8" Clear DiamondTemp glass
- Foil-faced foam board
- TrioVing lockset
- Neoprene 35 durometer
- Black nylon individual dogs
- Primed red oxide (Steel) or buffed finish (S/S)

- DiamondLam or specialized glazing
- Ballistic or mineral wool insulation
- Keyless Entry or GSA approved lock
- EMI gasketing or high heat
- Single lever quick-acting dogs
- Welded blade hinges

**RADED FEATURES** 

- Heat trace Artic climate vessels
- Door closer or hold open
  - Painted Awlcraft 2000

### PREMIUM DUTY ALUMINUM 1420 SERIES

The 1420 Series is a single leaf, heavy duty, quick-acting door that is designed for high traffic access installations. It features a patented chain-drive mechanism that allows for easy and fast opening and closing of the door with a single handle. The door panel is made of thick aluminum with welded frame and skin construction, ensuring durability and weather tightness. The door can also accommodate full length, centrally located windows or special glazing, as well as unique shapes, camber, knuckles and sloping surfaces. For over three decades, the Freeman Marine 1420 Series door has been the trusted choice of the USCG for their rollover response boats, providing reliable protection and safety for our borders and lives. The Freeman Marine Model 1420 is suitable for pilothouse, galley, engine room, salon, main deck and staterooms applications.

#### CONSTRUCTION

- Marine graded .160" or .250" marine grade aluminum skins welded panel design with interior bonde d or removable inner door skin
- Foil-Faced Foam Sheathing Board, which is a rigid polyisocyanurate foam sheathing that provides exceptional heat, sound and moisture resistance
- Internal welded stiffeners added strength
- Glass filled striker wedges with isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Neoprene black 35 durometer gasket, weathertight compression sealing
- Radius or mitered corners available
- Weld-in, clamp-in or bolt-in frame options with fixed and or adjustable compression gasket carriers
  - 3/8" Clear DiamondTemp glass
  - TrioVing lockset

STANDARD FEATURES

- 4.5" x 4.5" 316L butt hinges
- Quick-acting roller dogs
- Buffed aluminum finish
  - Buffed aluminum finish



- DiamondLam, specialized or ballistic glass
- Keyless entry or GSA approved lock
- EMI gasketing
- Welded blade or concealed hinges
- Heat trace artic climate vessels
- Vented louver

**DGRADED FEATURES** 

- Door closer or hold opens
- Painted Awlcraft 2000



COAST GUAR

### SLIDING WEATHERTIGHT STANDARD DUTY

#### 1710 & 1716 SERIES

FREEMAN MARINE'S Single-Axis sliding doors offer traditional felted strip weather tight sealing. Sliding doors can be specified in virtually any size required and a variety of configurations; single panel, bi-parting, and multi-panel styles. Custom sized windows designed to complement adjacent vessel windows can be ordered. Passive solid panels as well as sidelights are also available. FREEMAN Sliding doors are finished in yacht-quality linear polyurethane and offer attention to detail, durability, performance and style not found in lighter duty, ordinary sliding doors.

#### CONSTRUCTION

• Marine grade aluminum construction panel construction offers customizable window sizing or full glass design

**UDGRADED FEATURES** 

Automatic operation system

DiamondFrit full glass window

Counterpull bi-parting door

**Keyless entry** 

Awlcraft 2000 finish

- Aluminum welded frame construction with double felt strip weather seal and deep drainage gutters design
- Noise isolating urethane roller

Manually operated

TrioVing lockset

Flat panel or knuckle shape design available

Manual 316L drop-bolt hold-open

DiamondTemp 3/8" thick glass

Aluminum buffed finish



### SLIDING WEATHERTIGHT STANDARD DUTY







#### FMDS AUTOMATIC DOOR SYSTEM

#### STANDARD COMPONENTS

- Vandal proof Piezo, lighted bezel.
- 115VAC or 230VAC
- Plug and Play Cabling
- 4 position mode switch
  - Off
  - AUTO (2 Way)/ Normal
  - Exit (1-way)
  - Hold Open

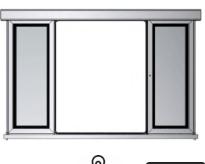
#### **OPTIONAL COMPONENTS**

#### Safety

- UPS Battery Back-up
- Photoelectric safety
   beams
- Edge Sensors

#### Activation

- Over Head Radar
- Touchless Hand Wave
- Security Keypad
- Inflatable Gasket









Sealed Piezo Buttons

Touch

Screen

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### PREMIUM DUTY SLIDING DUAL AXIS

#### 1720 & 1726 SERIES

FREEMAN MARINE'S Dual-Axis sliding door series with a patented camming mechanism and full perimeter elastomer gasket provide excellent performance when aggressive spray and splashed weather tight sealing is required. Sliding doors can be specified in virtually any size required and a variety of configurations; single panel or bi-parting configurations. Custom sized windows designed to complement adjacent vessel windows can be ordered. Passive solid panels as well as sidelights are also available.

#### CONSTRUCTION

- Marine graded .160" or .250" marine grade aluminum skins welded panel design with removable inner door skin
- Cam-actuated weathertight sealing
- Noise isolating urethane roller system
- Isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion

#### Manually operated single lever actuated mechanism creates a weather tight, full perimeter, positive gasket seal when the door is fully closed and "cammed-in"

 Camming also acts as a hold open feature to secure the door panel in a stationary position at any point along its track

- TrioVing statin finish locksets
- Black, neoprene 35 durometer gasket
- DiamondTemp 3/8"
- Aluminum buffed finish

# UDGRADED FEATURES

- Automatic operation system
- Keyless entry or GSA approved locks
- EMI gasketing
- DiamondLam or specialized glazing
- Awlcraft 2000 finish



### **PREMIUM DUTY SLIDING DUAL AXIS**









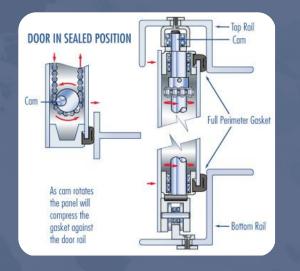




#### FREEMAN MARINE DUAL AXIS SLIDING DOOR

A patented design exclusively from Freeman Marine Single lever actuated mechanism creates a weather tight, full perimeter, positive gasket seal when the door is fully closed and "cammed-in." Ideal for both exterior and interior applications, camming ability also acts as a hold open feature to secure the door panel in a stationary position at any point along its track.

#### USA Patent #5,542,213



### SLIDING WEATHERTIGHT TOP HUNG SERIES

#### 1730 & 1736 SERIES

Freeman Marine's heavy duty top hung sliding boat doors offer inflatable gasket for superior weathertight sealing. Sliding doors can be specified in virtually any size required and in a variety of configurations in either single or multi panel flat panel or curved design. Custom sized windows designed to complement adjacent vessel windows can be ordered with passive solid panels as well as full glass sidelights.

#### CONSTRUCTION

- Marine grade aluminum construction panel construction offers customizable window sizing or full glass design
- Top hung roller system with "J" track anodized black finish for long-lasting durability

- Manual operation TrioVing satin finish lockset
- Manual hold-open
- Single durable felt seal with wiper
- DiamondFrit 1/2" thick glazing clear or grey tint
- Low profile hidden bottom track slide
- Aluminum buffed finish

- Automatic operation Whisper Drive "Plug & Play" Control System
- Overhead radar sensor or wave sensor
- Keyless entry or GSA approved lock
- Inflatable gasket with self-enclosed
   inflate/deflate pump
  - o Ship supplied air required
- ADA sill height or flush sill available
  DiamondLam or specialized glazing
- Awlcraft 2000 finish

**UDGRADED FEATURES** 



### SLIDING WEATHERTIGHT TOP HUNG SERIES











#### 1736 SERIES

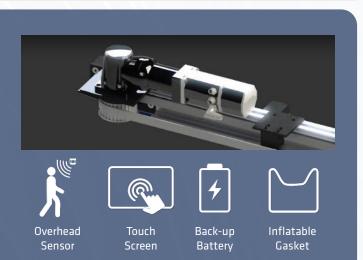
#### WHISPER DRIVE

Plug & Play marine grade automatic door control system: (4) Mode touch screen:

- Sea
- Port
- Full Open
- Housekeeping

1730 SERIES

- Exterior | Interior Led Piezo's
- Eye beam sensors
- Up to 500lbs per panel capacity
- Security pin lock
- Inflatable gasketing
- Back battery power-pack
- Adjustable speeds & hold-open time



### PREMIUM DUTY WATERTIGHT

#### 1140 & 1440 SERIES

Freeman Marine 1140 & 1440 Series Doors are heavy-duty, single aluminum panel, watertight door designed for commercial use on boats. It's solidly constructed, fully insulated, and high quality, making it suitable for commercial, military, and yacht crew or machinery space applications. Suitable for applications such as engine rooms, storage compartments, and other areas that require watertight access

#### CONSTRUCTION

- Rugged knife-edge seal, robust silicone gasket, and floating durable hinges to provide a commercial watertight seal when properly adjusted and dogged closed
- Marine grade aluminum panel skins from .160" up to .250", with extra internal reinforcements, welded construction
- Heavy-duty aluminum, steel or stainless steel door frame available

STANDARD FEATURES

- Aluminum buffed finish
- Aluminum blade hinges, floating
- Individual aluminum stainless steel roller dog.
  - Welded-in window 3/8" clear DiamondTemp
    - 6", 10" or 12" Round
    - Custom size available
- Black or white silicone gasket
- TrioVing lockset or rim lock

- Awlcraft 2000 finish
- Concealed hinge
- Aluminum Flush pocket dogs
- Central wheel operation
- DiamondLam or other specialized
  glazing
- Louvers or removable sill plate
- Door closure or hold-open
- EMI gasketing

**JDGRADED FEATURES** 

GSA approved cypher lock



### PREMIUM DUTY WATERTIGHT







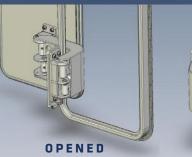




#### PANTOGRAPH HINGE

Freeman Marine Pantograph Hinge allows the door or hatch to open with minimal clearance and is ideal for transoms and narrow bulwarks.

- Aluminum painted hinge
- Available hinges
  - 14" Hinge [24" to 27"]
  - 17" Hinge [27" to 38"]
  - 23" Hinge [38" to 46"]
- Manual hold-open





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### HEAVY DUTY WATERTIGHT COMMERCIAL SERIES

#### 1212 & 1662 SERIES

The Freeman Marine Model 1212 & 1662 doors are class-approved, heavy-duty commercial watertight doors designed for marine as well as non-marine civil construction projects. It's designed to withstand high design pressures for internal "unseating" or external "seating", making it an excellent choice for marine and civil engineering projects. The door is solidly constructed, suitable for high traffic access installations, and built to last. Its robust construction and design ensure it meets rugged requirements. Applications such as engine rooms, storage compartments, and other areas that require large watertight access.

#### CONSTRUCTION

- Class accepted construction
- ABS grade A36 steel, marine grade aluminum, 304 stainless or 316L stainless welded door panel design
- Internal welded stiffeners added strength
- Isolation to dissimilar metals & Tef-Gel on all fasteners to ensure long-life without corrosion
- Neoprene black gasket, watertight "knife-edge" sealing
- Radius or mitered corners available

- Quick-acting bronze friction dogs
- Individual steel dogs
  - Stainless-steel lever handle with linkage operation
- Finish, sand-blasted with red oxide primer
- Black neoprene gasket

- Stainless steel roller dogs, high pressure
- Wheel and gear reduction operation
  - Create more torque when dogs exceeds (8+) dogs per design req.
- Awlcraft 2000 or industrial coatings
- Door closer or hold-opens
- Hasp & eye

**JDGRADED FEATURES** 

- Security locks or GSA approved lock
- EMI or high heat gasket

### **HEAVY DUTY WATERTIGHT COMMERCIAL SERIES**



NTERIOR VIEW



VIEW

INTERIOR









#### FIRE RATED

We offer a wide range of fire doors (A0, A15, A30 and A60), able to withstand flame test up to 60 minutes (depending on the type of door).

- AO, A15, A30 & A60 Fire Rated Doors
- MED Certified / DNV GL



### PREMIUM DUTY WATERTIGHT HATCHES

#### INDIVIDUAL DOG

Freeman Marine 3140 Series hatches are manufactured from marine grade aluminum, with an option for steel or stainless-steel coamings, flush or raised.

#### QUICK-ACTING

Freeman Marine 3440 Series hatches are manufactured from marine grade aluminum, with an option for steel or stainless-steel coamings, flush or raised.





### COMMERCIAL HEAVY DUTY WATERTIGHT HATCHES

#### FLUSH

Freeman Marine's Model 3211 is a flush hatch, that is class approved, manufactured in marine grade aluminum, A36 steel or 304/316 stainless-steel.

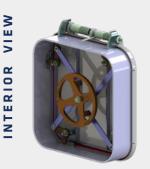
VIEW

NTERIOR

#### RAISED

Freeman Marine's Model 3212 is a raised hatch, that is class approved, manufactured in marine grade aluminum, A36 steel or 304/316 stainless-steel.





#### 3212 SERIES

**JDGRADED FEATURES** 

**EXTERIOR VIEW** 

- Quick-acting bronze friction dogs
- Individual steel dogs

3211 SERIES

- Stainless-steel lever handle with linkage operation
- Finish, sand-blasted with red oxide primer
- Black neoprene gasket

- Stainless steel roller dogs, high pressure
- Wheel and gear reduction operation.
  - Create more torque when dogs exceeds (8+) dogs per design req.
- Awlcraft 2000 or industrial coatings
- Door closer or hold-opens
- Hasp & eye
- Security locks or GSA approved lock
- EMI or high heat gasket

#### FREEMAN MARINE

### **CAST ALUMINUM CLOSURES**

Freeman Marine is a leading manufacturer of high-quality custom aluminum castings for various marine and civil engineering projects. Freeman Marine has an extensive aluminum foundry that can produce complex and precise castings in different sizes and shapes, using state-of-the-art equipment and techniques. Freeman Marine has a long history of supporting the maritime industry with its innovative and durable products, as well as the US Navy (LCAC/SSC) and the US Coast Guard (47'MLB/45' RB-m) with their various programs. Freeman Marine has also provided aluminum cast hatches for civil projects such as floating pontoon bridges, airports, and various survival compartment and water mitigation projects. Freeman Marine has the experience, the facilities, and the staff capabilities to make your project an on-time success. Whether you need standard or specialty aluminum casting, Freeman Marine can deliver the best solution for your needs

LCAC-65

#### CAPABILITIES

- Full in-house casting capabilities
  - Concept, 3D design & full FEA
  - In-house patterns
  - Aluminum foundry 535.2 or A356 ALMAG
  - Machine shop
  - ISO 9001:2015 Certified
- Lightweight, thin wall castings
- T6 Heat treatment
- Varying finish types
  - Powder coat black or white powder
  - Awlcraft 2000 wet-paint system
  - Hard-coat anodizing



#### VENTILATION HATCHES

- 2120-0002 10" x 10"
- 2121-0002 10" x 12"
- 2122-0002 12" x 12"





VIEW

INTERIOR

#### CONSOLE DOOR

- Model 6101-0002 11" x 23"
- Model 6101-0004 9" x 18"
- Model 6101-0005 18" x 28"



#### LENS HATCH

- Quick-acting watertight
- Clear opening 25.5" x 25.5"



#### **CIVIL ENGINEERING HATCHES**

- **Floating Bridge**
- Airport & Ports
- Sewer & Dams
- **Commerical Buildings**

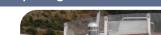




#### INTERIOR ACCESS HATCH

- Clear opening 24.3" x 24.3"
- Flush slam latch







#### FLUSH SHORE POWER HATCH

Watertight

Flush Weld-In

- Available sizes:
  - 9" x 15"
  - 11" x 20"



#### FREEMAN MARINE

### **COMPOSITE CLOSURES**

With carbon fiber and FRP materials, Freeman Marine offers marine doors and hatches that are watertight and weathertight. These composite products are much lighter than aluminum ones, weighing only about 33% as much. They are also much stronger pound for pound, with up to eight times the strength of aluminum. Moreover, they have excellent resistance to corrosion and can be customized in size, features and finish. Carbon fiber also has some other advantages over aluminum or steel, such as:

- Offers better heat conduction and thermal expansion properties, which means it can withstand temperature changes and dissipate heat more efficiently
- Higher rigidity and responsiveness, which improves handling and performance
- It can be repaired if it cracks, unlike metal which may need to be replaced.
- Allowing for more unique and aerodynamic shapes, which can enhance the aesthetics and efficiency of the products

Freeman Marine superior experience for over 40 years of building world class products is elevated with our Composite Closures.







#### DOORS

#### DOORS

- Standard TrioVing locket
- Upgraded GSA approved locks
- Bridge notifications sensors
- Standard DiamondFrit glazing
  - Upgraded Ballistic insulation & glass
- Individual or quick-acting dogging
- Fully isolated components
- Non-corrosive hardpoints

#### HATCHES

- Smooth flush painted surface
- Upgrade non-skid in mold
- Flush or concealed hinging
- Gutter drainage prepared

HATCHES

- Exterior recessed integrated handle
  - Removable "T" wrench
  - Flush bi-square
    - Optional bi-square keyed lock
- Fully isolated components
- Non-corrosive hardpoints

#### FREEMAN MARINE

## NAVSEA

#### PREMIUM MILITARY CLOSURES

Our products are engineered to meet the rigorous standards of the Naval Sea Systems Command (NAVSEA) for water and fire resistance, shock and vibration resistance, and long-term durability. Our products are also certified by the Navy for robotic welding, which ensures state-of-the-art quality and precision. Freeman Marine offers a wide range of NAVSEA products, such as hinged flush and raised hatches and individual or quick-acting dogged doors, in various sizes and finishes to suit any naval or coast guard application. Our products are made of premium materials, such as aluminum, steel, or stainless steel, and feature reliable hardware and seals. Freeman Marine's NAVSEA products are trusted by naval and coast guard customers around the world for their superior performance, safety, and reliability. Freeman Marine is proud to serve those who protect us by opening the future to security at sea. For the best NAVSEA products in the market, backed by the best service and warranty, call Freeman Marine.

ROBOTIC WELDER

# DOORS



D O G D E T A I L S Weathertight & watertight doors
Aluminum, steel & stainless-steel

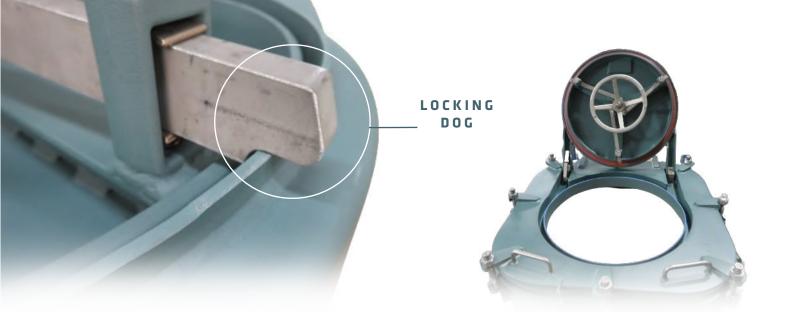
- Quick-acting & individual dogging
  Shock & fire rating qualifications
- Robotic certified welding
- ISO 9001:2015 Certified

**CAPABILITIES** 

HINGE DETAILS

 Quality control & testing – NAVSEA Mil Spec 248/1689





# SCUTTLES

	•	High-pressure watertight			
PABILITIES	•	Flush, ramped & raised coamings		•	Hold-opens
	•	Quick-acting & individual dogging		•	Adjustable dogs
	•	Shock & fire rating qualifications	U R	•	Knife-edge watertight sealing
	•	ISO 9001:2015 Certified	AT	•	Silicone high-heat gasketing
	•	Quality control & testing -	ш	•	Aluminum, steel & stainless-steel
A		NAVSEA Mil Spec 248/1689	LL.	•	Quick-acting & individual dogging
U					

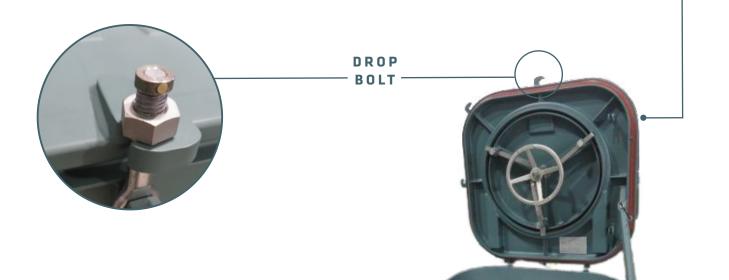




# HATCHES

<ul> <li>Watertight</li> <li>Aluminum, steel &amp; stainless-steel</li> <li>Flush &amp; raised coamings</li> <li>Integrated scuttle</li> <li>Quick-acting, drop-bolt &amp; individual dogging</li> <li>Shock &amp; fire rating qualifications</li> <li>ISO 9001:2015 Certified</li> <li>Quality control &amp; testing - NAVSEA Mil Spec 248/1689</li> </ul>	FEATURES	•	Hold-opens Adjustable dogs Knife-edge watertight sealing Silicone high-heat gasketing Aluminum, steel & stainless-steel Quick-acting, drop-bolt & individual dogging
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#### SILCONE HIGH TEMP GASKET



### ADVANTEC MARINE DEFINITIONS

#### **DOORS/HATCHES**

#### **OVERALL SIZE MEASUREMENT (OSM)**

Outside measurement of frame width & height.

**ROUGH OPENING** Opening in bulkhead, often referred to as "plate-cut"

#### SPIGOT

Section of frame that protrudes through rough opening.

#### **CLEAR OPENING**

Is the opening that you can physically pass through when the door/hatch is in full open position.

#### **INDIVDUAL DOG SET (S)**

Individually operated dogs (cleats) used to secure door/hatch for weathertight & watertight application. Variations of Interior & Exterior options available.

#### QUICK-ACTING DOG (S)

Lever or wheel used to operate multiple dogs with a single operation.

#### BLIND DOG (S)

Interior operated only, can be individually operated dog or quickacting.

#### **DOOR/HATCH FRAME**

Main frame installed into bulkhead that the door/hatch insert will be fitted to  $\varpi$  seal to.

#### **DOOR/HATCH INSERT**

Door/hatch panel mounted to the frame via hinges or can be supplied as lift-out.

#### **BOLT-IN**

Door/hatch main frame is installed and secured to bulkhead via mechanical fasteners.

#### WELD-IN

Door/hatch main frame is installed and secured to bulkhead via welding method.

#### CLAMP-IN

Door/hatch main frame is installed and secured to bulkhead via interior clamp ring.

#### **DOOR HANDING**

Hinge doors refer to direction of the door swing when viewed from outside looking at key cylinder side.

Insert swings outward, Left-hand (LH) hinge on left or right-hand (RH) hinge on right.

Sliding doors refer to direction of slide (again viewed from exterior), left-hand sliding (LHS), door slides left or right-hand sliding (RHS), door slides right.

#### LOCKSET

Lockset assembly includes - lever handles, lock case, keyed exterior cylinder, interior thumb-turn & supplied with roses or escutcheons plate.

Available in satin or chrome polished.

#### **DEADBOLT ONLY (NON-LATCHING)**

Includes – lock case, keyed exterior cylinder, interior thumb-turn & round roses or rectangular escutcheons plates.

Available finishes are satin or polished chrome.

#### PASSAGE SET

Includes – lever handles, passage lock case & round roses or rectangular escutcheons plates.

Available finishes are satin or polished chrome.

#### WEATHERTIGHT

Designed to withstand and prevent the ingress of water exterior. Typically used above the waterline.

#### WATERTIGHT

Will withstand water to a defined head pressure from exterior seating &/or both exterior seating & interior unseating pressures. Typically used below the waterline locations such as engine rooms, watertight boundaries & transoms.

#### ADVANTEC MARINE DEFINITIONS

#### FINISHES

#### **ANODIZED - TYPE I (STANDARD)**

Chromic Acid anodizing is a metal coating process used when the application calls for a thin coating and a high level of corrosion resistance. MIL-A-8625F type I

#### **ANODIZED - TYPE II (HARDCOAT)**

Proven electrochemical process that transforms a plain metal surface into an engaging exterior that provides both advanced corrosion-resistance and durability. MIL-A-8625 Type II

#### **MILL FINISH**

Mill finish is the as extruded appearance of aluminum, no external mechanical or chemical finishing to the surface of the metal.

#### **BUFFED FINISH**

Buffed with an orbital sander, no chemical finishing to the surface of the metal.

#### **POWDER-COAT**

Electrostatically charged coloured powder that is applied to the metal and then baked on to provided a protective hard wearing coating.

#### **PREMIUM YACHT COATINGS**

Wet paint system in a wide range of colours and brands.

#### GLASS

#### ANNEALED GLASS

Sheet/plate glass, often called "float glass" that has not been heat-strengthened or tempered.

#### **HEAT TREATED**

Like tempering, with a slower cooling process. Heat-strengthened glass is approximately twice as strong as annealed glass but breaks into shards.

#### TEMPERED

Heat treated safety glass, breaks into small 1/8" crumbles.

#### **CHEMICALLY TOUGHENED**

Chemically treated plate glass which is agitated to remove all imperfection in glass surfaces meeting or exceeding strengths of tempered glass.

#### LAMINATED

Two or more pieces of glass bonded together using an .030 or .060 inner layer of polyvinyl butyral (PVB) or ethylene-vinyl acetate (EVA).

Considered to be safety glass due to strength of bonded panel and the fact the panes remain stuck together even after damage. Insulation properties & sound attenuation properties are much greater than standard tempered glass and can reduce UV transmission along with adding tints.

#### HEATED

Tempered laminated glass with a built-in electrical element to create heat transfer across the glass to eliminate fogging or icing.

#### **INSULATED GLASS UNIT (IGU)**

2 or more panes of heat reflective glass separated by an air gap using a desiccant spacer to reduce heat and noise transfer.

#### **ARRIS GROUND (ROUGH ARRIS)**

Is achieved using a wet belt sander and removes the sharpness of the glass edges. Primarily applied to ensure the glass is safe to handle.

#### **FLAT GRIND**

CNC machine removes all sharp edges and leaving a diamond smooth unpolished edge with a satin, white appearance.

#### **FLAT POLISH**

After flat grinding an additional process is completed on our CNC machine.

All edges are polished producing a smooth, gloss finish similar to the glass surface, utilised on glass products where edges are exposed.

#### **VLT - VISIBLE LIGHT TRANSMISSION**

Used when discussing tint, VLT is the percentage of the light that passes through glass. The higher the number the more light is passing though and vise versa. Example: VLT 9% gray, will have a dark gray tint only allowing 9% visible light transmission.

#### ADVANTEC MARINE DEFINITIONS

#### WINDOWS

#### **CLAMP RING**

An internal ring that pinches exterior bulkhead and holds the window in place along with providing an interior beauty trim.

Options are Z-trim, Flat bar ring or L-trim

#### **BOLT-IN**

Window frame is installed and secured to bulkhead via mechanical fasteners.

#### **MITERED CORNER**

An angled corner formed by cutting and welding each leg of extrusion on a window.

#### **RADIUS CORNER**

A rounded corner formed when the window extrusion is bent in our bending machine.

#### MULLION

Used between panes of glass in a window to add strength. Used particularly in oversized windows.

#### OSM

Is the outside measurement of main frame.

#### SPIGOT

The projection of the frame that will fit into the hole or opening.

#### **CLEAR VIEW (OR SIGHT LINE)**

Viewing area when looking through window frame.

Or glass view is the glass area or area of the window. The area you will effectively be looking through.

#### X & O PANELS

Describes the configuration of sliding pane. The "X" pane is the active panel, "O" pane is the inactive/fixed pane. Also described as active or inactive panes.

#### **ALASKAN LEG**

Raised leg on lower frame edge to prevent ingress of water in harsh environments.

A damn built to the lower frame to prevent the ingress of water where a window will be used in particularly harsh environments.

#### **BOTTOM VENT**

A fixed/vent window with a hinged opening on bottom section.

#### **TOP VENT**

A fixed/vent window with a hinged opening on top section

#### **TOP HINGED**

Opening window with hinges across top where entire vent portion hinges open.

#### 1/2 DROP

A sliding window where the top half of the window is the active (X) panel and the bottom half is the inactive (O) panel. Opening from top to bottom.

#### **FULL DROP**

A sliding window where the entire pane slides vertically down to open.

#### **REAR SLIDING (RS)**

A sliding window where the rear/aft pane is the active (X) panel.

### SERVICE & SUPPORT SERVICE & SUPPORT AT ADVANTEC MARINE, WE SUPPORT WHAT WE SELL!

We're more than a manufacturer of innovative marine products. We offer a range of technical support services for our products post-purchase. See below for some of our service offerings.

#### **MAINTENANCE & REPAIRS:**

- Davits/Cranes
- Doors Automatic & Manual Doors
- Windows & Glass
- Hatches
- Onsite Diagnostics
- Machine Shop Services

#### **INSPECTIONS & CONSULTING:**

- OEM Inspections
- Installation Support & Oversight
- Weather & Watertight Testing
- Product Commissioning & Testing
- \*Extended Warranty Qualification
- 24/7 Remote Technical Support





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WARRANTY



Diamond Sea Glaze dSg

AdvanTec Manufacturing Canada 43676 Progress Way, Chilliwack, BC, V2R OC3, Canada

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Phone: 1.800.770.0455 Email: info@advantecglobal.com AdvanTec Manufacturing USA 28336 Hunter Creek Rd., Gold Beach, OR, 97444, USA