



DeltaRail & DeltaLadder

FRP Handrail & Ladder Systems



AIMS Composites is a world leader in offshore vortex induced vibration (VIV) suppression, engineered fiberglass structural systems, and platform dock fendering systems. Since 1982, AIMS has been the leader in supplying, engineering, and fabricating fiberglass grating and structural systems. AIMS supplies a full line of platforms, dock fenders, fiberglass signs, vortex breakers, VIV suppression products, blast panels, and mudmats. In addition, we are a leading supplier of fiberglass handrail and stair systems, as well as other specialty fiberglass products.

AIMS prides itself on its ability to take the customer project from the initial design and engineering phase to the implementation and installation of the finished product.

In an effort to continually improve services, AIMS actively seeks expansion opportunities within the United States and in overseas markets. In 1993, we purchased Teledyne Monarch Rubber's platform fender product line, moved the product tooling to Houston, and began manufacturing and marketing a platform fender product line, i.e., energy cells, rubstrips, and barge bumpers. In 2017, AIMS began fabricating aluminum structures and handrails.

To market our products and services around the world, AIMS forms partnerships with local companies in various countries, including Malaysia, Australia, Korea, Singapore, India, United Arab Emirates, Nigeria, Brazil, and Mexico. Everywhere there is offshore oil and gas, you will find AIMS International.



Manufacturing

AIMS fiberglass products are guaranteed and manufactured to ISO 9001:2008 standards in a world-class facility that meets the same high standard of excellence. Our products incorporate only the highest quality resins and glass, in addition to other proprietary manufacturing techniques.

DeltaRail Handrail and DeltaLadder Ladder Systems are manufactured to a sequence of quality assurance inspections ensuring complete sealing of all joints, full wet-out of the glass rovings, consistent resin-to-glass ratios, and consistent non-skid features. Complete traceability of resin batches and glass utilized in every panel is standard operating procedure.



AIMS fiberglass products are offered in a variety of specially formulated resins, meeting our customers' specific service environments.

Engineering & In-House Capabilities

AIMS' engineering and drafting capabilities are unsurpassed in the structural fiberglass industry. We have developed a 3-dimensional, structural finite-element analysis computer design program—Allowable Stress Design (ASD)—incorporating the industry-accepted fiberglass formulas. Our Structural Engineers can perform 3-D structural analyses of any fiberglass structure, steel or aluminum structure, or even a concrete structure. This structural design program performs stress and deflection calculations, plots of deflections, forces, stresses, reactions, etc., as well as resizing over-stressed members. AIMS is committed to producing the most optimum structural design for all of its engineered systems.

Our in-house team of engineers and designers possess exceptional knowledge of fiberglass products and are capable of providing qualified solutions to our customers for their unique requirements.

Market Applications

AIMS' products and services have been successfully used in various applications in many different industries. Wherever there is value placed on safety, eliminating maintenance expenditures, ease of installation, and long service life, AIMS should be consulted. The following are industries and locations where our products are found:

OFFSHORE DRILLING & PRODUCTION FACILITIES

wellhead access platforms around wells & vessels, stair towers, grating systems, electrical cable trays, mudmats

PETROCHEMICAL PLANTS & REFINERIES

walkways & platforms around vessels and equipment, stair towers, trench grating

INDUSTRIAL & MUNICIPAL WASTEWATER FACILITIES

walkways & catwalks in and around clarifiers, settling basins, and platforms used as storage areas

PULP & PAPER MILLS

walkways & catwalks in and around their waste water plants, including bleaching and washing areas

METAL PLATING & MINING FACILITIES

platforms in processing areas, catwalks, stair towers, and storage areas

COMMERCIAL WAREHOUSES

grating systems for additional storage areas and mezzanines

BEVERAGE & FOOD PROCESSING PLANTS

grating systems & platforms in and around wash-down areas, access platforms, and storage areas

HI-TECH COMPUTER INDUSTRY FACILITIES

grating systems in clean rooms and etching areas

WATER PARK & RECREATIONAL FACILITIES

trench grating in and around pools, structural systems for flowing streams

COOLING TOWER INDUSTRY

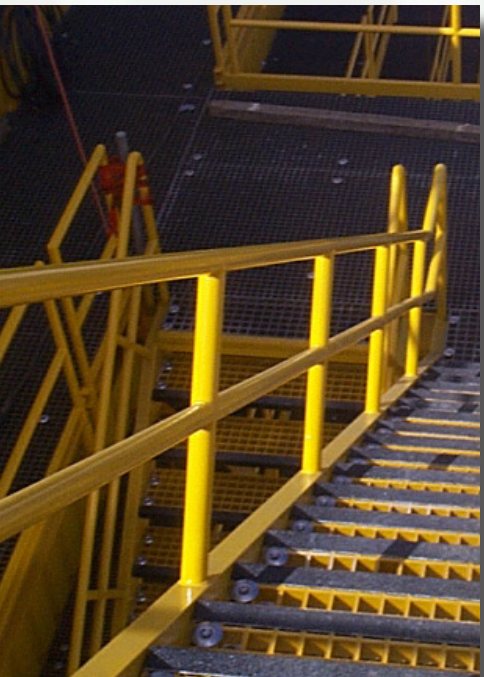
access walkways & towers, de-misters

FEDERAL & STATE PARKS

bridges & erosion control

Valuable features of AIMS' products for these and other industries include:

- Excellent corrosion resistance and elimination of maintenance
- Lightweight and ease of installation
- High strength-to-weight ratio
- Excellent non-skid characteristics, safety, and ergonomics
- Fire resistance
- Electrical and thermal non-conductivity
- Durability and long service life
- Great return on investment



DeltaRail & DeltaLadder FRP Handrail and Ladder Systems

AIMS corrosion resistant fiberglass products are found throughout the world in a variety of applications and industries where safety, low maintenance costs, easy installation, and long service life are essential.

The standard color for AIMS handrail and ladder systems is Safety Yellow, however, any system can be custom ordered to specific color requirements.

Corrosion Resistant

Unlike conventional metals, AIMS products eliminate the rusting and corrosion problems associated with traditional materials. A proven pultrusion process, which combines fiberglass and proprietary resins, creates a durable and safer structure that outlasts metal and offers a significantly lower life cycle cost. Additionally, special UV inhibitors included in the formulation provide extra protection from the effects of weathering.

Easy to Install, Easy to Maintain

There is no need for heavy equipment or expensive tools since AIMS handrail and ladder systems are less than half the weight of steel. Lighter weight means lower shipping costs and less manpower for installation. With no scraping, sandblasting, or painting required, they are virtually maintenance free.



Strong and Durable

Pound for pound, fiberglass is stronger than steel. In addition, when designed to certain load-response criteria, FRP material will weigh one-third to one-half of its steel counterpart. Our handrails and ladders get their strength from a high percentage of glass within the laminate, providing durability, high unidirectional strength, and stiffness.

Non-Conductive and Fire Retardant

AIMS handrails and ladders are electronically and thermally non-conductive, and are fire retardant for a safer work environment. Our products meet the self-extinguishing requirements of ASTM E-84, and have a Class 1 Flame Spread Rating of 25 or less. Because our systems are non-metallic, electromagnetic and radio wave frequencies are completely unaffected.

DeltaRail Handrail Systems

DeltaRail systems meet requirements from small platforms to complex structures with high-strength, maintenance-free handrails that are ideal for any location.

Wide Range of Applications

AIMS offers two types of handrail systems that meet a variety of needs—Standard Duty and Heavy Duty. For complex handrail solutions, AIMS has the capability to design, manufacture, and fabricate a custom system. For less complicated projects, we can provide kits for a more cost-effective installation.

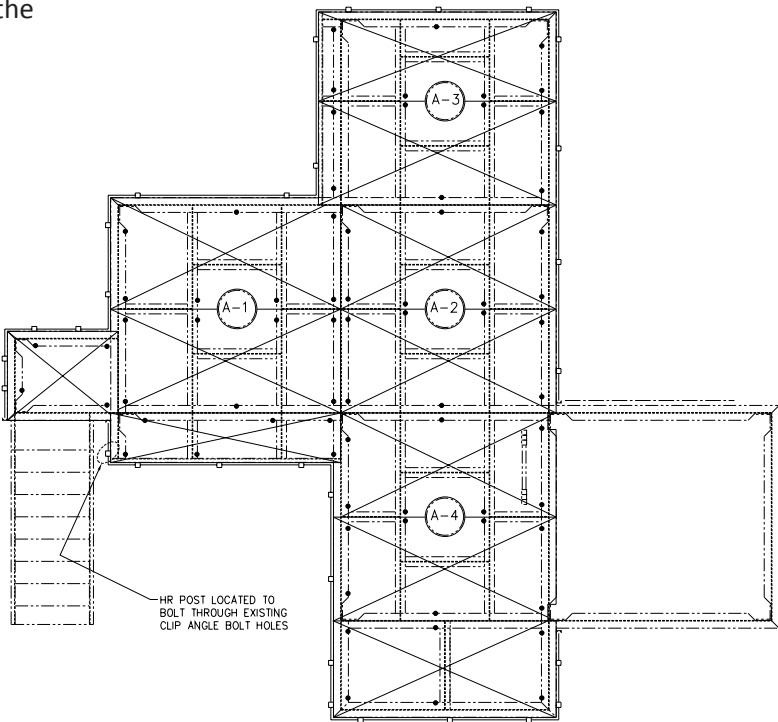
Modular Do-It-Yourself Kits

For projects that do not require design services, easy-to-assemble modular kits are available. These lower cost systems include everything needed for quality construction. Minimal assembly skills and common hand tools are all that are required for installation.

Code Compliant

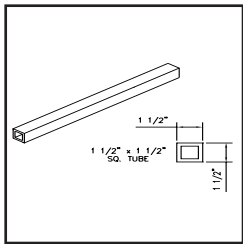
All DeltaRail Handrail Systems meet or exceed the following specifications and/or building codes:

- BOCA Basic Building Code, Section 1615.8
- National Building Code, Section 403-407
- OSHA, Section 1910.23
- Southern Building Code, Section 1207.2
- Uniform Building Code, Section 16

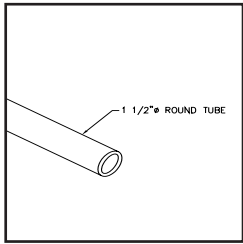


Typical Handrail Layout

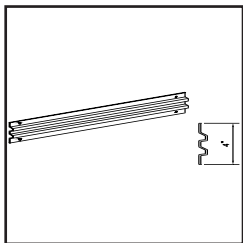
DeltaRail Modular Handrail Kit Components



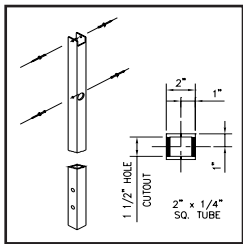
1. T-Rail
1-1/2" x 1/4" square tube – 20' stock (top rail)



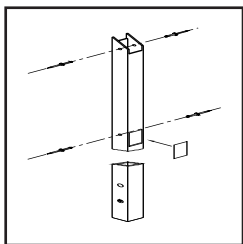
2. M-Rail
1-1/2" x 1/4" square tube – 20' stock (mid rail)



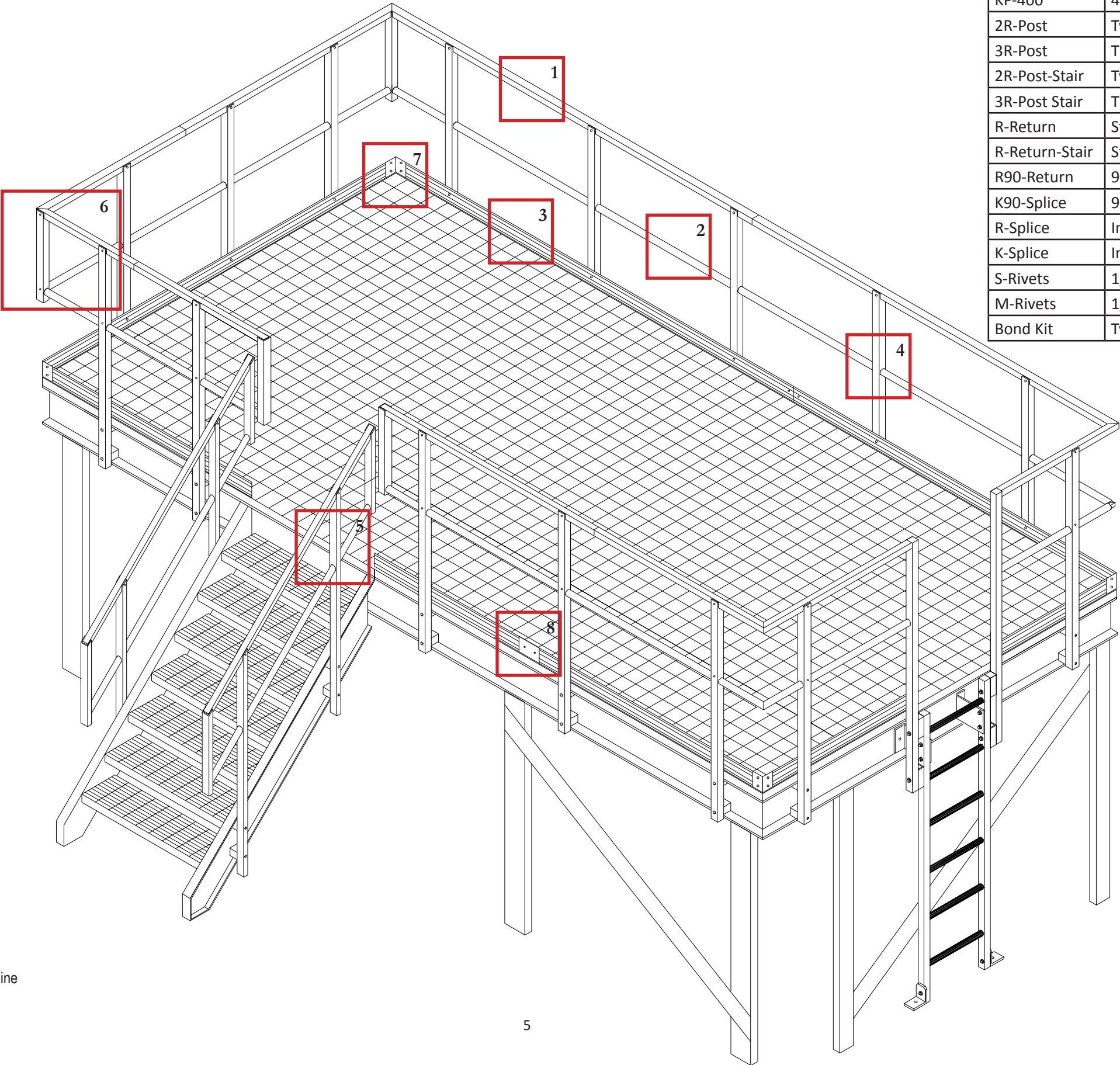
3. KP-400
4" kick plate – 20' stock



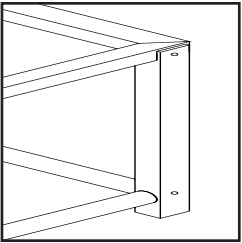
4. 2R-Post
Two-rail prefabricated 2" x 1/4" ST post



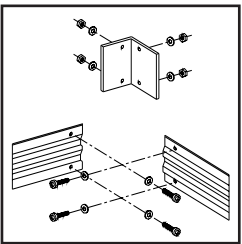
5. 2R-Post-Stair
Two-rail prefabricated 2" x 1/4" ST post – incline



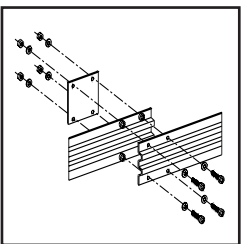
DeltaRail Modular Handrail Kit Components	
T-Rail	1-1/2" x 1/4" square tube - 20' stock (top rail)
M-Rail	1-1/2" x 1/4" round tube - 20' stock (mid rail)
KP-400	4" kick plate - 20' stock
2R-Post	Two-rail prefabricated 2" x 1/4" ST post
3R-Post	Three-rail prefabricated 2" x 1/4" ST post
2R-Post-Stair	Two-rail prefabricated 2" x 1/4" ST post - incline
3R-Post Stair	Three-rail prefabricated 2" x 1/4" ST post - incline
R-Return	Standard rail return
R-Return-Stair	Standard rail return - incline
R90-Return	90° corner return
K90-Splice	90° kick plate splice
R-Splice	Inline rail splice, top & mid rails - 1" solid rod x 8"
K-Splice	Inline kick plate splice
S-Rivets	1/8" stainless steel rivets
M-Rivets	1/8" monel rivets
Bond Kit	Two-part epoxy kit



6. R90-Return
90° corner return



7. K90-Splice
90° kick plate splice



8. K-Splice
Inline kick plate splice

DeltaRail Circular Handrail

Developed for tank and vessel manufacturers, the DeltaRail Circular Handrail is a prefabricated fiberglass system that arrives ready to be mounted. It eliminates traditional segmented circular systems and the field fabrication and installation problems associated with them.

Ladder Sizes

Standard sizes are available for 8', 10', 12', 14', and 16' lengths. The handrail is manufactured one foot shorter than the outside diameter of the tank; custom diameters are available. The DeltaRail Circular Handrail is designed to meet or exceed all the requirements of OSHA, Section 1910.23.



DeltaLadder Safety Ladder Systems

Designed for easy installation and fabrication, DeltaLadder meets or exceeds OSHA requirements with durable construction and corrosion-resistant materials.

Ready to Assemble

DeltaLadder Systems may be purchased in modular kits for fast, hassle-free installation. Ladders are available in standard heights ranging from 8' to 24' with splicing kits available for longer lengths. Optional safety cage kits are designed with pre-drilled hoops for easy attachment. Choose from standard fiberglass ladders for regular, close stand-off supports, or stiffened ladders for longer spans between supports.

Lightweight

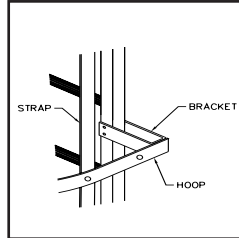
DeltaLadder Systems are one-third the weight of steel and require less maintenance and upkeep. These impressive features are the result of being manufactured with the optimal combination of fiberglass rovings and isophthalic polyester or vinylester resins, ensuring a long, corrosion-free life.

Unique Custom Designs

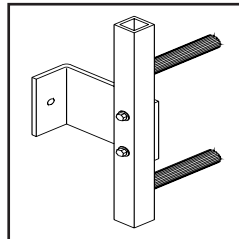
DeltaLadder Systems can be built to meet unique specifications. From platforms or special stand-off distances to self-supporting returns or double-sided dismounts, a DeltaLadder can be made to conformed to your specific requirements.



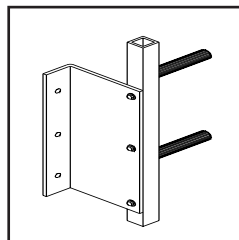
DeltaLadder Safety Ladder Components



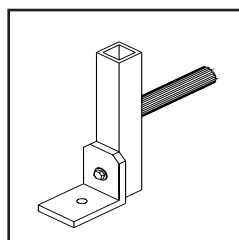
1. Safety Cage
OSHA compliant.
Safety cages made to order upon request



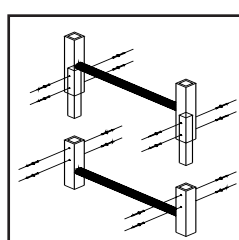
2. Wall Mount
3/8" thick, 2-3/16" x 8" x 6" angle bracket comes with 1/2" bolt assembly for attaching to ladder; hardware for attaching bracket to structure or concrete is provided by installer



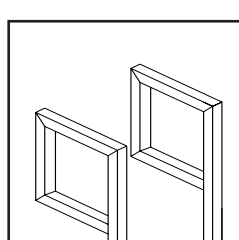
3. Ladder Bottom Mount
3/8" thick, 2-3/16" x 8" x 18" angle bracket; comes with 1/2" bolt assembly for attaching to ladder; hardware for attaching bracket to structure or concrete provided by installer



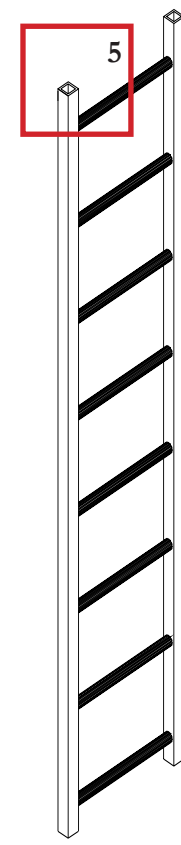
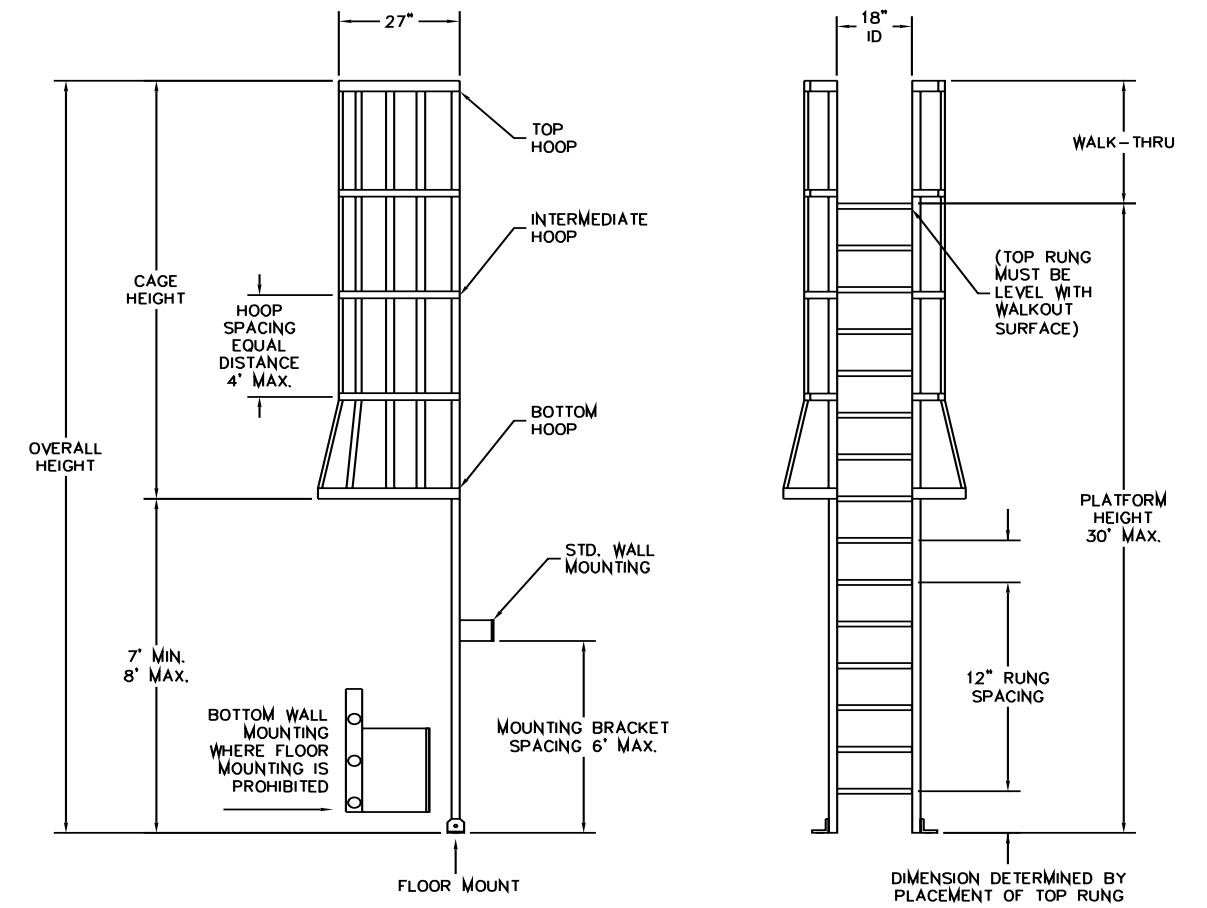
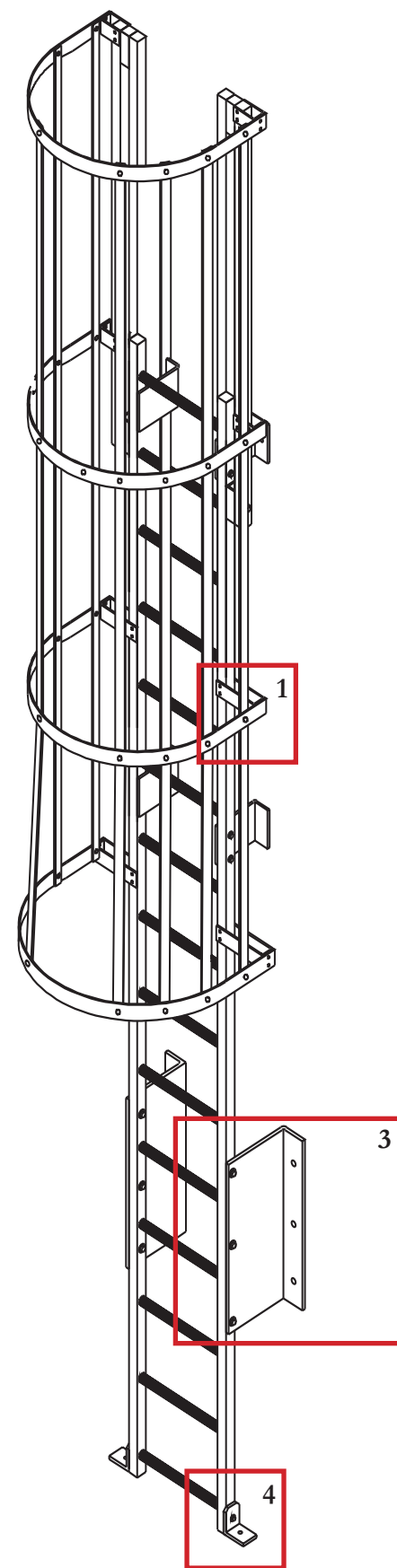
4. Floor Mount
3/8" thick, 2-3/4" x 4" x 4" angle bracket; comes with 1/2" bolt assembly for attaching to ladder; hardware for attaching bracket to structure or concrete is provided by installer



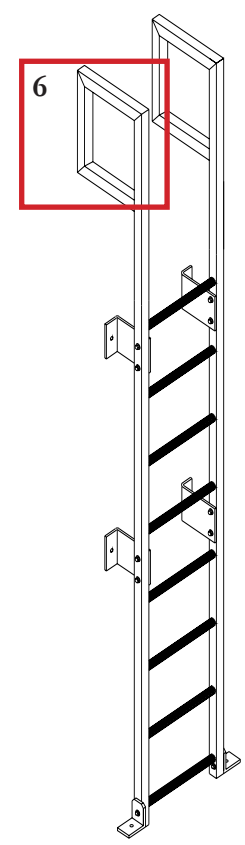
5. Splice
Used when ladder exceeds 20 feet



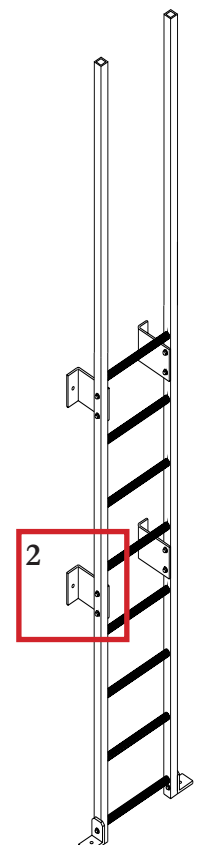
6. Ladder Returns
Variety of ladder returns can be fabricated in order to accommodate any field condition



Standard



Standard with Return



Standard with Walk-Thru

AIMS Composites

... dedicated to customer service and support

AIMS Composites

1617 Peach Leaf St.

Houston, TX 77039

Phone 281.590.3240 ▪ Toll Free 800.495.5997

aimssales@aimscomposites.com

www.aimscomposites.com