



# **Contents**

Company History	4
Capabilities Statement	5
Loadmaster® Rackmount Cases	7
Loadmaster® Shipping Cases	14
Loadmaster® Footlocker Cases	20
Custom FRP Shipping Containers	23
Custom FRP Rackmount Cases	26
VIP Containers	27
Fusion Third Rack System	31
Testing	33
Options	34

# **Company History**

ECS Case was founded in 1954 and has since evolved into an internationally respected designer and manufacturer of reusable containers and enclosures for equipment of all kinds. The company is an experienced custom molder of thermoplastic and thermoset composite parts and boasts possession of one of the nation's largest compression molding presses. Other techniques for molding thermoplastic materials and fabricating metal products add diversity to the core capabilities at ECS. The company's reputation for on-time delivery of high quality products is maintained by the efficient use of sophisticated manufacturing management system and by a dedicated team of employees. We are located in Grants Pass, Oregon. The company has maintained strict compliance with environmental quality regulations and is recognized for its service to community and country.



ECS Headquarters - Grants Pass, Oregon

# **Capabilities Statement**

#### **Small Business, HUB Zone Classifications & Codes**

ECS is classified as a small business through the United States Small Business Administration (SBA). The company is located in a Hub Zone certified substantial labor surplus area and has received Hub Zone certification from the SBA as well. The local work force is of high quality and is important to the success and growth of the company.

NAICS Code: 326199 DUNS #: 059497768 CAGE Code: 24995 SBA #: PO121064 Hub Zone Cert #: 4157

ITAR Certified

ISO 9000 Compliant

#### **Capabilities Overview**

#### **Products**

At ECS we feature four products lines: Thermostamp Composite (TSC), Fiberglass Reinforced Polyester (FRP), Rotomold (RTM), and Vacuum Infused Process (VIP). We offer a full line of factory direct shipping products as well as the most advanced custom packaging solutions available today. Commercial-off-the-shelf products include rackmount enclosures, medical cases, weapons solutions, shipping, storage, drawer, and footlocker cases available on demand. Transportable military rackmount cases were invented and patented by ECS in 1969, and we continue to set the bar for rackmount usability, compact design, and high performance.

Loadmaster® Rackmount Cases now stack with all previously fielded standard model rackmounts and all Loadmaster® Shipping Cases. Loadmaster® rotationally molded shipping cases are completely modular in all dimensions. Cases of different sizes securely stack and interlock together for maximum stacking efficiency. Loadmaster® cases are ideal for use on 463L military pallets. We manufacture all of our tooling, molds, and cushions for cases we build.

#### **Facilities and Location**

ECS is located in Grants Pass, Oregon. The Grants Pass facility is located on a 10 acre site and includes 100,000-SqFt of factory and office space. It serves as the ECS manufacturing, operations and corporate headquarters. It is served by major air and surface carriers

#### **Transportation**

Our headquarters are located along Interstate Highway 5 (I-5) in Southwestern Oregon. The interstate highway system provides many surface freight carriers for the shipment of ECS products throughout the United States and Canada. The area is also serviced by major airlines, UPS, and Federal Express offer services from an excellent airport in the Rogue Valley International Medford Airport, approximately twenty-five miles from our location. ECS regularly ships internationally via a well-developed network of carriers. Shipments to Asia, Europe, South America and the Middle East are commonplace and handled by experienced shipping personnel.

#### **Contract Management**

ECS maintains a full contract management department. The company utilizes a sophisticated cost accounting system to record and analyze every job-related expense, including labor by task, by lot, and by work station. This cost data is then rolled into learning curve altered labor estimates for quotation purposes. The ECS manufacturing management system utilizes IBM MAPICS software to provide detailed material cost data and the ability to fully document and support contract cost estimates. ECS regularly participates in fact finding, quotation analysis, and negotiations of contracts which are subject to the requirements of the US Federal Acquisition Regulations (FAR).

#### **Engineering & Testing**

The ECS engineering and design team offers sophisticated modeling using Solid Works, Finite Element Analysis and rapid prototyping for scalable models. ECS offers custom engineering services to meet customers' needs and required MIL specs. We also have an onsite testing lab for environmental, vibration, and drop testing.

#### **Past Performance**

ECS has participated in and supported numerous government programs, and has earned an unparalleled, extremely positive past performance record. ECS is the recipient of the highly prized Star Supplier Award from Lockheed Martin Corporation, the Exceptional Quality Award from AAI Textron, the Key Supplier Award from L3 Communications, and many others.

#### **International Scope**

All ECS products are shipped to a blue ribbon group of customers in the United States and around the world. Domestic USA sales are handled through direct ECS sales personnel, and sales representatives. ECS products are also sold internationally both through direct ECS personnel and a network of representatives located in the Americas, Europe, and Asia.

#### **ECS Advantage**

ECS invented and patented the 19", field portable, shock isolated rackmount case in 1969 and has provided the leading rackmount solutions ever since. The first portable rackmount cases were Fiberglass Reinforced Polyester (FRP) rackmount cases. Our innovation of rackmount cases continued when we introduced our compression molded Glass Mat material line of Thermo Stamped Composite (TSC) products. In 1985, ECS offered the original Legacy rackmount cases which remain unmatched in the industry and proudly offered in support of existing programs.

Beginning in 2006 we put state of the art improvements into our TSC rackmount cases and introduced the ECS Loadmaster® rackmount series. This rackmount case offers the best in class 21st Century design that is a marked improvement to the original Legacy rackmount case with added ergonomic enhancements, improved stacking features, molded-in features, and standardized options that allow for quick delivery. Our Loadmaster® rackmount cases stack compatibly with our standard Legacy Line. Our product is far superior in design, quality and performance to our competitors' rackmount cases. Some highlights of key features include:

- 1. ECS uses molded-in threaded inserts, which prevent potential leak paths. Elimination of rivets has stopped more than 80 potential leak paths.
- 2. ECS offers stainless steel, field replaceable hardware that can be installed with a screwdriver. Our competitors do not.
- 3. Loadmaster® patented stacking feature allows our product to be stacked with all Loadmaster® rackmount sizes, Loadmaster® transit cases and same depth Legacy rackmount cases.
- 4. Loadmaster® rackmount cases use molded-in, threaded inserts for field replaceable hardware with no use of POP-rivets. The use of POP-rivets creates significant areas of entrapment for Chemical, Biological and Radiological Warfare Agents.
- 5. Loadmaster® rugged design allows the end user to "Use and Abuse" ECS cases over and over, while still benefiting from unmatched performance and durability resulting in the best value and highest quality of any cases available anywhere.
- 6. Since ECS is the point of contact, case manufacturer, and have our own machine shop to custom manufacture all tooling, we control the quality of our cases from "Start to Ship" providing the consistency expected from any product purchased.

# Loadmaster® Rackmount Cases

# Proven In The Field

ECS invented portable rackmount cases in 1969 and has continued to set the bar for rackmount usability, compact design and innovation.

Loadmaster®
Rackmount Cases
provide unbeatable
durability for
valuable payloads.
Cases are
manufactured from
Thermo Stamped
Composite (TSC)
materials.

Loadmaster®
Rackmount Cases,
with standardized
options, are
available for
immediate delivery.

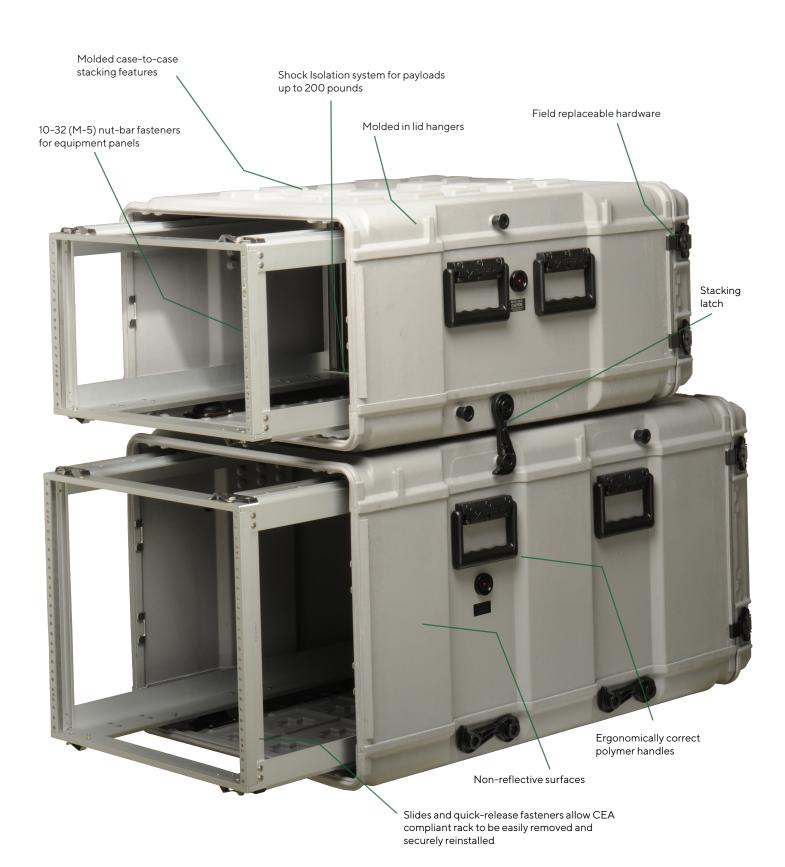


Loadmaster® Rackmount Cases are the toughest, lightest, most protective, portable military electronic enclosures anywhere. They are extremely durable in any environment. The slide-out rack can be unlatched and removed from the outer case when the rack is empty or when it is filled with electronic equipment. Slide-out 19-inch racks allow unlimited access to electronic equipment during installation, integration, and maintenance. Ruggedized ECS Rackmount Cases have been the choice of American warfighters for more than 40-years.

Rackmount cases are manufactured from ECS' incredibly strong TSC composite material. Using compression molding presses up to 1,200-tons in capacity, ECS manufactures these cases of the same composite materials used for car bumpers and military truck components. TSC case shells provide extraordinary impact resistance and rugged durability at temperatures which exceed a range of -53° C to +85° C.



The patented Loadmaster® stacking feature allows cases to securely interlock with all previous standard rackmount models, as well as any size Loadmaster® Shipping Case.



## Performance Tested accordance with MIL-STD-810G

#### **High and Low Temperature**

Proven performance in temperature extremes ranging from -53° C to +85° C.

#### **Drop Testing**

Able to withstand the rigors of deployment – drop tested from a height of 24 to 48 inches. Impacts conducted on all corners, flat surfaces and edges for a total of 26 drops.

#### **Basic Transportation Vibration**

Built to move, ECS cases show no damage when exposed to vibration environments for a duration of 30 minutes per mutually perpendicular axis.

#### **Loose Cargo Bounce**

Upright and with the covers in place, ECS cases show no damage and/or degradation when exposed to Loose Cargo Transportation environments for 30 minutes.

# Water Submersion / Wind Blown Rain

ECS cases show no evidence of water intrusion and/or damage as a result of exposure to 40 mph wind blown rain conditions.

#### Wind Blown Sand and Dust

ECS cases are desert ready and show no evidence of damage and/or sand or dust intrusion.

#### **Fungus Growth**

ECS case materials will not support fungus growth.

#### **Low Pressure**

ECS cases show no damage and/or degraded when exposed to low pressure environments.





Loadmaster® Rackmount Cases come with 3" or 5" lids



CEA-310-E compliant shock mounted interior racks are manufactured from all aluminum components and precision machined aluminum extrusions. Riveted aluminum vertical rails on these 19-inch racks provide multiple equipment mounting capabilities. Racks have equipment mounting holes in front and rear vertical members and interior vertical rails for attachment of slides and brackets. Two rackmount fastener types are available - Thread locking 10-32 (M-5) clip nuts or stainless steel nut bars with 10-32 (M-5) tapped holes.

ECS Rackmount Cases optimize sway space inside the smallest, lightest, toughest rackmount enclosures available anywhere. Enhanced sway space for the rack allows shock mounts to provide maximum shock and vibration protection for the equipment. The 19" all aluminum racks optimize volume utilization inside the case and to reduce total case weight. Rackmount cases provide maximum attenuation of impact energy and unequaled shock and vibration protection for enclosed equipment.

Rackmount case sizes are available from 3U-20U in rack height and front-to-back rack depths of 20″, 24″ and 30″. TSC covers are available in two different depths (3″ and 5″).





Rackmount Frame Depth



20" Frame Depth



24" Frame Depth



30" Frame Depth

# 7000 Series (Fixed Frame) Rackmount Case Sizes Weights are approximate depending on case options selected.

			3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	u o p o mum	g on case	options sele	Otou.		
ECS	Rack	Rack	Flange to	Outside	Outside	Front	Center	Rear	Overall	Case
Case	Height	Height	Flange	Case	Case	Cover	Body	Cover	Outside	Weight
Part	(Units)	Inside	Depth	Height	Width	Depth	Depth	Depth	Depth	(Lbs)
	(Onits)		-	_		-	-		_	(LDS)
No.		(Inch)	(Inch)	(Inch)	(Inch)	(Inch)	(Inch)	(Inch)	(Inch)	
7303	3	5.25	20.00	9.34	22.47	3.00	24.00	3.00	30.00	34.9
7304	4	7.00	20.00	11.09	22.47	3.00	24.00	3.00	30.00	37.0
7305	5	8.75	20.00	12.84	22.47	3.00	24.00	3.00	30.00	38.9
7306	6	10.50	20.00	14.59	22.47	3.00	24.00	3.00	30.00	42.3
7307	7	12.25	20.00	16.34	22.47	3.00	24.00	3.00	30.00	44.3
7308	8	14.00	20.00	18.09	22.47	3.00	24.00	3.00	30.00	46.7
7309	9	15.75	20.00	19.84	22.47	3.00	24.00	3.00	30.00	48.6
7310	10	17.50	20.00	21.59	22.47	3.00	24.00	3.00	30.00	50.5
7310	11	19.25	20.00	23.34	22.47	3.00	24.00	3.00	30.00	51.0
7311	12	21.00	20.00	25.09	22.47	3.00	24.00	3.00	30.00	52.9
7312	13	22.75	20.00	26.84	22.47	3.00	24.00	3.00	30.00	54.9
7313	14	24.50	20.00	28.59	22.47	3.00	24.00	3.00	30.00	56.8
7314	15	26.25	20.00	30.34	22.47	3.00	24.00	3.00	30.00	59.7
7316	16	28.00	20.00	32.09	22.47	3.00	24.00	3.00	30.00	61.6
7317	17	29.75	20.00	33.84	22.47	3.00	24.00	3.00	30.00	63.5
7318	18	31.50	20.00	35.59	22.47	3.00	24.00	3.00	30.00	65.4
7319	19	33.25	20.00	37.34	22.47	3.00	24.00	3.00	30.00	67.3
7320	20	35.00	20.00	39.09	22.47	3.00	24.00	3.00	30.00	69.2
ECS	Rack	Rack	Flange to	Outside	Outside	Front	Center	Rear	Overall	Case
ECS Case	Rack Height	Rack Height	Flange to Flange	Outside Case	Outside Case	Front Cover	Center Body	Rear Cover	Overall Outside	
Case	Height	Height	Flange	Case	Case	Cover	Body	Cover	Outside	Weight
Case Part		Height Inside	Flange Depth	Case Height	Case Width	Cover Depth	Body Depth	Cover Depth	Outside Depth	
Case	Height	Height	Flange	Case	Case	Cover	Body	Cover	Outside	Weight
Case Part No.	Height (Units)	Height Inside (Inch)	Flange Depth	Case Height	Case Width	Cover Depth	Body Depth (Inch)	Cover Depth	Outside Depth	Weight (Lbs)
Case Part No.	Height (Units)	Height Inside (Inch)	Flange Depth (Inch)	Case Height (Inch)	Case Width (Inch)	Cover Depth (Inch)	Body Depth (Inch) 28.50	Cover Depth (Inch)	Outside Depth (Inch)	Weight (Lbs)
Case Part No. 7503 7504	Height (Units) 3 4	Height Inside (Inch) 5.25 7.00	Flange Depth (Inch) 24.00 24.00	Case Height (Inch) 9.34 11.09	Case Width (Inch) 22.47 22.47	Cover Depth (Inch) 3.00 3.00	Body Depth (Inch) 28.50 28.50	Cover Depth (Inch) 3.00 3.00	Outside Depth (Inch) 34.50 34.50	Weight (Lbs)  38.6 40.7
Case Part No.  7503 7504 7505	Height (Units) 3 4 5	Height Inside (Inch) 5.25 7.00 8.75	Flange Depth (Inch)  24.00 24.00 24.00	Case Height (Inch) 9.34 11.09 12.84	Case Width (Inch) 22.47 22.47 22.47	Cover Depth (Inch) 3.00 3.00 3.00	Body Depth (Inch) 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00	Outside Depth (Inch) 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8
Case Part No.  7503 7504 7505 7506	Height (Units) 3 4 5 6	Height Inside (Inch) 5.25 7.00 8.75 10.50	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00	Case Height (Inch) 9.34 11.09 12.84 14.59	Case Width (Inch) 22.47 22.47 22.47 22.47	Cover Depth (Inch) 3.00 3.00 3.00 3.00	Body Depth (Inch) 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00	Outside Depth (Inch) 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3
Case Part No.  7503 7504 7505 7506 7507	Height (Units)  3 4 5 6 7	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch) 9.34 11.09 12.84 14.59 16.34	Case Width (Inch) 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00	Body Depth (Inch) 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4
Case Part No.  7503 7504 7505 7506 7507 7508	Height (Units)  3 4 5 6 7	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00	Case Height (Inch) 9.34 11.09 12.84 14.59 16.34 18.09	Case Width (Inch) 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00	Body Depth (Inch) 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9
Case Part No.  7503 7504 7505 7506 7507 7508 7509	Height (Units)  3 4 5 6 7 8 9	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch) 9.34 11.09 12.84 14.59 16.34 18.09 19.84	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch) 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9
Case Part No. 7503 7504 7505 7506 7507 7508 7509 7510	Height (Units)  3 4 5 6 7 8 9 10	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59	Case Width (Inch) 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch) 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511	Height (Units)  3 4 5 6 7 8 9 10 11	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch) 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512	Height (Units)  3 4 5 6 7 8 9 10 11 12	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch) 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513	Height (Units)  3 4 5 6 7 8 9 10 11 12 13	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514 7515	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14 15	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7 64.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514 7515 7516	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14 15 16	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch)  34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7 64.7 66.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514 7515 7516 7517	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00 29.75	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09 33.84	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7 64.7 66.7 68.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514 7515 7516 7517 7518	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00 29.75 31.50	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09 33.84 35.59	Case Width (Inch)  22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7 64.7 66.7 68.7 70.7
Case Part No.  7503 7504 7505 7506 7507 7508 7509 7510 7511 7512 7513 7514 7515 7516 7517	Height (Units)  3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Height Inside (Inch)  5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00 29.75	Flange Depth (Inch)  24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	Case Height (Inch)  9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09 33.84	Case Width (Inch)  22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Body Depth (Inch)  28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	Cover Depth (Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	Outside Depth (Inch) 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	Weight (Lbs)  38.6 40.7 42.8 46.3 48.4 50.9 52.9 54.9 55.6 57.6 59.7 61.7 64.7 66.7 68.7

ECS Case Part No.	Rack Height (Units)	Rack Height Inside (Inch)	Flange to Flange Depth (Inch)	Outside Case Height (Inch)	Outside Case Width (Inch)	Front Cover Depth (Inch)	Center Body Depth (Inch)	Rear Cover Depth (Inch)	Overall Outside Depth (Inch)	Case Weight (Lbs)
7903	3	5.25	30.00	9.34	22.47	3.00	34.00	3.00	40.00	42.8
7904	4	7.00	30.00	11.09	22.47	3.00	34.00	3.00	40.00	45.1
7905	5	8.75	30.00	12.84	22.47	3.00	34.00	3.00	40.00	47.3
7906	6	10.50	30.00	14.59	22.47	3.00	34.00	3.00	40.00	50.9
7907	7	12.25	30.00	16.34	22.47	3.00	34.00	3.00	40.00	53.2
7908	8	14.00	30.00	18.09	22.47	3.00	34.00	3.00	40.00	55.9
7909	9	15.75	30.00	19.84	22.47	3.00	34.00	3.00	40.00	58.0
7910	10	17.50	30.00	21.59	22.47	3.00	34.00	3.00	40.00	60.2
7911	11	19.25	30.00	23.34	22.47	3.00	34.00	3.00	40.00	61.0
7912	12	21.00	30.00	25.09	22.47	3.00	34.00	3.00	40.00	63.2
7913	13	22.75	30.00	26.84	22.47	3.00	34.00	3.00	40.00	65.4
7914	14	24.50	30.00	28.59	22.47	3.00	34.00	3.00	40.00	67.6
7915	15	26.25	30.00	30.34	22.47	3.00	34.00	3.00	40.00	70.8
7916	16	28.00	30.00	32.09	22.47	3.00	34.00	3.00	40.00	73.0
7917	17	29.75	30.00	33.84	22.47	3.00	34.00	3.00	40.00	75.1
7918	18	31.50	30.00	35.59	22.47	3.00	34.00	3.00	40.00	77.3
7919	19	33.25	30.00	37.34	22.47	3.00	34.00	3.00	40.00	79.4
7920	20	35.00	30.00	39.09	22.47	3.00	34.00	3.00	40.00	81.6

# 8000 Series (Slide-Out Frame) Rackmount Case Sizes Weights are approximate depending on case options selected.

			signite and ap	proximate	acpenani	9 011 0430	- p 11-011-0-0-0-0			
ECS Case Part No.	Rack Height (Units)	Rack Height Inside (Inch)	Flange to Flange Depth (Inch)	Outside Case Height (Inch)	Outside Case Width (Inch)	Front Cover Depth (Inch)	Center Body Depth (Inch)	Rear Cover Depth (Inch)	Overall Outside Depth (Inch)	Case Weight (Lbs)
8303	3	5.25	20.00	9.34	22.47	3.00	24.00	3.00	30.00	36.8
8304	4	7.00	20.00	11.09	22.47	3.00	24.00	3.00	30.00	38.9
8305	5	8.75	20.00	12.84	22.47	3.00	24.00	3.00	30.00	40.8
8306	6	10.50	20.00	14.59	22.47	3.00	24.00	3.00	30.00	44.2
8307	7	12.25	20.00	16.34	22.47	3.00	24.00	3.00	30.00	46.2
8308	8	14.00	20.00	18.09	22.47	3.00	24.00	3.00	30.00	48.6
8309	9	15.75	20.00	19.84	22.47	3.00	24.00	3.00	30.00	50.5
8310	10	17.50	20.00	21.59	22.47	3.00	24.00	3.00	30.00	52.4
8311	11	19.25	20.00	23.34	22.47	3.00	24.00	3.00	30.00	52.9
8312	12	21.00	20.00	25.09	22.47	3.00	24.00	3.00	30.00	54.8
8313	13	22.75	20.00	26.84	22.47	3.00	24.00	3.00	30.00	56.9
8314	14	24.50	20.00	28.59	22.47	3.00	24.00	3.00	30.00	58.7
8315	15	26.25	20.00	30.34	22.47	3.00	24.00	3.00	30.00	61.6
8316	16	28.00	20.00	32.09	22.47	3.00	24.00	3.00	30.00	63.5
8317	17	29.75	20.00	33.84	22.47	3.00	24.00	3.00	30.00	66.4
8318	18	31.50	20.00	35.59	22.47	3.00	24.00	3.00	30.00	67.3
8319	19	33.25	20.00	37.34	22.47	3.00	24.00	3.00	30.00	69.2
8320	20	35.00	20.00	39.09	22.47	3.00	24.00	3.00	30.00	71.1
0320	20	35.00	20.00	39.09		3.00	24.00	3.00	30.00	/

ECS Case Part No.	Rack Height (Units)	Rack Height Inside (Inch)	Flange to Flange Depth (Inch)	Outside Case Height (Inch)	Outside Case Width (Inch)	Front Cover Depth (Inch)	Center Body Depth (Inch)	Rear Cover Depth (Inch)	Overall Outside Depth (Inch)	Case Weight (Lbs)
8503 8504 8505 8506 8507 8508 8509 8510 8511 8512 8513 8514 8515 8516 8517 8518 8519	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00 29.75 31.50 33.25	24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00 24.00	9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09 33.84 35.59 37.34	22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50 28.50	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50 34.50	40.5 42.7 44.7 48.2 50.3 52.8 54.8 56.8 57.5 59.5 61.6 63.6 66.6 70.6 72.6 74.6
8520 ECS Case Part	20 Rack Height (Units)	35.00 Rack Height Inside	24.00 Flange to Flange Depth	39.09  Outside  Case  Height	22.47 Outside Case Width	3.00 Front Cover Depth	28.50 Center Body Depth	3.00 Rear Cover Depth	34.50 Overall Outside Depth	76.8  Case  Weight (Lbs)
8903 8904 8905 8906 8907 8908 8909 8910 8911 8912 8913 8914 8915 8916 8917 8918 8919 8920	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	(Inch) 5.25 7.00 8.75 10.50 12.25 14.00 15.75 17.50 19.25 21.00 22.75 24.50 26.25 28.00 29.75 31.50 33.25 35.00	30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	9.34 11.09 12.84 14.59 16.34 18.09 19.84 21.59 23.34 25.09 26.84 28.59 30.34 32.09 33.84 35.59 37.34 39.09	22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47 22.47	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00 34.00	(Inch)  3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.	40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00 40.00	46.3 48.6 50.8 54.5 56.7 59.4 61.6 63.7 64.6 66.7 69.0 71.1 74.4 76.6 78.7 80.8 83.0 85.2

# Loadmaster® Transit Cases



The patented Loadmaster® stacking feature allows cases to securely interlock with all previous standard rackmount models, as well as any size Loadmaster® Shipping Case.



Patented Loadmaster® Shipping Cases are completely modular in all dimensions. Shipping cases of different sizes securely stack and interlock in any grouping for maximum stacking efficiency. Case dimensions change length and width in 4.2-inch increments and height in 4-inch increments.

For the first time a truly user-friendly set of case sizes is available for military and commercial applications. Rugged, cutting edge and built of high quality materials for lasting performance. We manufacture all of our tooling, molds and cushions for cases we build.

# Cases Stack Up

Loadmaster® rotationally molded shipping cases are completely modular in all dimensions. Cases of different sizes securely stack and interlock in any grouping for maximum stacking efficiency. Loadmaster® cases are ideal for use on 463L military pallets. All cases have field replaceable hardware attached to molded-in inserts and are built with zero draft angle for maximum interior volume.



Cases of different sizes securely stack and interlock in any grouping for maximum stacking efficiency. Loadmaster® Cases are ideal for use on 463L military pallets and compatible with JMIC shipping containers.

Modular Molded-in Case-to-Case Stacking Features





# **Standard Colors**

Desert Tan Olive Drab





FS-23531 Gray

FS-34088



FS-26231 Earth



FS-30277

ECS Case also offers products in custom colors.

Contact ECS for details.

Standard Loadmaster® shipping cases are ideal on 463L military pallets and JMIC shipping containers.







Loadmaster® transit cases are ideal for military applications which require uncompromised protection from moisture, dust, sand and battlefield contaminants. Water tight cases provide protection from moisture, salt spray, sand, and dust throughout the world's extreme climates. Each case has a water-proof gasket and an automatic air pressure relief valve. Impervious to fuels, oils and solvents, they can also be decontaminated if exposed to chemical warfare agents.

Part Number	Series	Outside Dimensions Length x Width x Height	Inside Dimensions Length x Width x Height	Weight (Lbs)
320000	LM1717-12	16.6" x 16.6" x 12.0"	13.6" x 13.6" x 10.50"	16
321000	LM2117-12 LM2117-12	20.8" x 16.6" x 12.0"	17.8" x 13.6" x 10.50"	19
321100	LM2117-12 LM2117-16	20.8" x 16.6" x 16.0"	17.8" x 13.6" x 14.50"	21
321200	LM2117-10 LM2117-20	20.8" x 16.6" x 20.0"	17.8" x 13.6" x 18.50"	23
322000	LM2117-20 LM2121-12	20.8" x 20.8" x 12.0"	17.8" x 17.8" x 10.50"	21
323000	LM2517-12	25.0" x 16.6" x 12.0"	22.0" x 13.6" x 10.50"	25
323100	LM2517-16	25.0" x 16.6" x 16.0"	22.0" x 13.6" x 14.50"	27
323200	LM2517-20	25.0" x 16.6" x 20.0"	22.0" x 13.6" x 18.50"	29
324000	LM2521-12	25.0" x 20.8" x 12.0"	22.0" x 17.8" x 10.50"	24
324100	LM2521-16	25.0" x 20.8" x 16.0"	22.0" x 17.8" x 14.50"	27
324200	LM2521-20	25.0" x 20.8" x 20.0"	22.0" x 17.8" x 18.50"	29
324300	LM2521-24	25.0" x 20.8" x 24.0"	22.0" x 17.8" x 22.50"	32
325000	LM2525-12	25.0" x 25.0" x 12.0"	22.0" x 22.0" x 10.50"	27
325100	LM2525-16	25.0" x 25.0" x 16.0"	22.0" x 22.0" x 14.50"	30
325200	LM2525-20	25.0" x 25.0" x 20.0"	22.0" x 22.0" x 18.50"	33
327100	LM2921-16	29.2" x 20.8" x 16.0"	26.2" x 17.8" x 14.50"	30
327200	LM2921-20	29.2" x 20.8" x 20.0"	26.2" x 17.8" x 18.50"	34
328000	LM2925-12	29.2" x 25.0" x 12.0"	26.2" x 22.0" x 10.50"	31
328100	LM2925-16	29.2" x 25.0" x 16.0"	26.2" x 22.0" x 14.50"	34
328200	LM2925-20	29.2" x 25.0" x 20.0"	26.2" x 22.0" x 18.50"	37
328300	LM2925-24	29.2" x 25.0" x 24.0"	26.2" x 22.0" x 22.50"	40
328400	LM2925-28	29.2" x 25.0" x 28.0"	26.2" x 22.0" x 26.50"	43
329100	LM2929-16	29.2" x 29.2" x 16.0"	26.2" x 26.2" x 14.50"	38
329200	LM2929-20	29.2" x 29.2" x 20.0"	26.2" x 26.2" x 18.50"	42
329300	LM2929-24	29.2" x 29.2" x 24.0"	26.2" x 26.2" x 22.50"	45
331000	LM3321-12	33.4" x 20.8" x 12.0"	30.4" x 17.8" x 10.50"	30
331100	LM3321-16	33.4" x 20.8" x 16.0"	30.4" x 17.8" x 14.50"	34
331200	LM3321-20	33.4" x 20.8" x 20.0"	30.4" x 17.8" x 18.50"	37
331300	LM3321-24	33.4" x 20.8" x 24.0"	30.4" x 17.8" x 22.50"	40
331400	LM3321-28	33.4" x 20.8" x 28.0"	30.4" x 17.8" x 26.50"	43
332000	LM3325-12	33.4" x 25.0" x 12.0"	30.4" x 22.0" x 10.50"	34
332100	LM3325-16	33.4" x 25.0" x 16.0"	30.4" x 22.0" x 14.50"	38
332200	LM3325-20	33.4" x 25.0" x 20.0"	30.4" x 22.0" x 18.50"	40
332300	LM3325-24	33.4" x 25.0" x 24.0"	30.4" x 22.0" x 22.50"	45
332500	LM3325-28	33.4" x 25.0" x 32.0"	30.4" x 22.0" x 30.50"	54
333000	LM3329-12	33.4" x 29.2" x 12.0"	30.4" x 26.2" x 10.50"	39
333100	LM3329-16	33.4" x 29.2" x 16.0"	30.4" x 26.2" x 14.50"	42
333200	LM3329-20	33.4" x 29.2" x 20.0"	30.4" x 26.2" x 18.50"	46
333400	LM3329-28	33.4" x 29.2" x 28.0"	30.4" x 26.2" x 26.50"	56
333500	LM3329-32	33.4" x 29.2" x 32.0"	30.4" x 26.2" x 30.50"	59
334000	LM3333-12	33.4" x 33.4" x 12.0"	30.4" x 30.4" x 10.50"	43
334200	LM3333-20	33.4" x 33.4" x 20.0"	30.4" x 30.4" x 18.50"	50
334300	LM3333-24	33.4" x 33.4" x 24.0"	30.4" x 30.4" x 22.50"	57
334400	LM3333-28	33.4" x 33.4" x 28.0"	30.4" x 30.4" x 26.50"	61
336100	LM3821-16	37.6" x 20.8" x 16.0"	34.6" x 17.8" x 14.50"	37
336200	LM3821-20	37.6" x 20.8" x 20.0	34.6" x 17.8" x 18.50"	40
337100	LM3825-16	37.6" x 25.0" x 16.0"	34.6" x 22.0" x 14.50"	41
337200	LM3825-20	37.6" x 25.0" x 20.0"	34.6" x 22.0" x 18.50"	l 45 l

Part Number	Series	Outside Dimensions	Inside Dimensions	Weight
		Length x Width x Height	Length x Width x Height	(Lbs)
337300	LM3825-24	37.6" x 25.0" x 24.0"	34.6" x 22.0" x 22.50"	48
338200	LM3829-20	37.6" x 29.2" x 20.0"	34.6" x 26.2" x 18.50"	50
338300	LM3829-24	37.6" x 29.2" x 24.0"	34.6" x 26.2" x 22.50"	57
339100	LM3833-16	37.6" x 33.4" x 16.0"	34.6" x 30.4" x 14.50"	51
339200	LM3833-20	37.6" x 33.4" x 20.0"	34.6" x 30.4" x 18.50"	58
339300	LM3833-24	37.6" x 33.4" x 24.0"	34.6" x 30.4" x 22.50"	62
339400	LM3833-28	37.6" x 33.4" x 28.0"	34.6" x 30.4" x 26.50"	66
339500	LM3833-32	37.6" x 33.4" x 32.0"	34.6" x 30.4" x 30.75"	70
340000	LM3838-12	37.6" x 37.6" x 12.0"	34.6" x 34.6" x 10.50"	52
340200	LM3838-20	37.6" x 37.6" x 20.0"	34.6" x 34.6" x 18.50"	63
340300	LM3838-24	37.6" x 37.6" x 24.0"	34.6" x 34.6" x 22.50"	67
341000	LM4217-12	41.8" x 16.6" x 12.0"	38.8" x 13.6" x 10.50"	35
343200	LM4225-20	41.8" x 25.0" x 20.0"	38.8" x 22.0" x 18.50"	48
346200	LM4238-20	41.8" x 37.6" x 20.0"	38.8" x 34.6" x 18.50"	67
346300	LM4238-24	41.8" x 37.6" x 24.0"	38.8" x 34.6" x 22.50"	71
346400	LM4238-28	41.8" x 37.6" x 28.0"	38.8" x 34.6" x 26.50"	77
347000	LM4242-12	41.8" x 41.8" x 12.0"	38.8" x 38.8" x 10.50"	60
347500	LM4242-32	41.8" x 41.8" x 32.0"	38.8" x 38.8" x 30.50"	92
348000	LM4617-12	46.0" x 16.6" x 12.0"	43.0" x 13.6" x 10.50"	35
352100	LM4633-16	46.0" x 33.4" x 16.0"	43.0" x 30.4" x 14.50"	62
352400	LM4633-28	46.0" x 33.4" x 28.0"	43.0" x 30.4" x 26.50"	75
355200	LM4646-20	46.0" x 46.0" x 20.0"	43.0" x 43.0" x 18.50"	84
355300	LM4646-24	46.0" x 46.0" x 24.0"	43.0" x 43.0" x 22.50"	94
355400	LM4646-28	46.0" x 46.0" x 28.0"	43.0" x 43.0" x 26.50"	100
355500	LM4646-32	46.0" x 46.0" x 32.0"	43.0" x 43.0" x 30.50"	105
355600	LM4646-36	46.0" x 46.0" x 36.0"	43.0" x 43.0" x 34.50"	111
356000	LM5017-12	50.2" x 16.6" x 12.0"	47.2" x 13.6" x 10.50"	38
365000	LM5417-12	54.4" x 16.6" x 12.0"	51.4" x 13.6" x 10.50"	40
368000	LM5429-12	54.4" x 29.2" x 12.0"	51.4" x 26.2" x 10.50"	56
368100	LM5429-16	54.4" x 29.2" x 16.0"	51.4" x 26.2" x 14.50"	64
368300	LM5429-24	54.4" x 29.2" x 24.0"	51.4" x 26.2" x 22.50"	74
386000	LM6317-12	62.8" x 16.6" x 12.0"	59.8" x 13.6" x 10.50"	44
386100	LM6317-16	62.8" x 16.6" x 16.0"	59.8" x 13.6" x 14.50"	49
401000	LM6729-12	67.0" x 29.2" x 12.0"	64.0" x 26.2" x 10.50"	67
401100	LM6729-16	67.0" x 29.2" x 16.0"	64.0" x 26.2" x 14.50"	76
401400	LM6729-28	67.0" x 29.2" x 28.0"	64.0" x 26.2" x 26.50"	100
426000	LM7521-12	75.4" x 20.8" x 12.0"	72.4" x 17.8" x 10.50"	59
427200	LM7525-20	75.4" x 25.0" x 20.0"	72.4" x 22.0" x 18.50"	82
429400	LM7533-28	75.4" x 33.4" x 28.0"	72.4" x 30.4" x 26.50"	117
456000	LM8417-12	83.8" x 16.6" x 12.0"	80.8" x 13.6" x 10.50"	57
458100	LM8425-16	83.8" x 25.0" x 16.0"	80.8" x 22.0" x 14.50"	83

# **Loadmaster® Footlockers**



The Loadmaster® Footlocker is perfect for organizing and transporting gear. This rugged case is ideal for shipping, storing, and securing personal items.



# **Removable Storage Lids**

Each Loadmaster® Footlocker comes with a pair of removable storage trays. The trays lock in place when the lid is closed and offer superior protection for personal items.







Series	Outside Dimensions Length x Width x Height		Weight lbs			
Large Footlocke	r					
LMFL3321-12 LMFL3321-16 LMFL3321-20	33.4" x 20.8" x 12" 33.4" x 20.8" x 16" 33.4" x 20.8" x 20"	30.4" x 17.8" x 10.5" 30.4" x 17.8" x 14.5" 30.4" x 17.8" x 18.5"	36.6 39.6 42.7			
Medium Footloo	Medium Footlocker					
LMFL2214-12 LMFL2214-16 LMFL2214-20	25" x 16.6" x 12" 25" x 16.6" x 16" 25" x 16.6" x 20"	22" x 13.6" x 10.5" 22" x 13.6" x 14.5" 22" x 13.6" x 18.5"	25 27 30			

Loadmaster® Footlocker
cases are ideal for applications which
require uncompromising protection
from moisture, dust, sand and
contaminants. Watertight cases
provide protection from moisture,
salt spray, sand and dust throughout
the world's harshest extremes. Like
all Loadmaster® products, the
Footlocker is impervious to fuels, oils
and solvents.



# **Custom FRP Shipping Cases**

# Designs Without Limits

Custom Cases are available in unlimited sizes and configurations.

FRP, Fiberglass
Reinforced
Polyester, allows
total design
flexibility for
military and
industrial transit
cases and reusable
containers.

FRP composite cases are the most durable custom military transit cases and enclosures anywhere.

FRP containers have protected valuable military, industrial and commercial equipment from the world's most challenging conditions.



ECS uses a proprietary compression molding process to create cases with unparalleled structural rigidity. High-impact, lightweight, FRP composite components are epoxy bonded to heavy-duty aluminum extrusions. This fabrication method allows ECS to create cases in a huge range of sizes and configurations. The proprietary ECS process results in FRP composites which are 10 -15 % lighter than metallic products, have an unbeatable tensile strength and tensile modulus combination, and will not corrode or oxidize.

Since 1961, ECS has used FRP composites for shipping solutions ranging from portable test sets, to EMI-shielded workstations to one-of-a-kind oversized enclosures for special equipment. ECS-made FRP case shells have exceptional impact and puncture resistance. They are extremely durable to extreme temperatures which exceed a range of -53° C to 85° C. They are available with an endless combination of latches, external hardware and internal shock absorbing systems, engineered to protect the contents.



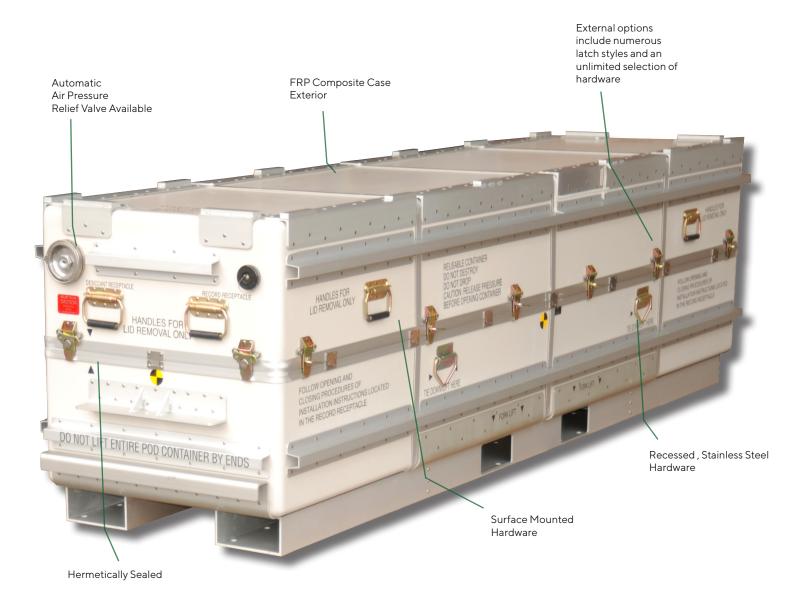
Watertight FRP composite cases provide protection from moisture, salt spray, sand, and dust throughout the world's extreme environments. Impervious to fuels, oils and solvents, they can also be decontaminated if exposed to chemical warfare agents.



## **Advantages of FRP Material**

- Better strength-to-weight ratios in heavy commercial and industrial applications.
   Cases are 10-15% lighter than metallic products.
- FRP has an unbeatable tensile strength and tensile modulus combination, making it the most ruggedized transit case material available.
- Exhibits unrivaled puncture resistance compared to non-composite materials.
- A textured internal surface gives FRP superior heat dissipation.
- Does not dent or permanently deform.
- · Does not corrode or oxidize.

# **ENDLESS CONFIGURATION OPTIONS**



# **Custom Rackmount Cases**

## Carbon Fiber Cases

ECS manufactures these lightweight cases by compression molding carbon fiber reinforcement materials with enhanced thermoset resins. Carbon Fiber Cases are ultra lightweight and demonstrate exceptional structural rigidity. Carbon Fiber Cases can be compression molded by us in a variety of wall thicknesses to meet unique performance/ weight requirements for military equipment. Additional layers of carbon fiber and/or optional ballistic reinforcement materials can provide enhanced performance characteristics for challenging applications.







## FRP RACKMOUNT SERIES

2000 Rigid Rack The smallest, non-shock isolated rackmount case. Optional latching drawer.

3000 Unlimited Rack Perfect for large payloads and is available in unlimited sizes. Optional 1U sliding equipment shelf and work surface.

**4000 Compact Rack** The smallest shock isolated envelope. Riveted aluminum rack with eight multi-axis shock mounts.

**5000 Standard Rack** For equipment with normal fragility. Riveted aluminum rack with eight diagonally attached shock mounts.

6000 High Fragility Rack Has increased sway space for equipment with high fragility. Riveted aluminum rack with eight diagonally attached shock mounts.



ECS Case invented the 19" (48.26 cm) rackmount case in 1969 and has provided the leading rackmount solutions since. The first rackmounts were FRP composite, and to this day FRP Rackmount Cases remain the ideal balance of rugged durability, sizing options and effective shock and vibration protection.

FRP Rackmount cases provide unparalleled design flexibility and generous sway space for shock and vibration attenuation. These versatile rackmount cases can be configured to enclose an wide range of equipment sizes, weights and special features.

- FRP Composite material
- · Hermetically sealed
- Recessed, stainless steel hardware
- · Two removable covers to allow electronic equipment to be accessed from front or back

#### **Options**

- EMI Shielding
- Case-to-case stacking rails
- · Custom shock systems
- · Fan assisted cooling
- Shelves
- Custom patterns
- · Deck mounting plate
- D-Ring lift
- Dust boots

# **VIP Solutions**

# Our Real VIP

Vacuum Infusion
Process (VIP) is the
newest
innovation from ECS.
VIP containers are
very large, uniquely
crafted systems
designed to provide
the ultimate
protection for
storing and shipping
oversized
equipment.

The process is a technique used to manufacture high performance, void free composites.

This new product line is especially suited for container systems that are 4'x4'x4' and larger for use in markets including UAV, aerospace, military, mining, and construction.



VIP products are very large and uniquely crafted closure systems designed to provide the ultimate protection supporting oversized equipment for storage and shipping. Our VIP containers are custom engineered vacuum assisted resin transfer molded composites designed with unparalleled attention to detail. The process is a technique used to manufacture high performance, void free composites and is especially suitable for large or complicated molds.

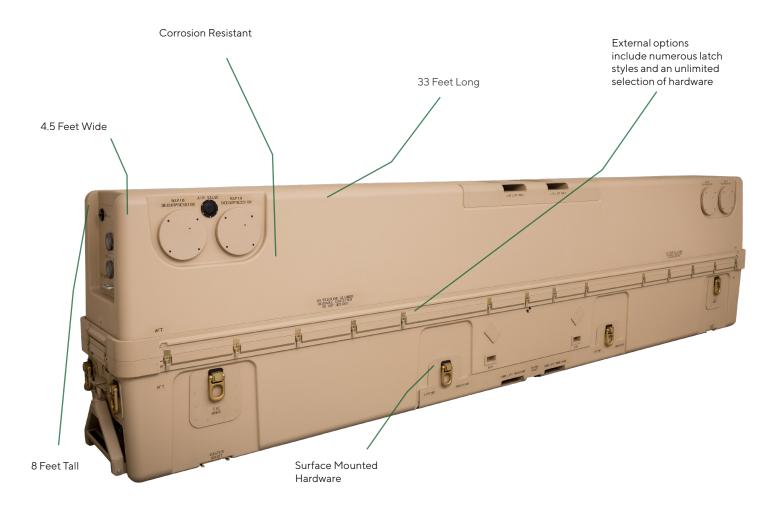


Like all ECS products, these container systems are uniquely designed to meet specific needs of customers and meet or exceed rigorous standards including military standards. With the addition of the VIP line, ECS has a new solution to design and build ruggedized packaging able to house and ship items including unmanned vehicles, weaponry, missiles, sensitive communications equipment, engines, propellers, and much more.

# VIP Standards and Specifications Data

- **Strong Laminate** vacuum removes air, excess resin and volatiles
- **Light** high glass ratio, reduced excess resin
- Thickness Control increased laminate compression during cure
- Void Free Vacuum process removes excess air in composite shells
- Thickness Wall thickness up to 1/2"
- Flexibility More flexible than aluminum
- **Reinforced** Reinforcement features can be molded into shells
- Custom Pigment Shells can be pigmented and silkscreened to customer specifications
- · Field repairable
- · Transportability/Dual point lifting
- Hermetically sealed
- · Corrosion, chemical, fuel and UV resistant
- · CONUS/OCONUS
- · MTMCTEA







All hardware is recessed for maximum protection. Latches, custom brackets, and rivets are stainless steel. Ergonomic acetal copolymer handles with UV inhibitor have comparable strength to steel at half the weight. An automatic air pressure relief valve protects the case and enclosed electronic equipment from rapid compression and decompression during transportation.

ECS VIP Cases are available in military colors, earth, desert tan, black, olive drab and gray. Options are available including everything imaginable...from casters, slides, drawers, and work surfaces, ventilation systems, and exterior plug receptacles.



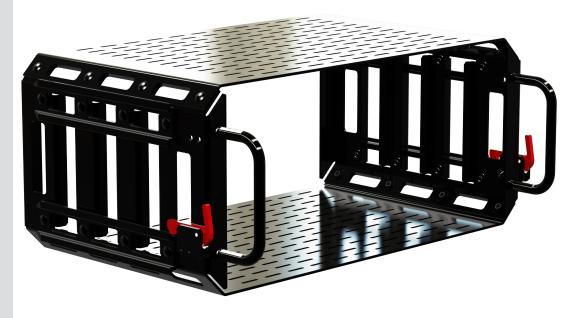
# Size, Weight, and Protection

With the drive toward small - form - factor, modular equipment coupled with the need for rugged protection during transportation, operation, and storage. ECS has developed packaging solutions to accommodate the need for size, weight and protection.

As equipment platforms are becoming smaller and lighter weight, ECS continues to set the standard.

The Fusion Third Rack offers the same rugged support as our 19" Rackmount inner frames, which ECS invented in 1969, and Half Rack inner frames. Yet, it is flexible in accommodating modular systems in just about any configuration or requirement.

# **Fusion Third Rack System**



ECS is proud to unveil its latest innovation: the Fusion Third Rack System. As modular equipment and embedded computing becomes smaller, coupled with the need for light weight protectiveness and ruggedness in transportation, operation and storage, the Fusion Rack is the answer. The Fusion Rack offers the same rugged support as our 19" Rackmount inner frames, and the Half Rack inner frames, yet are flexible in accommodating modular systems, in just about any configuration or requirement. The Fusion Rack is platform independent - whether it is mounted in our Loadmaster® Rackmount Cases, Carbon Fiber tote-able ATA cases, or supported in our Loadmaster® Transit Cases.



# Interchangeable With:



ATA Carbon Fiber Operating Case



ATA Carbon Fiber Transit Case



19" Loadmaster® Rackmount Case



Loadmaster® Single Lid Case

**EXTERNAL DIMENSIONS:** 7" H x 10.03" D x 16.69" W (without mounting flange to 19" Rackmount)

INTERNAL DIMENSIONS: 6.8" H x 9.20" D x 14.07" W

**WEIGHT:** ≈ 4.36 lbs.

#### **FEATURES**:

- ✓ Overall size to accommodate your modular equipment
- ✓ Mounting hole arrangements offering enabling mounting location flexibility
- ✓ Hexagonal cooling vents for thorough and efficient air flow without compromising strength.
- ✓ Spring loaded handles for easy transition from one platform or configuration to another
- ✓ Innovative Quick-release locking mechanism to easily disengage the Fusion Third Rack and your equipment from one platform or configuration, and robust enough to endure shock, vibe and drop scenarios
- ✓ Slides for easy alignment

The Fusion Third Rack System is a group of cases and accessories that accommodate a new slide-out rack and is designed to fit the latest package size for portable electronics. The package size of these new modules are roughly one-third the width of a standard 19" rack. The Fusion Third Rack is sized so that modules of this size are oriented on their side with the ~6.29" dimension being measured vertically.

The Fusion Third Rack is easily removed from one case and installed into another. The Fusion Third Rack is platform independent and interchangeable - whether it is mounted and protected in:

- Carbon Fiber ATA Transit Case
- Carbon Fiber ATA Operating Case
- Backpack
- 19" Loadmaster® Rackmount Case
- Loadmaster® Single Lid Case

# **Testing**



The testing of containers and enclosures is intended to simulate real-life conditions that will be faced during the effective life of the container and its enclosed equipment. Simulation necessitates that those real-life hazards are known, that they are capable of being repeated in a laboratory environment, and that the results of the testing are verifiable with the results of actual field trials conducted under real-life conditions. None of these prerequisites should be negotiable or compromised in order to allow the use of materials that are known to fail under real-life conditions. If the testing is not representative of real-life conditions, then those products that have been qualified to lesser test conditions are far more likely to fail during use.

The free fall drop test, left, measures the ability of the container to withstand impacts onto hard surfaces, such as concrete or steel, or onto compacted soil or plywood surfaces. Drop testing is the most common method of testing the durability and rough handling resistance of reusable containers. This testing method also provides great insight into the effectiveness of shock and vibration attenuation systems that may be part of the design of the container or enclosure.



Water tests for hermetically sealed containers are conducted by a variety of test methods, but the objective of all of these methods is to determine the ability of the container to resist the ingress of moisture. Hot water immersion testing is a quick and inexpensive method to determine the ability of the container to hold interior air pressure while the container is submerged. The presumption is that an air tight container will also be a water tight container. Pneumatic pressure testing also determines the ability of a container to hold interior air pressure while submerged. MIL-STD-810G Method 512.1 Procedure 1 testing requires that the container be submerged under 36 inches of water and that a vacuum differential of 2 inches of mercury be drawn on the container and retained for one hour to determine if water will penetrate the container.

# Performance Tested Accordance With MIL-STD-810G

### **High and Low Temperature**

Proven performance in temperature extremes ranging from -53° C to +85° C.

#### **Drop Testing**

Able to withstand the rigors of deployment – drop tested from a height of 61 to 121 centimeters. Impacts conducted on all corners, flat surfaces and edges for a total of 26 drops.

# Basic Transportation Vibration

Built to move, ECS cases show no damage when exposed to vibration environments for a duration of 30 minutes per mutually perpendicular axis.

#### **Loose Cargo Bounce**

Upright and with the covers in place, ECS cases show no damage and/or degradation when exposed to Loose Cargo Transportation environments for 30 minutes.

# Water Submersion / Wind Blown Rain

ECS cases show no evidence of water intrusion and/or damage as a result of exposure to 40 MPH wind blown rain conditions.

#### Wind Blown Sand and Dust

ECS cases are desert ready and show no evidence of damage and/or sand or dust intrusion.

## **Fungus Growth**

ECS case materials will not support fungus growth.

#### Low Pressure

ECS cases show no damage and/or degraded when exposed to low pressure environments.

# **Options**

## Loadmaster® Rackmount Case Options



Lid Pouch Accessory pouch for cables and other loose items for secure storage in rackmount lid.



**Edge Casters**Field replaceable edge casters attach to lids.



**Lid Handle**Ruggedized
ergonomic polymer
handle.



Center Grip
Sturdy Ergonomic
Center Grip Handle
Kit.



**Drawers**Medium duty
slide-mounted
rackmount drawers
in 2U or 4U sizes.



Rain Shield Keep rain and sun off your equipment.

## **Loadmaster® Single Lid & Footlocker Options**



**Lid Hinges**Lid hinges allow tops to stay with cases.



Edge Casters Heavy duty, 2" wheels provide easy transport.



Foam Liner Two-inch liner provides extra cushion.



**Locking Hasps**Secure cases with padlockable hasps.



Handles
All single lid cases
come with
Ergonomic handles.



Field
Replacable
Latches and
handles are field
replacable.

## **FRP Options**



**Casters**Are selected to match the weight of the loaded case.



**Hinges**Fabricated hinges for many different applications.



**Skid Rails**Provide a wear surface for the bottom of case.



Stacking Include aluminum stacking feet mounted on the top of the case.



**Cushions**Satisfy the shock and vibration requirements.

## **VIP Options**



**Casters** Heavy-duty to support weight.



**Lifting Rings** Heavy duty, 2" wheels provide easy transport.



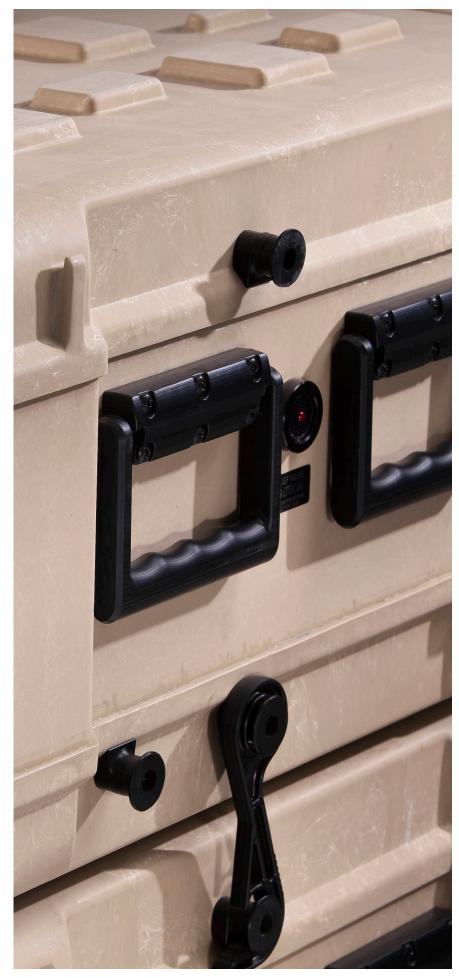
**Cushions**Satisfies the shock and vibration requirements.



Latches Latches and handles are field replacable.



**Branding**Company names or logos can be molded in.





**PROTECT** 

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