



## LOTS OF SPACE IN AMAZON

THE AMAZON RANGE OF  
ROTOMOLDED CASES  
AND 19 INCH RACKS  
FOR TOUGH TASKS



**AMAZON CASES**

## LOTS OF SPACE IN AMAZON

[WWW.CPCASES.COM](http://WWW.CPCASES.COM)

Amazon was created with one thing in mind: to give ultimate protection to your hi-tech equipment during transportation.

Using the latest polyethylene rotomolding technology, Amazon shields your equipment from sandstorms, saltwater, impact and extremes of temperature, keeping it secure during transit and ready for instant deployment.

Ideal for defense, marine, security, aerospace, oil and gas, satellite and telecommunication applications worldwide, Amazon Cases and Racks give all the advantages of rotomolding but without the normal wasteful thick wall cavity, restrictive narrow top opening and bulky deep lid. So Amazon gives you more space for any given case size.

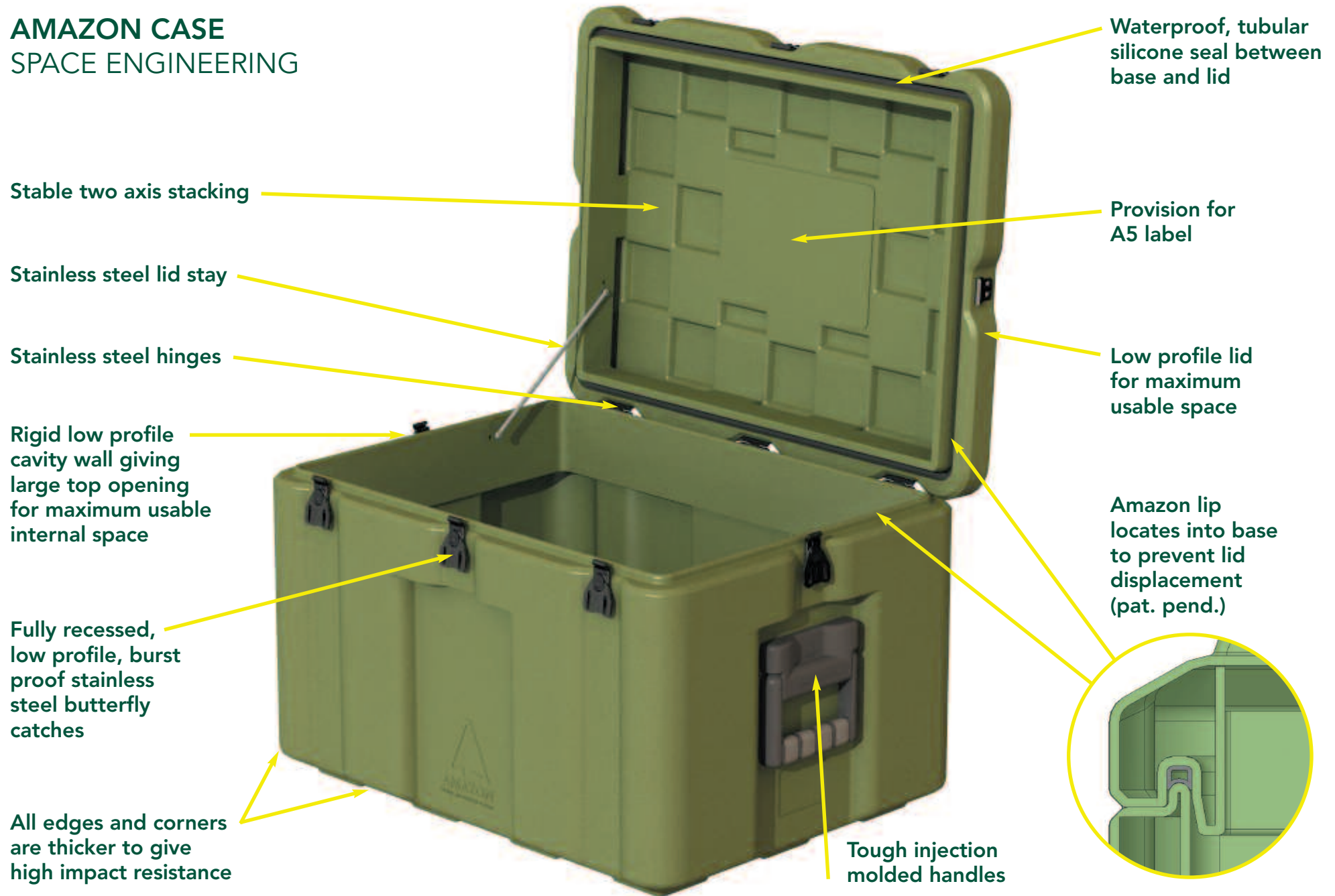
Inside an Amazon Rack there's more innovation. A lightweight stainless steel frame, suspended by eight elastomeric anti-vibration mounts, provides superior 'sway space' between the frame and the outer container. It's the best possible way to safeguard delicate equipment.



**AMAZON CASES**



## AMAZON CASE SPACE ENGINEERING






## AMAZON CASES

**All Amazon Cases are produced using a process called Rotomolding. It's ideal for making tough, waterproof products, using a high quality polymer that thickens at the edges and corners for extra strength and impact resistance. Amazon has brought rotomolded containers to a new level for the twenty first century by using decades of experience in case design and manufacturing. The result? A range of cases that are tougher and yet more spacious than any comparable product.**

### Amazon advantages:

- Maximum usable internal space versus external size.
- Rotomolded from high grade, virgin polyethylene for strength and impact absorption.
- Stable in temperatures from -40°F to +158°F.
- Corrosion proof and resistant to solvents and acids.
- Colors molded right through to retain appearance if scratched.
- Available in NATO green, admiralty grey, black and desert sand, with other colors available for orders of 25 or more. All colors are UV stabilized.
- NATO stock numbers available on request and from our website at [www.cpcases.com](http://www.cpcases.com)
- Strong, rigid, low profile lid for maximum space utilization.
- Molded-in Amazon lip that engages positively with body to eliminate lid displacement when subjected to sideways force (pat. pend.).
- All edges and corners are rounded and beveled for safe and comfortable carrying.
- Two axis location and engagement feature for positive stacking.
- A5 label indent positioned on lid.
- Two further small label indents provided on each side for contents identification.
- All fittings, including catches, hinges and lid stay are stainless steel, making Amazon Cases totally RoHS compliant.
- Heavy-duty plastic injection molded handles with soft grip thermo-plastic rubber overmold.
- Waterproof, tubular silicone lid seal stable in temperatures from -40°F to +158°F.
- Waterproof and impervious to sand and dust.
- Complies with MIL-STD-810F.
- Recyclable. 



A full list of options and accessories for Amazon Cases is shown towards the back of this brochure.

# CASE SIZES

Case numbering system indicates approximate external dimensions in inches e.g. AC3624-1604

Length 36 in  
Width 24 in  
Body height 16 in  
Lid height 4 in

Amazon Cases remain fully stackable with optional wheels fitted.



PART NUMBER US/Canada	IMPERIAL DIMENSIONS								METRIC DIMENSIONS								No of Handles No of Catches	
	External L (in)	W (in)	H (in)	Internal L (in)	W (in)	H (in)	Approx Volume (ft³)	Approx Weight (lb)	External L (mm)	W (mm)	H (mm)	Internal L (mm)	W (mm)	H (mm)	Approx Volume (m³)	Approx Weight (kg)		
AC4824-2004	48	24	24	45	21	23	16	47	1,219	610	610	1,143	533	572	0.45	21	4	9
AC4824-1604	48	24	20	45	21	19	13	42	1,219	610	508	1,143	533	470	0.37	19	4	9
AC3624-2804	36	24	32	33	21	31	15	46	914	610	813	838	533	775	0.42	21	4	8
AC3624-2004	36	24	24	33	21	23	12	48	914	610	610	838	533	572	0.34	22	4	8
AC3624-1604	36	24	20	33	21	19	10	36	914	610	508	838	533	470	0.28	16	4	8
AC3624-1204	36	24	16	33	21	15	8	39	914	610	406	838	533	368	0.23	18	4	8
AC3618-2004	36	18	24	33	15	23	9	34	914	457	610	838	381	572	0.25	15	2	6
AC3618-1604	36	18	20	33	15	19	8	32	914	457	508	838	381	470	0.23	15	2	6
AC3618-1204	36	18	16	33	15	15	6	30	914	457	406	838	381	368	0.17	14	2	6
AC3618-0804	36	18	12	33	15	11	5	26	914	457	305	838	381	267	0.14	12	2	6
AC3024-2103	30	24	24	27	21	23	10	35	762	610	610	686	533	572	0.28	16	4	7
AC3024-1703	30	24	20	27	21	19	8	31	762	610	508	686	533	470	0.23	14	4	7
AC3024-1303	30	24	16	27	21	15	7	30	762	610	406	686	533	368	0.20	14	4	7
AC3024-0903	30	24	12	27	21	11	5	27	762	610	305	686	533	267	0.14	12	4	7
AC3018-2103	30	18	24	27	15	23	8	31	762	457	610	686	381	572	0.23	14	2	5
AC3018-1703	30	18	20	27	15	19	6	34	762	457	508	686	381	470	0.17	15	2	5
AC3018-1303	30	18	16	27	15	15	5	29	762	457	406	686	381	368	0.14	13	2	5
AC2424-2103	24	24	24	21	21	23	8	30	610	610	610	533	533	572	0.23	14	4	7
AC2424-1703	24	24	20	21	21	19	7	28	610	610	508	533	533	470	0.20	13	4	7
AC2418-1703	24	18	20	21	15	19	5	25	610	457	508	533	381	470	0.14	11	2	5
AC2418-1303	24	18	16	21	15	15	4	23	610	457	406	533	381	368	0.11	10	2	5
AC2418-0903	24	18	12	21	15	11	3	20	610	457	305	533	381	267	0.08	9	2	5
AC2416-1703	24	16	20	21	13	19	5	24	610	406	508	533	330	470	0.14	11	2	5
AC2412-2103	24	12	24	21	9	23	4	20	610	305	610	533	229	572	0.11	9	2	5
AC2018-1303	20	18	16	17	15	15	4	20	508	457	406	432	381	368	0.11	9	2	4
AC1812-0903	18	12	12	15	9	11	2	13	457	305	305	381	229	267	0.04	6	2	2

Additional sizes are continually being developed – call or visit our website at [www.cpcases.com](http://www.cpcases.com) for our latest size list

# 19 INCH RACKS

## AMAZON 19 INCH RACKS ENGINEERED TO PROTECT

SHOWN WITH  
'EASY GLIDE'  
REMOVABLE RACK  
FRAME OPTION  
(PAT. PEND.)

The inner frame is  
'reversible' to offer either  
BS5954 / BS EN 60297 /  
DIN 41494 or alternatively  
fully punched rails for  
non standard equipment

Eight 'Bi-Angle' anti-vibration  
mounts (pat. pend.) focused  
towards centre of gravity  
of the rack frame, provide  
consistent shock protection  
in all orientations

All sizes of Amazon Racks can  
be stacked on each other with  
a common level front face

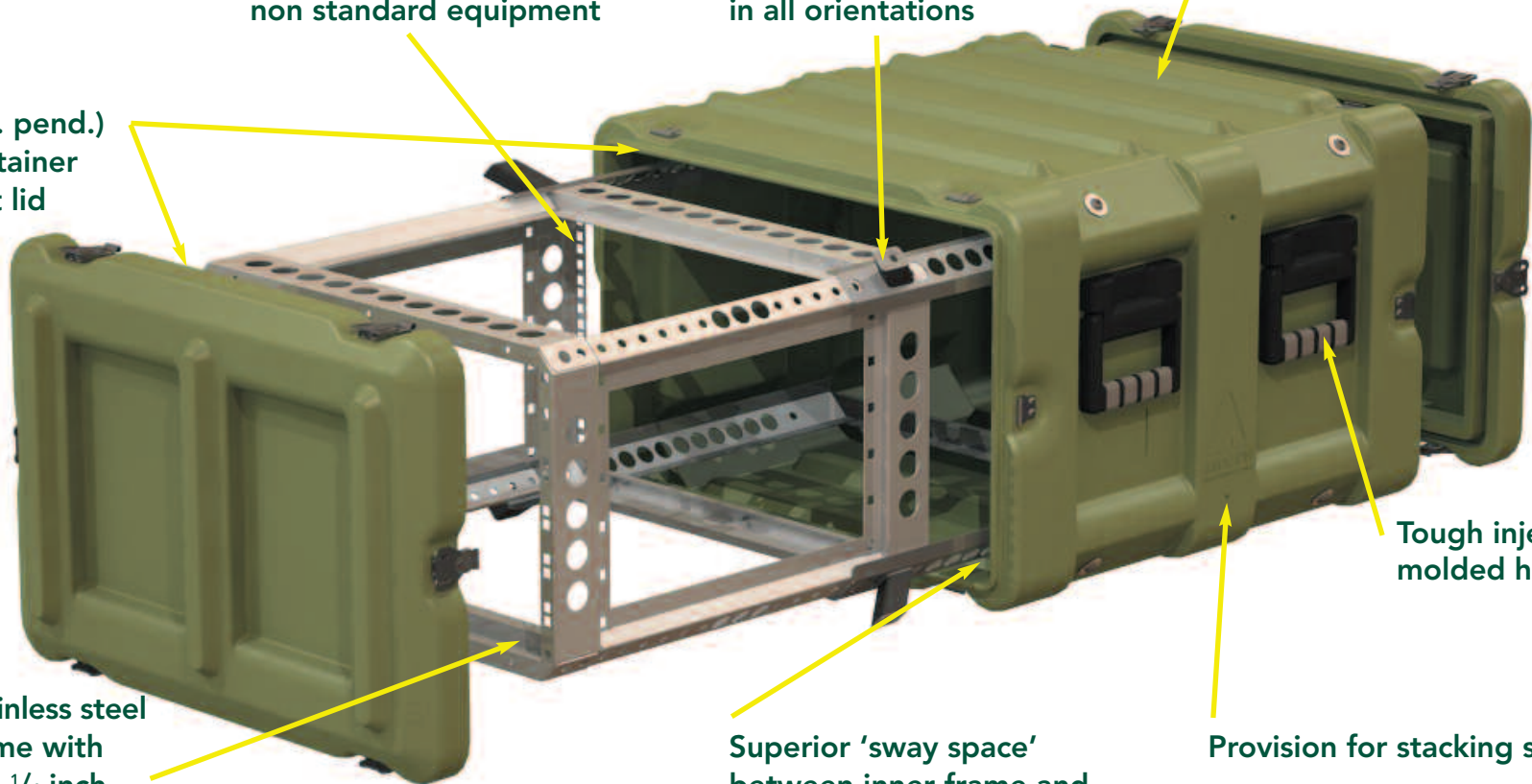
Amazon lip (pat. pend.)  
locates into container  
body to prevent lid  
displacement

Fully welded stainless steel  
19 inch rack frame with  
floating, captive 1/4 inch  
(M6) stainless steel nuts and  
cages (registered design)

Superior 'sway space'  
between inner frame and  
outer container to prevent  
contact under severe impact

Tough injection  
molded handles

Provision for stacking straps




# 19 INCH RACKS

## AMAZON 19 INCH RUGGEDISED TRANSIT RACKS

**Amazon design skills have also been applied to produce a new generation of 19 inch racks to protect electronic, IT and telecommunications equipment against climatic extremes and rough handling in field conditions. Amazon Racks combine the tough resilience of a rotomolded case with a lightweight stainless steel rack frame and a unique elastomeric suspension system.**



### Design features in addition to those of Amazon Cases include:

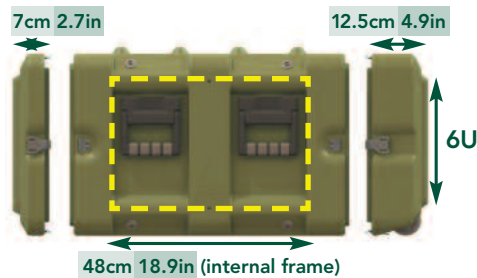
- Available from 4U to 12U with various standard 19 inch inner frame depth options.
- Eight 'Bi-Angle' elastomeric anti-vibration mounts (pat. pend.) with a choice of hardness grades, angled towards centre of gravity of the rack frame, provide optimized shock protection in all orientations.
- Superior 'sway space' between inner frame and outer case to prevent contact with outer container under severe impact.
- Optional 'Easy Glide' (pat. pend.) removable, self anchoring, internal frame system for convenience and speed of maintenance/replacement of equipment.
- Standard, stainless steel 1/4 inch (M6) threaded fasteners secure electronic equipment into floating stainless steel cage nuts at both front and rear of frame, providing ease of equipment fitting.
- Rack frame has additional 1/4 inch (M6) fixing holes in the rear face to accommodate non standard equipment.
- All threaded fasteners are field replaceable – no special tool required.
- The inner rack frame and all fittings are stainless steel, making Amazon Racks totally RoHS compliant.
- All racks have positive stacking, aligning at the front face regardless of rack depth.
- Internal rack frame conforms to BS5954 / BS EN 60297 / DIN 41494.
- Inner rack and outer container are recyclable. 
- Molded-in Amazon lip (pat. pend.) that engages positively with body to eliminate lid displacement when subjected to sideways force.
- Heavy-duty plastic injection molded handles with soft grip thermo-plastic rubber overmold.
- Optional recessed wheels for ease of handling with heavy payloads – additional 'front end' handles are fitted when wheels are installed.
- Optional deeper lids available to accommodate extended/protruding connectors etc.
- Complies with MIL-STD-810F / IP65.
- NATO stock numbers available on request and from our website at [www.cpcases.com](http://www.cpcases.com)

# 19 INCH RACK SIZES



All racks align  
at the front face  
regardless of  
rack depth

Product numbering system:  
AR 06 19 27 49



PART NUMBER  US/Canada	Rack Size (U)	Wheels can be fitted	IMPERIAL DIMENSIONS					METRIC DIMENSIONS					No of Handles	No of Catches
			External H (in)	W (in)	D (in)	Frame Depth (in)	Weight (lb)	External H (mm)	W (mm)	D (mm)	Frame Depth (mm)	Weight (kg)		
AR04192727	4	No	12.3	23.0	29.1	18.9	38.6	313	583	740	480	17.5	4	12
AR04192749	4	Yes	12.3	23.0	31.3	18.9	39.0	313	583	795	480	17.7	4	12
AR04242727	4	No	12.3	23.0	34.3	24.0	45.4	313	583	870	610	20.6	4	12
AR04242749	4	Yes	12.3	23.0	36.4	24.0	45.9	313	583	925	610	20.8	4	12
AR06192727	6	No	15.8	23.0	29.1	18.9	43.7	402	583	740	480	19.8	4	12
AR06192749	6	Yes	15.8	23.0	31.3	18.9	45.0	402	583	795	480	20.4	4	12
AR06242727	6	No	15.8	23.0	34.3	24.0	47.8	402	583	870	610	21.7	4	12
AR06242749	6	Yes	15.8	23.0	36.4	24.0	49.2	402	583	925	610	22.3	4	12
AR08192727	8	No	16.5	23.0	29.1	18.9	47.2	419	583	740	480	21.4	4	16
AR08192749	8	Yes	16.5	23.0	31.3	18.9	48.7	419	583	795	480	22.1	4	16
AR08242727	8	No	16.5	23.0	34.3	24.0	51.8	419	583	870	610	23.5	4	16
AR08242749	8	Yes	16.5	23.0	36.4	24.0	53.1	419	583	925	610	24.1	4	16
AR10192727	10	No	22.8	23.0	29.1	18.9	50.5	580	583	740	480	22.9	4	20
AR10192749	10	Yes	22.8	23.0	31.3	18.9	52.0	580	583	795	480	23.6	4	20
AR10242727	10	No	22.8	23.0	34.3	24.0	55.1	580	583	870	610	25.0	4	20
AR10242749	10	Yes	22.8	23.0	36.4	24.0	56.7	580	583	925	610	25.7	4	20
AR12192727	12	No	26.3	23.0	29.1	18.9	53.8	668	583	740	480	24.4	4	20
AR12192749	12	Yes	26.3	23.0	31.3	18.9	55.3	668	583	795	480	25.1	4	20
AR12242727	12	No	26.3	23.0	34.3	24.0	58.6	668	583	870	610	26.6	4	20
AR12242749	12	Yes	26.3	23.0	36.4	24.0	60.2	668	583	925	610	27.3	4	20

## Notes

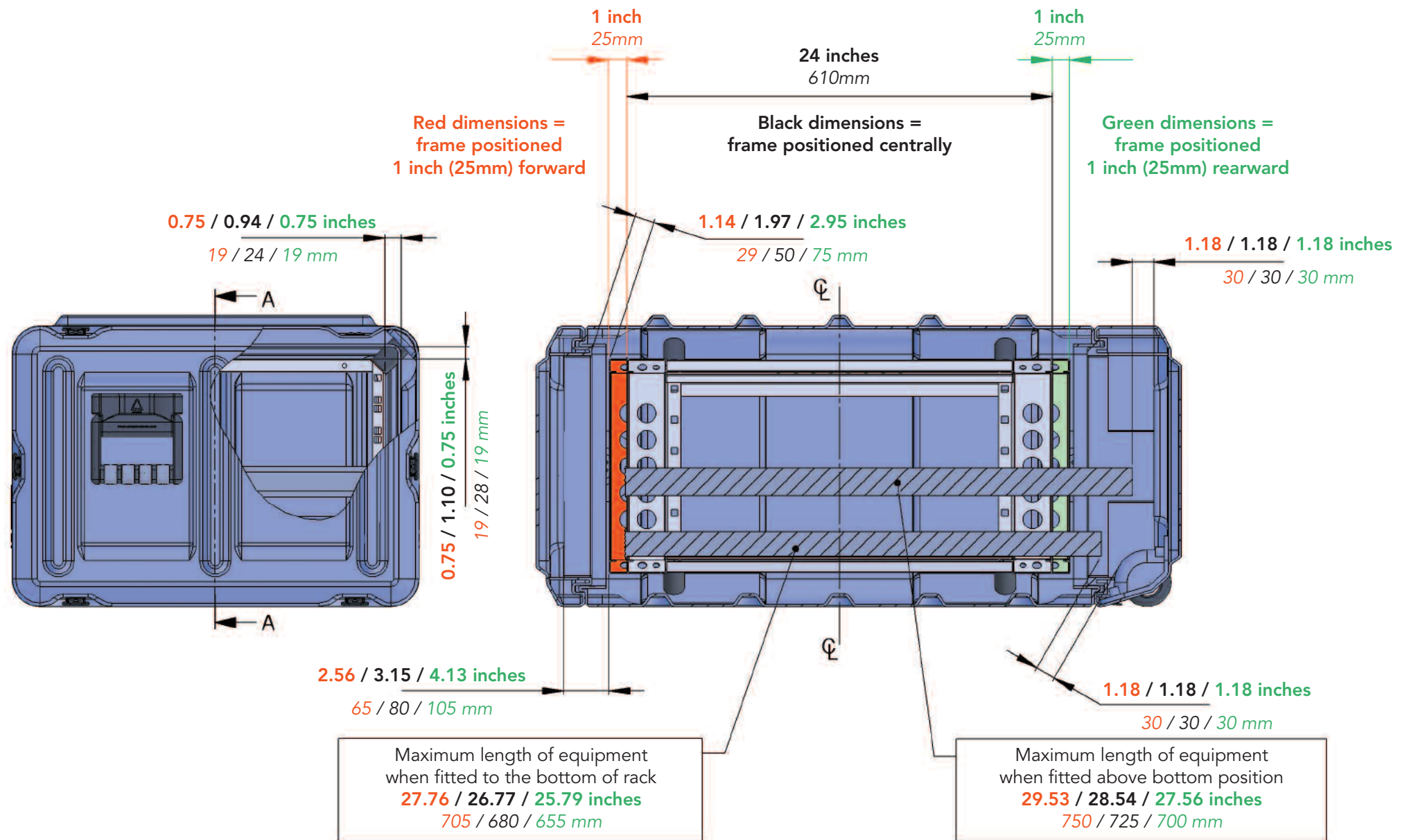
Wheels can only be fitted if the deeper lid 125mm 4.9in is fitted (item numbers ending in 49)

Where wheels are fitted two additional handles are fitted on the opposite lid

Inner frame DIN depths of 61cm 24in and 48cm 18.9in available



# SPECIAL RACK FEATURES



All Amazon Racks (excluding the removable 'Easy Glide' option) have a user-adjustable inner rack frame that can be positioned 1 inch (25mm) forward or back from its central position to allow

the accommodation of varying front panel and rear wiring needs. This drawing shows the 'sway space' between the inner frame and outer container in its three different positions.

It also shows the length of equipment that can be housed in the rack in these three positions. Note that long equipment should be located above the bottom position.



**Many accessories and options are available to enhance the functionality of Amazon Cases and Racks. These are shown on the following pages – check the Amazon Cases website for the latest developments at [www.cpcases.com](http://www.cpcases.com)**

### **Wheels (cases and racks)**

Cases of 30 inches (750mm) in length and greater have provision for fitting optional 2 3/4 inch (70mm) 'roller blade' recessed wheels. Similarly all racks can be fitted with two optional recessed wheels, housed in the deeper 4.7 inches (125mm) lid.

These robust wheels allow ease of handling with heavier loads, wheels do not protrude beyond the external dimensions of Amazon Cases and Racks, and are designed to come into operation, with 3/4 inch (20mm) ground clearance, as the case or rack is tilted, but do not interfere with stacking or stowage (pat. pend.).

Two additional handles are provided on the front lid of racks fitted with wheels.



### **Removable inner frame (racks)**

Amazon provides a removable 'EasyGlide' inner frame option (pat. pend.) without loss of anti-vibration characteristics, to allow complete withdrawal of the 19 inch inner frame in constricted spaces or semi-permanent installations.

Simple and rapid withdrawal, by front access, without any special tools is achieved by removing 4 x 0.315 inch (M8) stainless security bolts and sliding the 19 inch frame, with all its contents in place, towards you. Once fully removed, the 19 inch frame contents can be fully accessed for maintenance or repair.

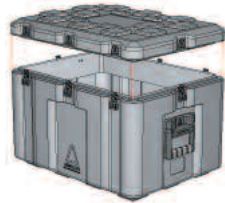
To replace the frame simply reverse the process, slide the frame down 4 Teflon coated glide runners, which automatically 'self-anchors' the frame at the rear, and replace the 4 x 0.315 inch (M8) security bolts. The frame is then firmly secured within the glide runners in the outer container.

# EXTERNAL OPTIONS

## KEY

(C) – Cases

(R) – Racks



### Removable lift-off lids (C)

Lids can be made completely removable by fitting catches all round. Catches can also be inverted so that the lid

becomes the base and vice versa creating a large lift-off lid for easy access to contents.



### Pressure relief valves (CR)

Amazon cases are virtually airtight. A two way automatic pressure and vacuum relief valve with manual override release push button enables equalization of the pressure inside and outside the container.



### Gore membrane vent (CR)

A Gore membrane vent allowing gradual equalization of internal and external pressure without ingress of dust or water.



### Humidity indicator (CR)

Humidity indicators and replaceable desiccant containers can be fitted for effective humidity control during long-term storage.



### Padlockable catches (CR)

Any of the standard catches can be replaced with a padlockable toggle latch which takes a padlock with a hasp diameter up to 0.35 inches (9mm).



### Injection molded handles (CR)

The number of handles supplied with standard cases is shown in the size list. Additional injection molded handles can be fitted if required.



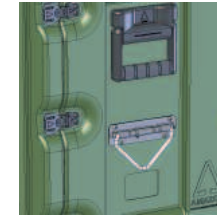
### Steel handles (CR)

Black steel handles are available as an alternative to the injection molded handles supplied as standard.



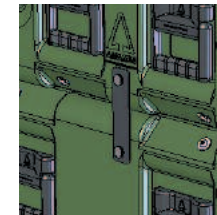
### Labeling (CR)

Provision is made to take an A5 size label on case lids and smaller labels at various points on cases and racks. A variety of labeling options is available including engraved metal and back printed, non scratch polycarbonate. A hard wearing write-on wipe-off label kit is also available complete with marker pen and cleaning solvent.



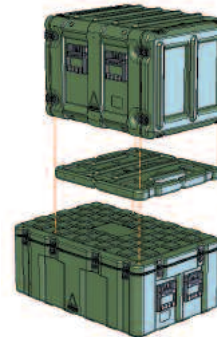
### Tie-down fittings (CR)

Steel tie-down fittings are available for securing Amazon containers and racks to ships' decks or in air cargo applications.



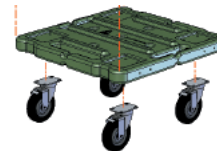
### Rack straps (R)

Provision is made on every Amazon Rack to fit 'Rack-Straps'. This secures racks together when stacked. All racks align at the front regardless of rack depth.



### Interstacker (CR)

Both Amazon Cases and Amazon Racks are each stackable. A universal interstacker is available which allows Amazon Racks to be stacked securely onto Amazon Cases.



The same interstacker can be fitted with 4 x 4 inch (100mm) castors to provide secure location and movement of heavy loads up to 660 lb (300Kg).

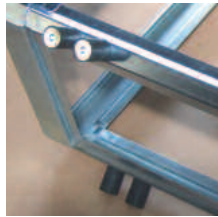


# INTERNAL OPTIONS

## KEY

(C) – Cases

(R) – Racks



### Elastomeric mount options (R)

Stiffer elastomeric mounts are available for payloads in excess of 110 lb (50Kg). Elastomeric mounts can also be fitted in tandem at each corner of the

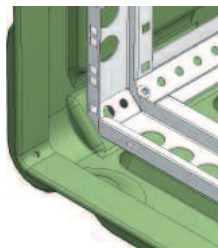
internal suspended frame, to give a total of 16 anti-vibration mounts. This provides a controlled ride for very heavy loads.



### Wire rope anti-vibration mounts (R)

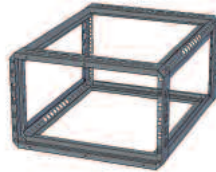
Where required wire rope isolators can be fitted in place of elastomeric mounts. These comprise of stainless steel stranded cable, threaded

through aluminum alloy retaining bars, crimped and mounted for effective vibration isolation. Their corrosion resistance, all-metal construction, gives environmentally stable, high-performance shock and vibration protection that is non toxic and is unaffected by temperature extremes, chemicals, oils, solvents and abrasives.



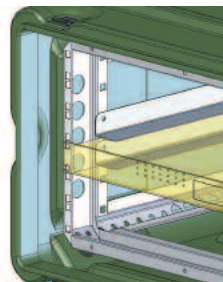
### Rack drainage (R)

Operationally, racks are often deployed in wet conditions with lids removed. The optional drain hole allows water to be drained whilst retaining the integrity of the outer container with the lids in place.



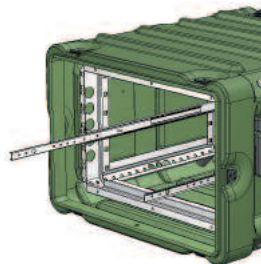
### Rack frame conductive coating (R)

For specialist applications the rack frame can be given a black conductive coating for Electro Magnetic Compatibility or Electrostatic Discharge purposes. The fully cured film results in a resistivity of less than 0.093 ohm ft<sup>2</sup> (1.0 ohm m<sup>2</sup>). Typical attenuation figures for electro-magnetic radiation are available on request.



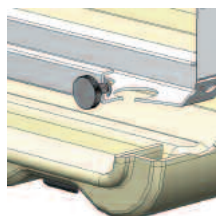
### Fixed support rails (R)

Fixed rails can be user fitted to 19 inch (480mm) and 24 inch (610mm) deep frames to support heavy / deep equipment, in addition brackets and fixings can be designed and supplied for installing non 19 inch equipment within the rack frame.



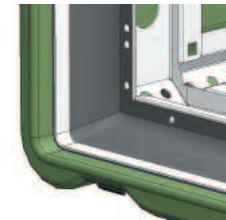
### Telescopic support rails (R)

Telescopic support rails are available to allow full access to racked equipment. Check with our engineers before installation to ensure compatibility with the equipment being fitted.



### Earthing /grounding point (R)

Earthing/grounding points can be fitted to allow for discharge of static electricity from the inner rack frame and its mounted equipment.



### Protective skirt (R)

For protection against the ingress of rain under operational conditions with the lid removed, a flexible rubber skirt can be fitted between the outer casing and the internal rack frame. It is important to ensure that equipment front panels are watertight to prevent water entry.



### Cable storage pouch (R)

Another unique design feature is the optional zipped pouch which can be snapped securely in place in both shallow and deep rack lids for the neat

storage of cabling and leads. Cable pouches can be retro fitted by users without the use of tools.



### Tamper evident catch (CR)

Cable ties can be applied (as shown in the photograph) to secure content against pilferage and tampering.

### 19 inch rack accessories (R)

A full range of accessories is available including:

- Full width shelves
- Keyboard trays
- Drawers
- Sunshades
- Protective covers





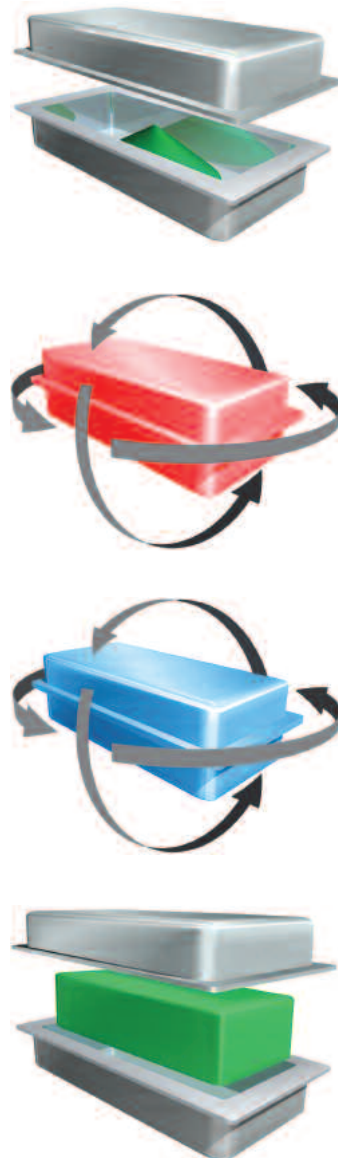
## The rotomolding process

An aluminum metal mold is filled with a predetermined quantity of polymer powder, closed, clamped and then passed into an oven chamber.

The mold is heated externally to a high temperature and rotated around both vertical and horizontal axes. As the powder inside heats up, it begins to melt and adhere to the inner surface of the mold. This continues until a layer of molten plastic is formed over the inner surface of the mold.

In the cooling chamber air is directed at the mold and in some cases water jets are used. When the plastic inside the mold has become solid, the mold can be removed from the chamber.

The Amazon Case or Rack is then removed from the mold and allowed to cool in a cooling jig to prevent distortion. Cycle time can vary from 20 minutes to one hour. There is a natural thickening of material at edges and corners which increases strength as the plastic is formed without pressure and as a result has no molded in stresses.



## Rotomolding material

Amazon Cases uses high quality Linear Low Density Polyethylene. This hexane copolymer is designed to offer superior processability, excellent dimensional control and low warpage. The resin used is ideally suited for applications that require excellent surface appearance and an optimum balance of stress crack resistance, toughness and stiffness properties. Cases and Racks molded from this polymer comply with MIL-STD-810F which includes testing at  $-40^{\circ}\text{F}$  to  $+158^{\circ}\text{F}$ .

LLDPE is a UV stabilized, non hazardous material which is easy to clean and has a wide resistance to acids, alkalis and organic solvents.

Standard colors are NATO green, admiralty grey, black and desert sand. For quantities greater than 25 units a wide range of alternative standard colors is available.



## Special materials

**Flame Retardant** – If flame retardant properties are required Amazon Cases can provide polymer with a flame retardant additive classified to UL94 at 0.12 inch (3mm) thickness.

**IRR** – For NATO green cases only, an additive is used to achieve infra-red reflective properties. The resulting case is fully UV stabilized and conforms to STANNAG 2338 in shade and near IR reflectivity.

**High temperature operation** – If operation in high temperatures is required a cross-linked polymer grade can be used which provides a product that can be used in temperatures up to  $212^{\circ}\text{F}$  ( $100^{\circ}\text{C}$ ).

**Anti-static** – Polymer is available with additives which render it permanently conductive and anti-static with a surface resistivity of approx  $4.49 \times 10^4$  ohm in<sup>2</sup> ( $2.9 \times 10^5$  ohm cm<sup>2</sup>). Available in black only.

There is an additional cost and lead-time if any of these special materials are required.

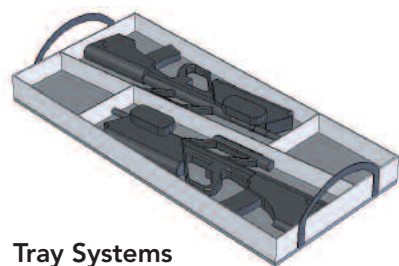


## Customization

### Protective Foam

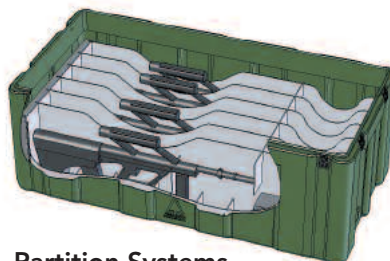
Amazon Cases offers a custom foam cushioning service to protect delicate electronic and mechanical equipment.

Plastazote polyethylene foam is used which has a closed cell structure to eliminate absorption of moisture. The correct grade / density and amount of foam can be calculated to provide the exact degree of cushioning specified. The foam is then precision cut on fully computerized foam routing equipment.



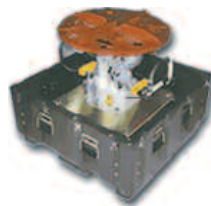
### Tray Systems

It is often space effective to fit trays into Amazon Cases for small pieces of equipment or components. These are usually manufactured from welded HDPE sheet and can be completely customized to fit any specific application.



### Partition Systems

Amazon Cases can be fitted with customized partitioning systems. The example shown is produced from interlocked and welded HDPE sheet which is welded securely into the case. Additional foam blocks can be added to provide further cushioning. If required full drawings can be provided prior to production using Solid Works software.



### Anti-Shock Platforms

Amazon Cases has full engineering drawing and metal fabrication facilities and is able to extensively modify our product to meet demanding specifications. The example shown is a shock absorption platform inside a standard case for transport of radar antennae.



## Non standard sizes

For quantities in excess of 200, Amazon style cases can be manufactured cost effectively in any size for an exact fit of equipment. The examples shown here were manufactured

for the French Gendarmerie for the rapid deployment of equipment. The specification called for fire retardancy and they were manufactured with fire retardant additives to the exact dimensions necessary to fit in a specific vehicle.



## Custom service

For quantities as few as 250, Amazon Cases offers a complete rotomolding service, which ranges from creating a design concept, rapid prototyping and producing a 'space' model, through to volume production. Design

options include 'double skin' moldings to provide custom internal sculpturing, together with foam cushioning and PU 'skinned foam' moldings. The example shown is a case for carrying home dialysis equipment, where the brief called for a high level of protection for the product coupled with a 'luggage' appearance to give end user acceptability.



IN ACTION



AMAZON CASES

