



LOTS OF SPACE IN AMAZON

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



**LOTS OF SPACE
IN AMAZON**

**BEAUCOUP PLUS
D'ESPACE DANS
LE 'AMAZON'**

**VIEL PLATZ
IM AMAZON**



WWW.CPCASES.COM/AMAZON



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

Using the latest polyethylene rotomoulding 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 defence, marine, security, aerospace, oil and gas, satellite and telecommunication applications worldwide, Amazon Cases and Racks give all the advantages of rotomoulding 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.

Les produits Amazon ont été conçus avec une seule idée en tête: apporter une protection ultime à votre équipement de haute technologie, lors de son transport.

Fabriqués, à l'aide de la toute dernière technologie de moulage par rotation des matériaux en polyéthylène, les produits Amazon protègent votre équipement des tempêtes de sable, de l'eau salée, des impacts et des températures extrêmes, permettant ainsi à votre matériel d'être déplacé de manière sécurisée et déployé instantanément.

Idéaux pour des applications mondiales propres à la défense, la marine, la sécurité, le pétrole et le gaz, les satellites et les télécommunications, les caisses et racks, Amazon apportent tous les avantages de la technologie de moulage par rotation. Sans cavité murale épaisse et inutile, sans ouverture supérieure étroite restrictive et sans couvercle profond encombrant, les caisses Amazon vous offrent plus d'espace quel que soit leur format initial.

L'intérieur des racks Amazon a été innové de manière fondamentale. Un châssis inoxydable et léger, suspendu par huit supports antivibratoires élastomères, fournit un « espace tampon » entre le cadre et le container externe. C'est la manière la plus efficace pour protéger les équipements délicats.

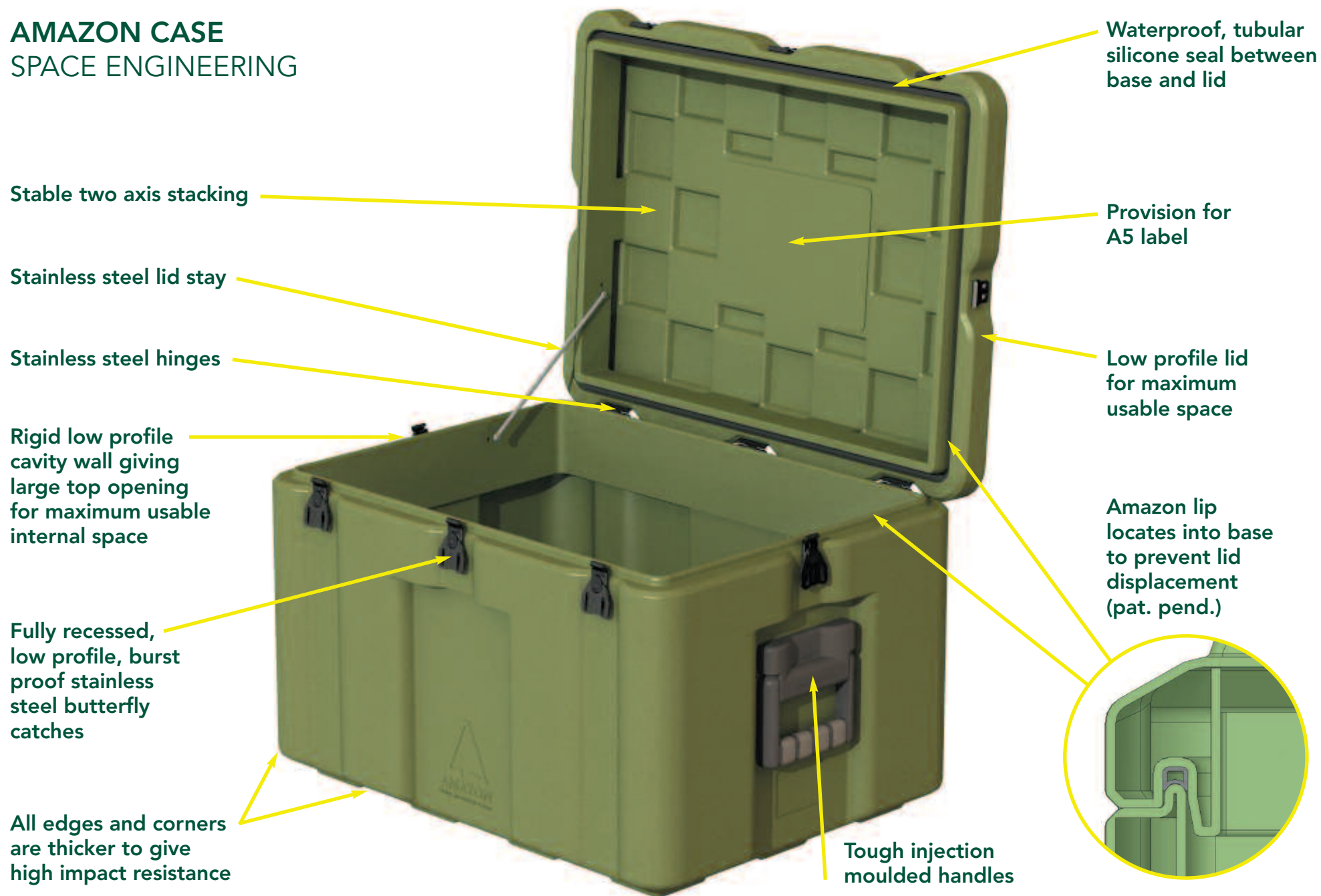
Amazon wurde allein mit einem Ziel entwickelt: um Ihr hochwertiges technologisches Gerät beim Transport optimal zu schützen.

Neueste Rotationsformtechnik und der Einsatz einer neu entwickelten Polyamid-V-variante im Amazon sorgen für den bestmöglichen Schutz Ihrer Hightech-Ausrüstung vor Sandstürmen, Salzwasser, Stößen, Schlägen und Extremtemperaturen und gewährleisten ihre Sicherheit während des Transports sowie ihre sofortige Einsatzbereitschaft am Zielort.

Amazon-Transportkisten und -Racks sind perfekt geeignet für Anwendungen im Bereich der Streitkräfte, Sicherheit, See- und Luftfahrt, Öl- und Gasindustrie, Satellitentechnologie und Telekommunikation weltweit. Sie bieten Ihnen alle Vorteile der Rotationsformtechnik, jedoch ohne die sonst üblichen platzraubenden dicken Wandaussteifungen, Deckelaussteifungen und Schließkantenverstärkungen. Damit bietet Ihnen Amazon mehr Innenraum für jede Behältergröße.

Weitere Innovationen finden sich im Inneren eines Amazon-Racks: Ein gewichtssparender, zwischen acht elastischen Schock-Absorbern montierter Edelstahlrahmen gewährleistet einen optimalen Vibrationsschutz und verhindert den Kontakt Ihrer Systeme mit der äußeren Behälterwand – die wirksamste Methode zum Schutz empfindlicher Ausrüstung.

AMAZON CASE SPACE ENGINEERING



AMAZON CASES

All Amazon Cases are produced using a process called Rotomoulding. 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 rotomoulded 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.
- Rotomoulded from high grade, virgin polyethylene for strength and impact absorption.
- Stable in temperatures from -40°C to $+70^{\circ}\text{C}$.
- Corrosion proof and resistant to solvents and acids.
- Colours moulded right through to retain appearance if scratched.
- Available in NATO green, admiralty grey, black and desert sand, with other colours available for orders of 25 or more. All colours are UV stabilised.
- NATO stock numbers available on request and from our website at www.amazoncases.com
- Strong, rigid, low profile lid for maximum space utilisation.
- Moulded-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 bevelled 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 moulded handles with soft grip thermo-plastic rubber overmould.
- Waterproof, tubular silicone lid seal stable in temperatures from -40°C to $+70^{\circ}\text{C}$.
- 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.

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.) focussed
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

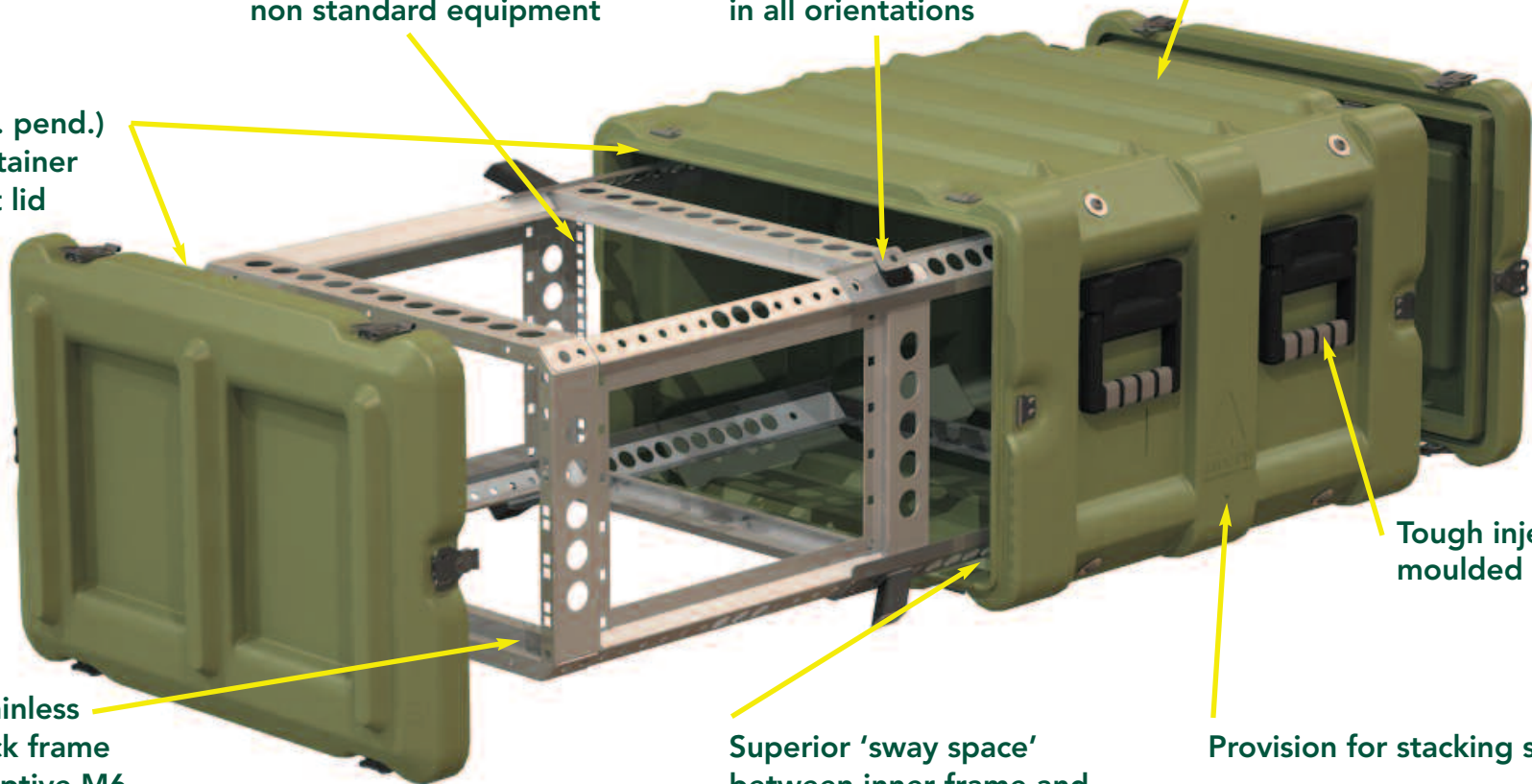
Amazon lip (pat. pend.)
locates into container
body to prevent lid
displacement

Fully welded stainless
steel 19 inch rack frame
with floating, captive 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
moulded handles

Provision for stacking straps



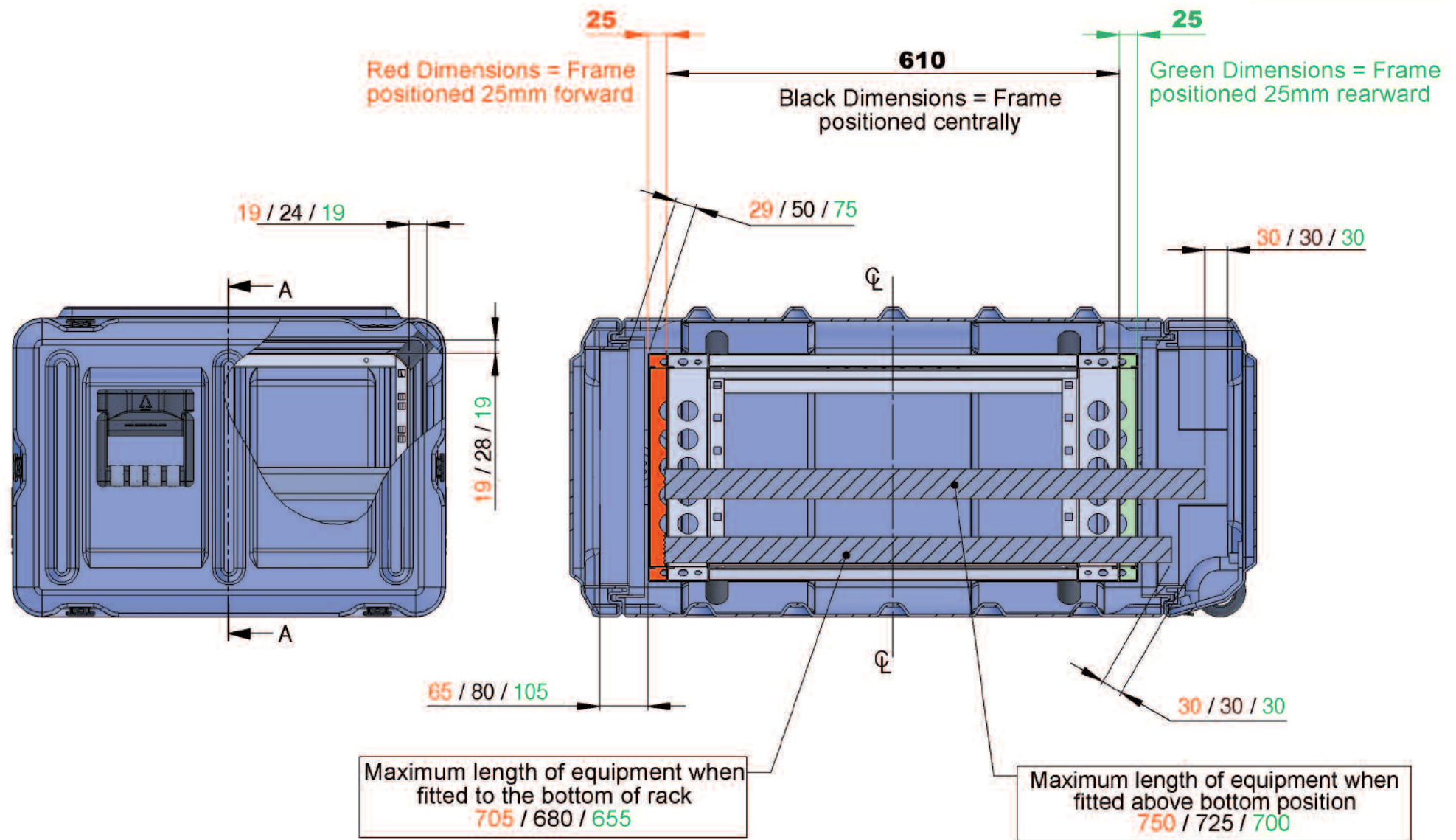
AMAZON 19 INCH RUGGEDISED TRANSIT RACKS



Design features in addition to those of Amazon Cases include:

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 rotomoulded case with a lightweight stainless steel rack frame and a unique elastomeric suspension system.

- 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 optimised 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 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 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. 
- Moulded-in Amazon lip (pat. pend.) that engages positively with body to eliminate lid displacement when subjected to sideways force.
- Heavy-duty plastic injection moulded handles with soft grip thermo-plastic rubber overmould.
- 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.amazoncases.com



All Amazon Racks (excluding the removable 'Easy Glide' option) have a user-adjustable inner rack frame that can be positioned 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.



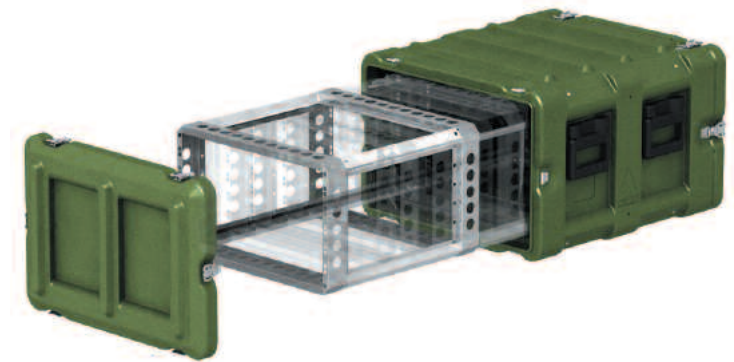
Many accessories and options are available to enhance the functionality of Amazon Cases and Racks. These are shown on the following pages – check the Amazon Cases website for the latest developments at www.amazoncases.com

Wheels (cases and racks)

Cases of 750mm in length and greater have provision for fitting optional 70mm 'roller blade' recessed wheels. Similarly all racks can be fitted with two optional recessed wheels, housed in the deeper 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 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.



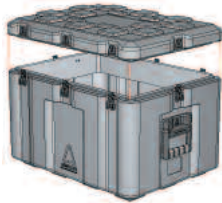
Removable inner frame (racks)

Amazon provides a removable 'Easy Glide' 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 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 M8 security bolts. The frame is then firmly secured within the glide runners in the outer container.

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 equalisation of the pressure inside and outside the container.



Gore membrane vent (CR)

A Gore membrane vent allowing gradual equalisation 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 9mm.



Injection moulded handles (CR)

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



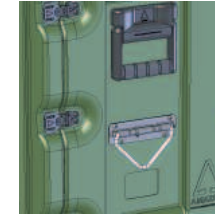
Steel handles (CR)

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



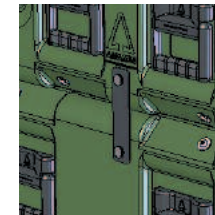
Labelling (CR)

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 labelling 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.



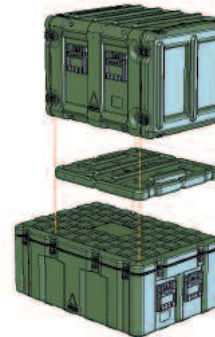
Tie-down fittings (CR)

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



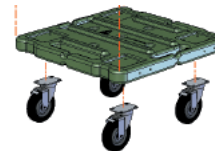
Rack straps (R)

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.



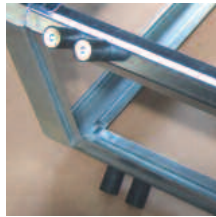
The same interstacker can be fitted with 4 x 100mm castors to provide secure location and movement of heavy loads up to 300Kg.

INTERNAL OPTIONS

KEY

(C) – Cases

(R) – Racks



Elastomeric mount options (R)

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

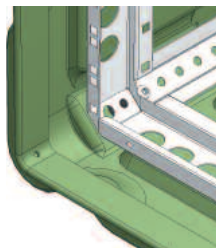
suspended frame, to give a total of 16 anti-vibration mounts. This provides a controlled ride for very heavy loads.



Wire rope anti-vibration mounts (R)

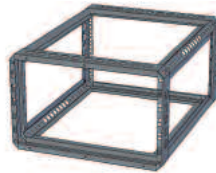
Where required wire rope isolators can be fitted in place of elastomeric mounts. These comprise of stainless steel stranded cable, threaded

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.



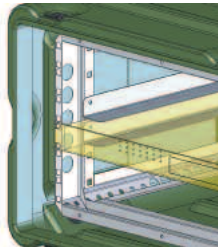
Rack drainage (R)

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.



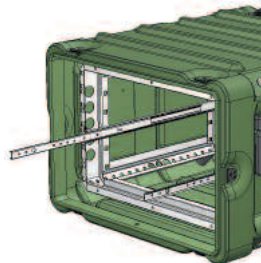
Rack frame conductive coating (R)

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 1 ohm per square metre. Typical attenuation figures for electro-magnetic radiation are available on request.



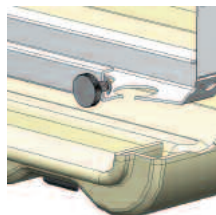
Fixed support rails (R)

Fixed rails can be user fitted to 480mm and 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.



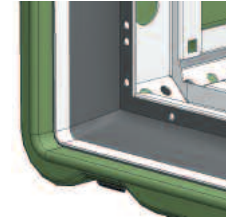
Telescopic support rails (R)

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 zippered 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



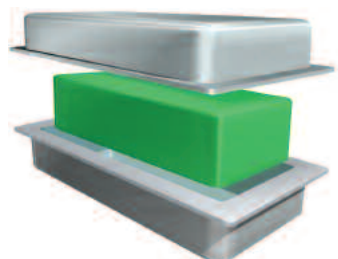
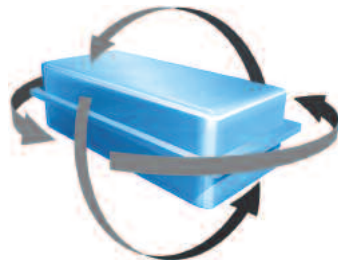
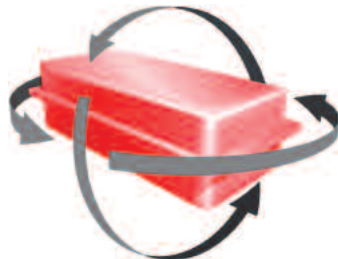
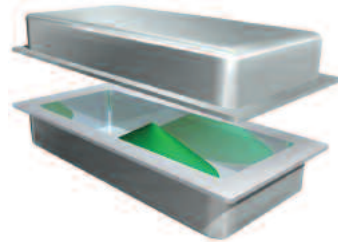
The rotomoulding process

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

The mould 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 mould. This continues until a layer of molten plastic is formed over the inner surface of the mould.

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

The Amazon Case or Rack is then removed from the mould 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 moulded in stresses.



Rotomoulding 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 moulded from this polymer comply with MIL-STD-810F which includes testing at -40°C to $+70^{\circ}\text{C}$.

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

Standard colours are NATO green, admiralty grey, black and desert sand. For quantities greater than 25 units a wide range of alternative standard colours 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 3mm thickness.

IRR – For NATO green cases only, an additive is used to achieve infra-red reflective properties. The resulting case is fully UV stabilised 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 100°C .

Anti-static – Polymer is available with additives which render it permanently conductive and anti-static with a surface resistivity of approx 2.9×10^5 ohm/cm². Available in black only.

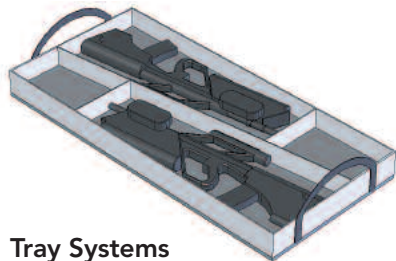
There is an additional cost and lead-time if any of these special materials are required.



Customisation Flame Retardant

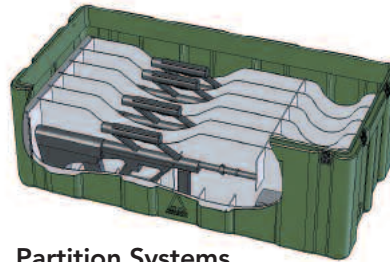
Amazon Cases offers a bespoke foam cushioning service to protect delicate electronic and mechanical equipment. Plastazote polyethylene foam is

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 computerised foam routing equipment.



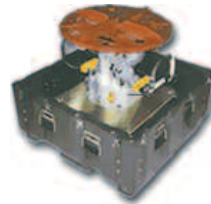
Tray Systems

It is often space effective to fit trays into Amazon Cases for small pieces of equipment or components. These are usually manufactured from welded 3mm HDPE sheet and can be completely customised to fit any specific application.



Partition Systems

Amazon Cases can be fitted with customised partitioning systems. The example shown is produced from interlocked and welded 3mm 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.



Bespoke service

For quantities as few as 350, Amazon Cases offers a complete rotomoulding service, which ranges from creating a design concept, rapid prototyping and producing a 'space' model, through to volume production. Design

options include 'double skin' mouldings to provide bespoke internal sculpturing, together with foam cushioning and PU 'skinned foam' mouldings. 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



Tel +44 (0) 20 8568 1881
Fax +44 (0) 20 8568 1141
amazon@cpcases.com
www.cpcases.com/amazon