



INSTRUCTION

OPERATIONAL GUIDELINES FOR BUP AND SMU SHIPMENTS

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1. General Provisions

1.1 Purpose and Users

This instruction is a guideline for the shipper or its agent who offers BUP/SMU shipments on ABC flights.

This Instruction sets out requirements for the following processes that are being performed under BUP & SMU program:

- cargo acceptance and restrictions;
- build up;
- handling of empty unit load devices and tie-down equipment.
- Air waybill completion;

Intended users of this Instruction are:

- Shippers or their agents who build up ULD under ABC BUP&SMU program;
- ABC employees/representatives who are engaged in BUP and SMU handling.

1.2 Putting the Document into Effect

Instruction was developed by Cargo Handling Standards Department.

Instruction cancels an action In-ABC-039.3.16 «Operational Guidelines for BUP and SMU Shipments» shall go into effect in «AirBridgeCargo Airlines LLC» (hereinafter referred to as ABC) 10 business days following its approval by general director and shall remain in full force until reissued or invalidated.

As soon as instruction goes into effect, it shall become a local regulatory act of ABC and shall be binding upon all the employees involved in build up and ULD handling.

2 Regulatory References

This Instruction contains references to the following documents:

- IATA TACT Rules;
- IATA Dangerous Goods Regulations;
- ICAO Technical instructions for the Safe Transport of Dangerous Goods by air (Doc 9284-AN/905);
- IATA Perishable Cargo regulations;
- IATA Temperature Control regulations;
- IATA Unit Load Device (ULD) Regulations.

3. Terms, Definitions, Symbols and Abbreviations

Terms, definitions, symbols and abbreviations applied in this instruction, are in line with the information and reference document “Dictionary of Terms and Definitions”.

Besides, this instruction contains the following terms and abbreviations:

ABC -AirBridgeCargo Airlines LLC

TCC – temperature-controlled container

AWB -Air waybill

BUP -bulk utilization program

CG -centre of Gravity

DG -dangerous goods

FT -foot

IN -inch

KG -kilogram

LB -pound

M -meter

SLAC -shipper loads and counts;

SMU -shipper mixed unit;

ULD -unit load device;

WET - Wet cargo is a shipment containing liquids or a shipment that by its nature may produce liquids and which are not packed in a watertight container;

PIL – pharmaceuticals;

PER – perishable cargo;

ODLN - operational damage limits notice

VUN – vulnerable cargo

Airworthiness - condition of serviceability that conforms to certification criteria. An airworthy container not only is serviceable but also meets certain minimum strength requirements established by government authorities. Airworthiness generally refers to certified aircraft structural and non-structural unit load devices.

Breakdown - process of removing cargo from a ULD.

Build-up - process of placing and securing cargo into/onto a ULD.

Contour - the specific shape of the cargo built up on the aircraft pallet to safely match the aircraft dimensions.

Footing - Beams under the cargo, usually, spacer blocks or grips to hold the cargo and ensure space for a forklift blades.

Forklift - Refers to the industrial truck used to lift and transport loads by means of twin tines, usually mounted on the front of the vehicle.

Forkliftable ULD - ULD having apertures as an integral part of its base that permit the insertion of forklift tines.

Non-forkliftable ULD - ULD without apertures as an integral part of its base that permit the insertion of forklift tines.

Owner - owner of the ULD whose designator/owner code is shown in the last two positions of the IATA ULD Identification Code, or whose name is otherwise conspicuously marked on the ULD.

Shoring - The effective placement of shoring material such as beams, planks, plywood platforms or other suitable means, under a cargo in order to spread load on a greater area or greater length.

Total weight - Cargo weight plus shoring material weight plus ULD tare weight.

ULD base support system - ULD storage or transport devices such as dolly, roller bed, conveyor, slave pallets, etc., equipped with rollers, ball mats, casters or other suitable load bearing devices, being able to support the ULD without damage to the base, allowing easy sideways movement of the ULD, and having stoppers/locks to hold the ULD in place.

Un-airworthy ULD. Refers to a condition of a Certified ULD that precludes it from being approved for release to service and being flown.

4. General provisions

The main aim of the guideline is set out build up requirements for cargo agents and forwarders in order to ensure flight safety on regular and charter flights.

4.1. Description

Shipper Built Units (Bulk Utilization Program, BUP) are load units which are built up and handed over ready for carriage by the shipper/shipper's agent as complete units and delivered to consignee as complete unit intact. Therefore, no additional cargo may be co-loaded into BUPs.

Shipper Load Mixed Units (SMU) are load units which are built up by the shipper/shipper's agent and handed over ready for carriage as complete units but containing more than one shipment.

BUP / SMU units must not contain any of the special cargo as listed below:

- Cargo subject to special security measures, e.g. valuable cargo (VAL), works of art;
- Live animals (AVI);

- Dangerous goods (DGR), except those items pointed in 4.8.2
- Cargo exceeding contour (with overhangs);
- Single weight per one piece over 5000 kg *;
- Piercing and cutting items;
- Cargo without security status (SPX/SCO/SHR) – subject to preflight security screening

* Maximum Linear load (weight divided by length) cannot be more than 1519 kg/m. Maximum area load (weight divided by square meter) cannot be more than 1952 kg/m². Each piece more than 500 kg must be checked according to above limits

4.2. “Cargo ready for carriage” criteria

All pieces of cargo accepted on ABC flights shall be in «**READY FOR CARRIAGE**» (condition, which means that:

- AWB is issued in accordance with IATA TACT rules, filled in and signed;
- All necessary documents are available (manifest (list) of consolidation, invoices, packing lists for personal belongings, other documents required for export, import or transit by customs or any other state authorities).
- Shipping documents shall be attached to the AWB and accompany it; The contents of each consignment must be properly packed so as to withstand all normal transportation incidents;
- Labels must be fully visible and all old labels and markings must be completely removed. Where standard labels for special consignments such as perishables, dangerous goods, pharmaceuticals are used they must be affixed to the packages;
- If cargo is being provided as BUP/SMU shipments, a serviceability check of the ULD must be conducted prior to loading. BUP/SMU pallets shall be within the contour prescribed by the carrier.
- Consignments delivered to a carrier shall be prepared ready for carriage in accordance with security control instructions provided by national authority.

4.3. BUP/SMU declaration

Due to fact that the physical ‘Ready for carriage’ check of pieces inside of BUP/SMU units cannot be performed, all shipper’s agents delivering such units must sign:

- for BUP – Bulk Unitization Program (BUP) Declaration (**Appendix 1**);
- for SMU - Shipper Loaded Mixed Unit (SMU) Declaration (**Appendix 2**);

To confirm:

- staff entrusted with pallet build-up is familiar with the valid ABC Guidelines and follows them;
- individual shipments loaded on BUP and SMU are “Ready for Carriage”;
- BUP/SMU units do not contain cargo mentioned in 4.1;
- for SMU – assumes liability for all damage or loss or other irregularities to cargo, detected during breakdown.

In case if any assistance and/or clarification from ABC is required, the following address shall be used for such an inquiry: ABC.Feedback@airbridgecargo.com

4.4. Types of ULDs and their characteristics

All cargo before loading into the aircraft must be placed on or in a ULD. Below is the table with the most frequently used ULDs and their specifications.

Table 4.1A Type of ULDs and their specifications

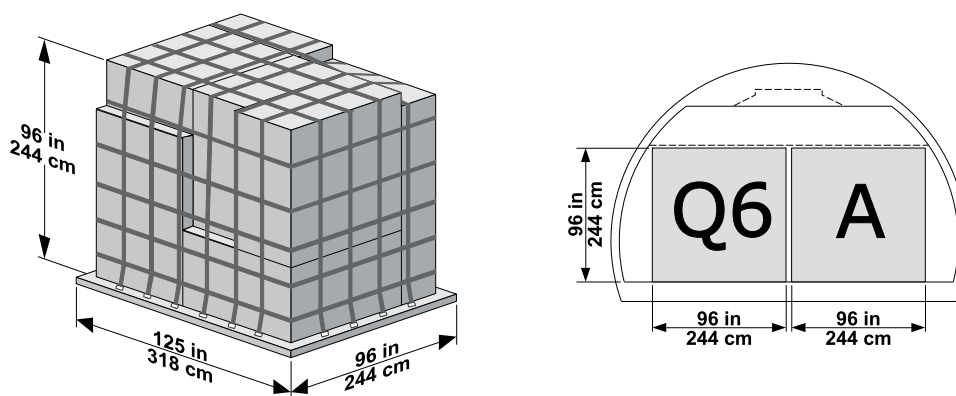
Type of ULD	Dimensions	Average tare weight	Usable loading area
PYB	140 x 244 cm (55'' x 96'')	70 kg	126 x 230 cm (50'' x 91'')
PLA (PLB)	318 x 154 cm (125'' x 60.4'')	90 kg	
PAG (PAJ)	318 x 224 cm (125'' x 88'')	120 kg	304 x 210 cm (120'' x 83'')
PMC (P6P, PQP)	318 x 244 cm (125'' x 96'')	120 kg	304 x 230 cm (120'' x 91'')
PGA (PGF)	606 x 244 cm (238,5'' x 96'') <i>Depth: 6 cm</i>	540 kg	592 cm x 231 cm (233'' x 91'')
PRA (PZA)	498 x 244 (196'' x 96'') <i>Depth: 6 cm</i>	440 kg	485 x 230 cm (191'' x 91'')
AKE (AVE,AKA)	156 x 153 cm (61,5'' x 60,4'') <i>Height: 163 cm (64'')</i>	100 kg	
AMP	318 x 244 cm (125'' x 96'') <i>Height: 163 cm (64'');</i>	286 kg	
AMA	318 x 244 cm (125'' x 96'') <i>Height: 244 cm (96'')</i>	300 kg	
AMD	318 x 244 cm (125'' x 96'') <i>Height: 300 cm (118'');</i>	395	

4.5.Boeing 747 allowable contours

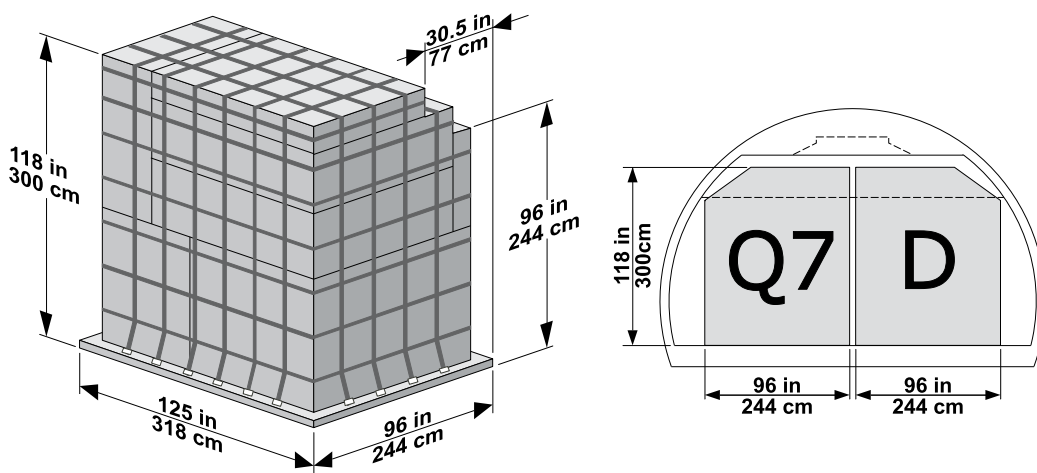
4.5.1 Main Deck Contours for ULD Size Codes A and M

The following contours may be used for main deck:

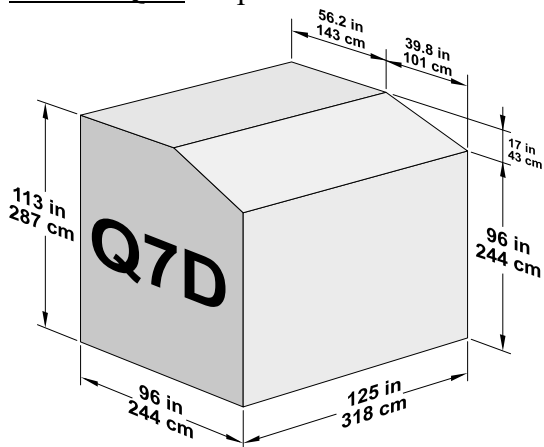
Contour Q6/A rectangular contour of 244cm height



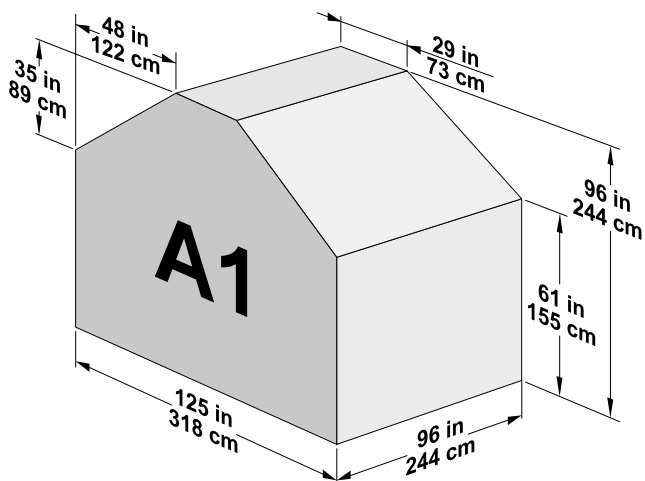
Contour Q7/D



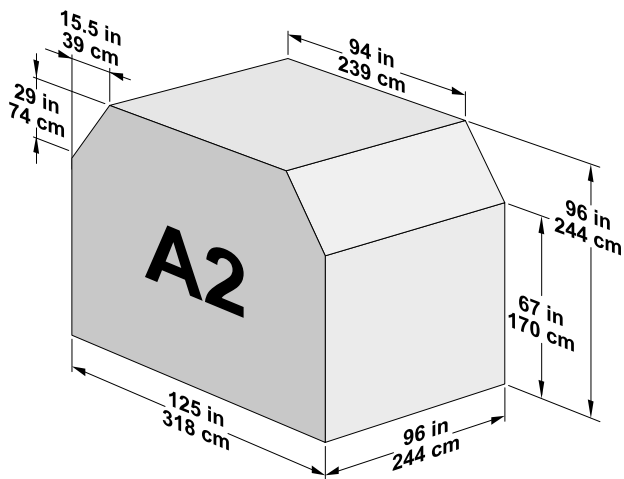
Contour Q7D for position “PL” on B747-400; “RL” on B747-8F (door positions)



Contour A1. Special contour for positions “A1”

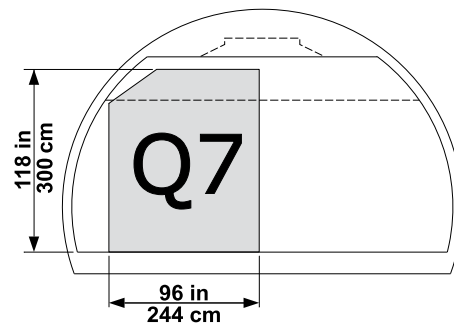
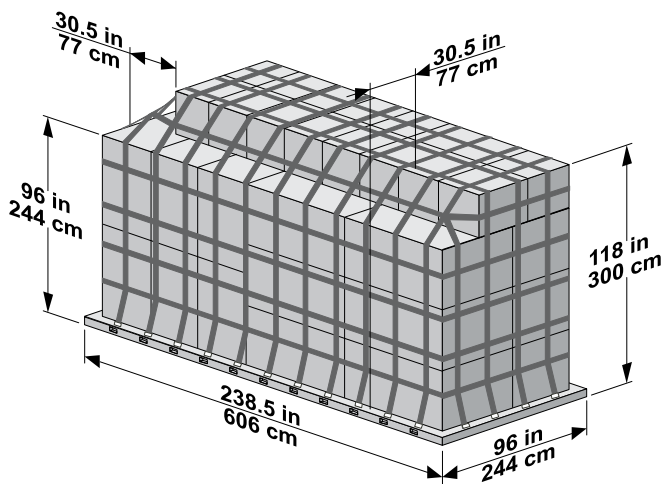


Contour A2. Special contour for positions “A2”

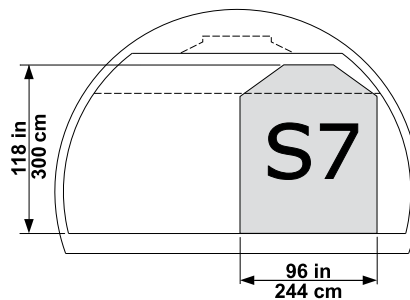
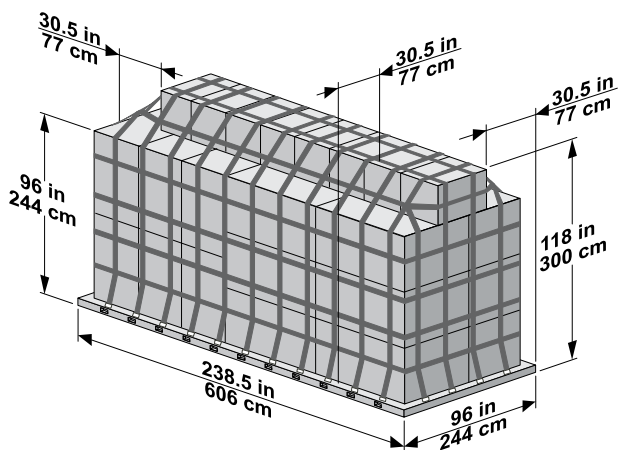


4.5.2 Main Deck Contours for size codes R and G pallets

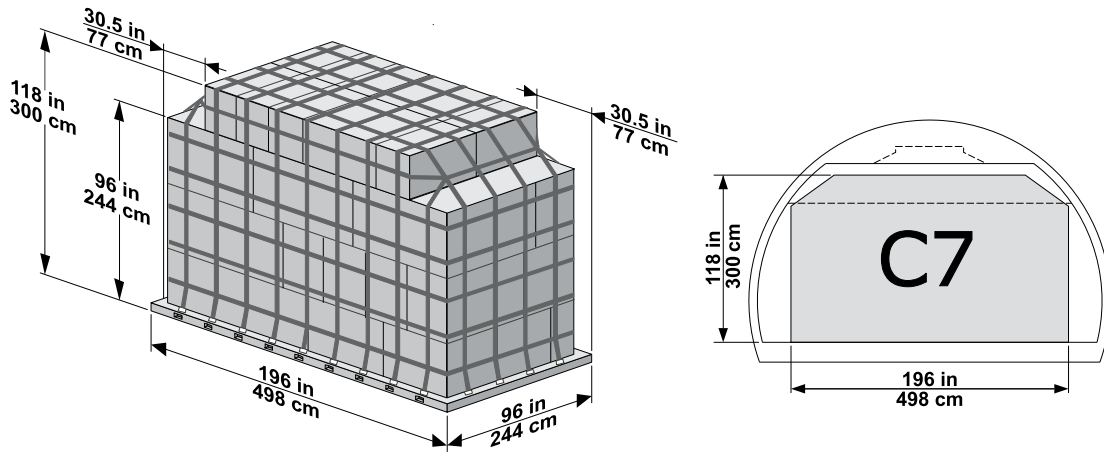
Contour Q7/D for 16FT or 20FT pallet



Contour S7 for 16FT and 20FT ULD on the MD



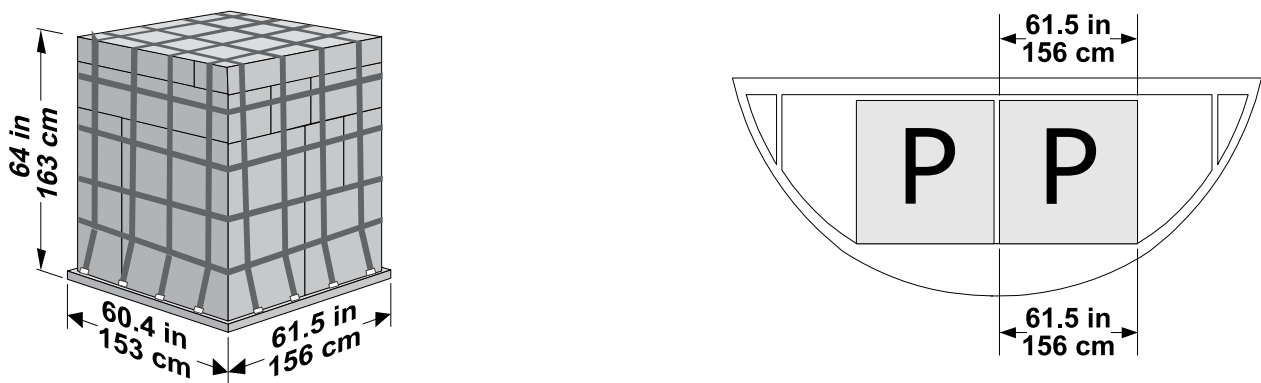
Contour C7 for 16FT ULD lateral load



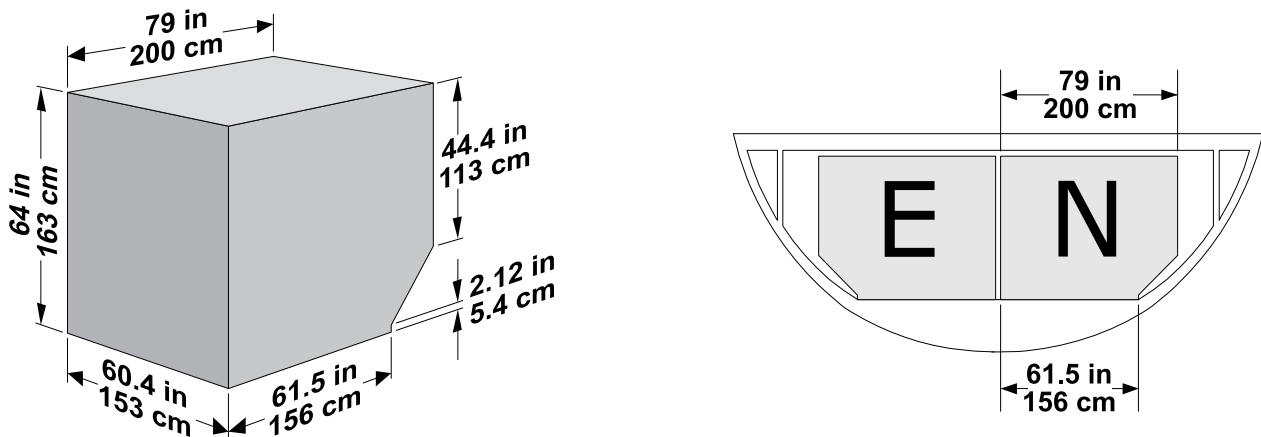
4.5.3 Lower Deck Contours for ULD size codes “K”

The following contours may be used:

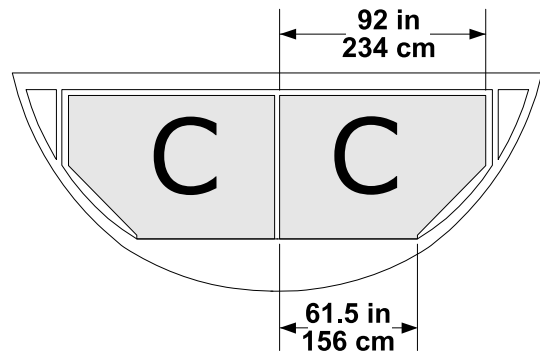
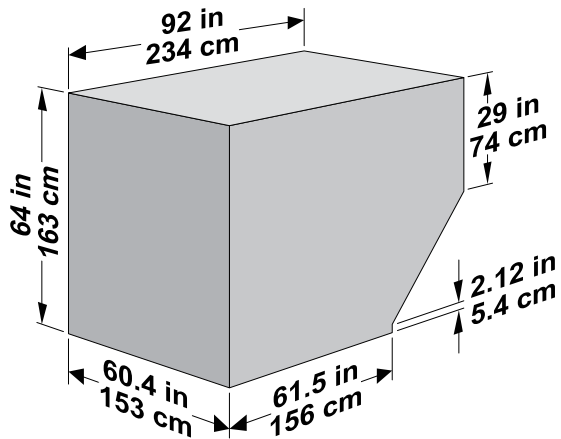
Contour “P” (PLD). Rectangular contour of 163cm (64 in) height.



Contour “E” or “N” (PLD/V1) with one 17,5 inch wing



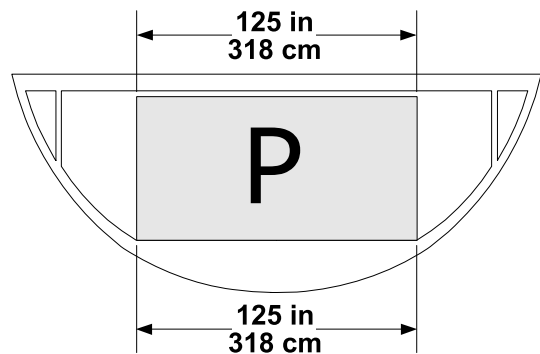
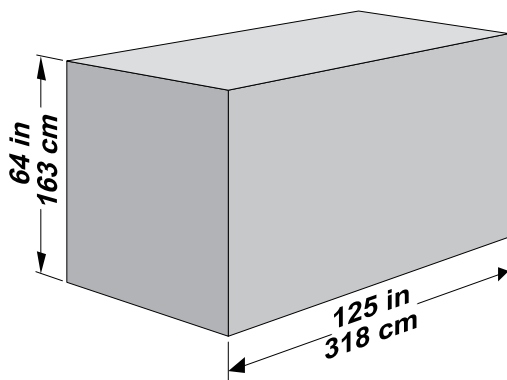
Contour “C” (PLD/V1) with one 30,5 inch wing.



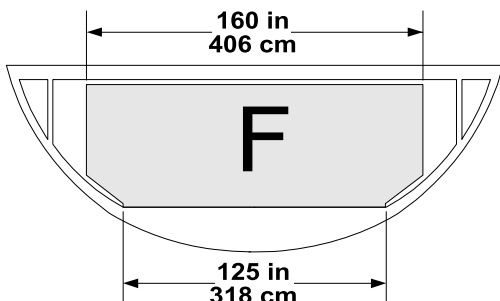
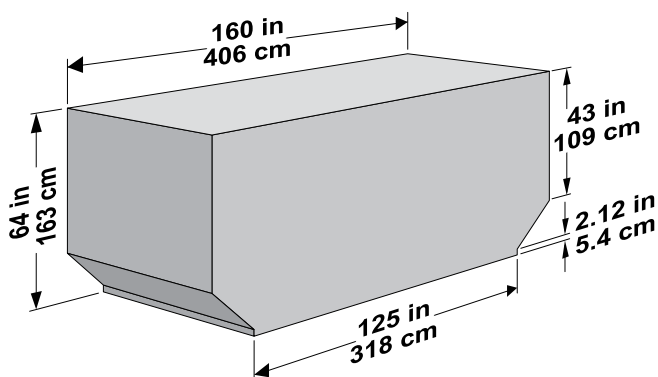
4.5.4 Lower Deck Contours for ULD Size Codes A, M and L

The following contours may be used:

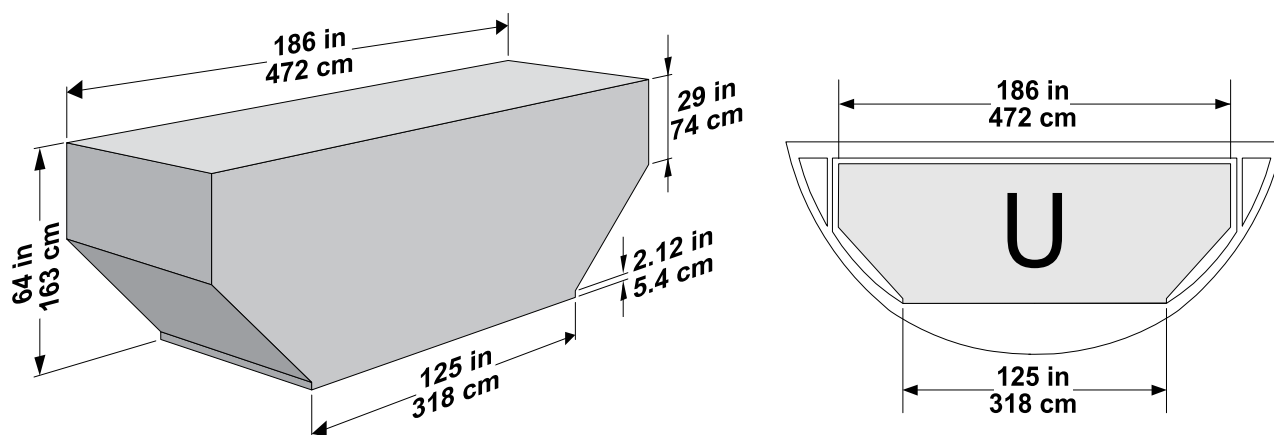
Contour PLD/“P” rectangular contour of 163cm height.



Contour PWG/F contour with two 17,3 inch wings.



Contour PWG/U with two 30,5 inch wings. Maximum contour for B747 Lower Deck.



Weight limits and maximum allowable contour for certain ULD size codes are shown in the following table.

Table 5.1A ULD allowable gross weight and contour.

	ULD		Maximum allowable gross weight of ULD, kg	Maximum allowable contour
	ULD size code	ULD base dimensions, cm		
Main deck*	M	244 x 318	4819	Q7
	A	224 x 318	4819	
	G (20 feet)	606 x 244	9195	
	R (16 feet)	498 x 244	7556	
	Y	140 x 244	2120	Q6
Lower deck	M	318 x 244	5034	P, U
	A	318 x 244	4626	
	K	153,5 x 156	1587	C

4.6.BUP/SMU Build-up

The main purpose of build-up is to load packages in such a way that the load area is used in the most practical way and both cargo and aircraft will not be damaged during transportation.

4.6.1 General requirements

To comply with the pertinent airworthiness regulations, each ULD, pallet net, strap and their components must be inspected prior to build up and load on board the aircraft. Any non-airworthy ULD, net, tie-down strap and their components, must not be used for loading or securing cargo on board of the aircraft.

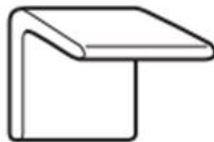
In order to operate ULD safely, meet the airworthiness requirements and load/unload into/from the aircraft without damage to the ULD, cargo and aircraft, the following requirements must be met:

1. Never the forklift blades have to enter in direct contact with the laden ULD. When using the forklift to move the loaded ULD the special devices need to be applied, such as slave pallets or similar means.

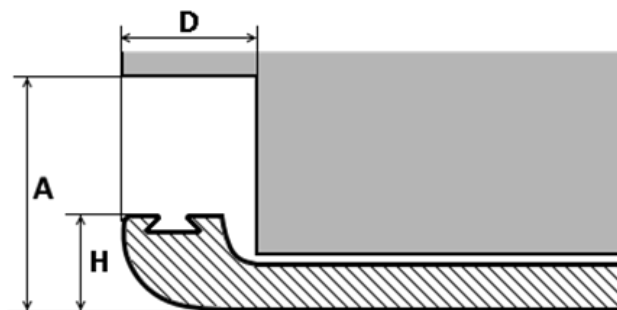
2. Before using ULD, it is required to remove ice, snow and garbage, that can accumulate during storage. No contaminations on internal part of ULDs and base plate of ULD are allowed. It's necessary to remove old tags/labels which could be used earlier.
3. Do not load packages, if they are damaged or seem to be damaged.
4. Packing with WET shipment must always be securely closed and of such construction as to prevent spillage and leakage. Bags and sacks must be water resistant and made tight against shifting of contents during transportation.
5. Carriage of cargo with offset center of gravity is forbidden.
6. All the goods on ULD shall be allocated for one point of unloading.
7. The plastic film for build-up should be transparent.
8. Observe special handling labels "This way up", "Fragile", "Keep Dry" and others:



9. Because of the requirement to secure net fittings to the pallet edge-rail seat track and later to restrict a pallet on the aircraft a cargo should not be placed within 50 mm of the outside edge of the pallet (up to height of 150 mm above conveying surface of aircraft cargo hold as a minimum).
10. In order to avoid cutting or grinding of tie-down straps, ropes and nets, it is required to cover sharp edges of a cargo piece by cloth or strong paper or edge protectors:

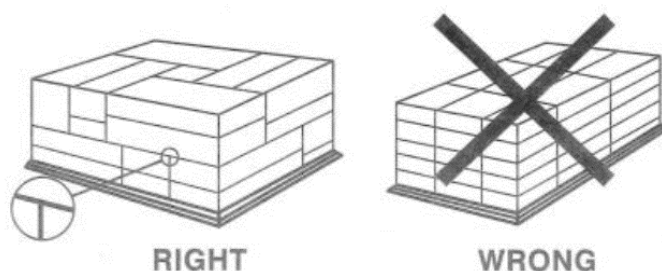


11. The top surface of the pallet edge rail shall be not more than 32 mm (1.25 in) above the conveying surface when in the loaded condition:

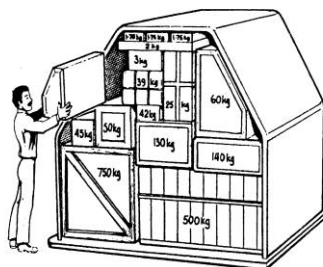


A = 150 mm (6 in) minimum
D = 50 mm (2 in) minimum
H = 32 mm (1.25 in) maximum

12. Whenever rectangular boxes must be stacked, they shall be “T” stacked in overlapping alternate layers:



13. Place heavier items with strong packaging on the bottom and lighter ones with weaker packaging on the top



14. Distribution of load on a ULD should be arranged in such a way to ensure that location of CG of built up ULD will be within the limits specified in table 12.1. High-density cargo must be placed in the center of ULD. See figure 4.2A below.

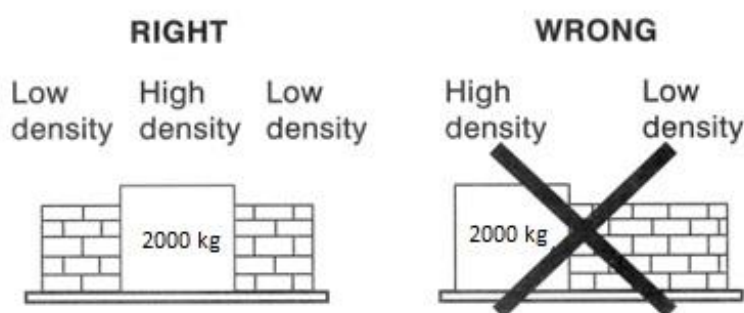
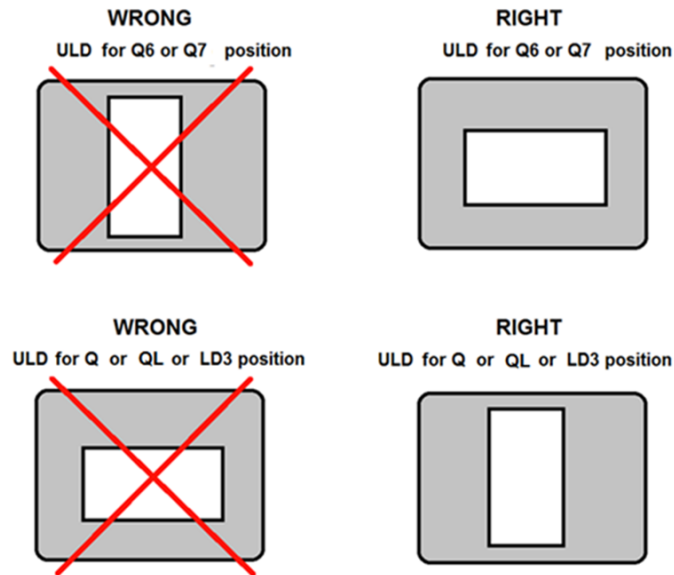


Table 12.1 C.G. location limits for ULDs.

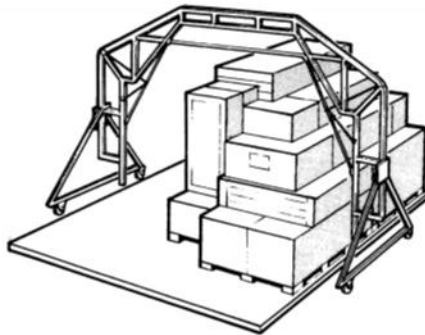
ULD		ALLOWABLE CENTER OF GRAVITY RANGE, INCHES (CM)		
SIZE CODE	BASE in inches (cm)	C.G. HEIGHT inches (cm)	LATERAL	LONGITUDIAL
A	88.0 x 125.0 (224 x 318)	0 - 48.0 (122)	±8.8 (22)	± 12.5 (32)
G	96 x 238.5 (244 x 606)	0 - 48.0 (122)	±9.6 (24)	± 11.9 (30)
M	96 x 125 (244 x 318)	0 - 48.0 (122)	±9.6 (24)	± 12.5 (32)
R	96.0 x 196.0 (244 x 494)	0 - 48.0 (122)	±9.6 (24)	±9.8 (25)

Note: ULD with centre of gravity out of above limits is not allowed for transportation

15. It is recommended that a piece of cargo is placed on a pallet so that long side of the cargo be parallel with flight direction. In other words, long side of the cargo should be in parallel with long side of a ULD which is intended for Q6 or Q7 positions and perpendicularly to long side of a ULD which is intended for Q or QL positions.



16. Cargo on the pallet shall be stowed in such a way that desired contour of the cargo is kept. Special profiles for building-up may be used in order to keep a desired contour.



17. All load on a pallet must be restrained in five restraint directions (Forward, Aft, Left, Right, Up) either by a pallet net or tie-down straps.
18. In case of heavy rain or snow season, additional plastic cover may be used. This cover shall be removed before loading ULD into aircraft.
19. The plastic material used for covering cargo on pallets or for wrapping containers should be typically from 0.03 to 0.05mm thick polyethylene film and shall have fire retardant properties of 14CFR/CS-25. Appendix F Part I, paragraphs (a)(2)(iv) and (a)(1)(ii): they shall be self extinguishing and exhibit an average burn length not exceeding 8 in (203mm) and average flame time after removal of the flame source (burner) not exceeding 15 s, when tested vertically.

4.6.1.1 Additional build-up requirements in TTC

Build-up of cargo in TTC shall be done according to the manufacturer's guidelines (for example, Envirotainer Operations Manuals).

4.6.1.2 Additional Requirements for VUN Cargo Packaging

1. External packaging of VUN shipments should not depict its contents;
2. Packaging should be tamper-proof and prevent opening or access to contents without clearly visible signs of such interference;
3. It is recommended to place internal packaging of such goods into external packaging made of strong material (wood, plastic, metal, plywood) with additional strapping of such packaging with strong straps.

4.6.2 Shoring

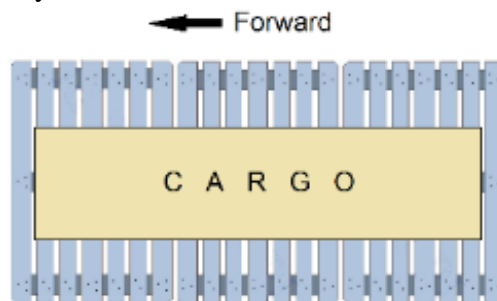
The purpose of shoring is to spread out concentrated loads by providing effective load redistribution in a way that a portion of the cargo weight is distributed outside the original cargo footprint, thus reducing linear and/or area loads. To redistribute a portion of any concentrated load, shoring must be capable of providing adequate stiffness and strength.

In order to protect aircraft structural components from overstress and ULD base from damages each item of cargo in excess of 500 kg weight shall be checked in order to determine shoring necessity or necessity for additional footings.

4.6.2.1 Elementary shoring

General idea of elementary shoring is to enlarge the footprint of heavy pieces of cargo on non-rigid ULD. One of the most common and easily available elementary shoring techniques is using a wooden pallet to enlarge the piece of cargo's footprint. Due to its height (usually 10 to 15 cm), it constitutes a very effective means of equal spreading the load within the limits resulting from its dimensions: for the area load purpose, a typical 1.0 m x 1.2 m industrial pallet offers an area of 1.2 m², hence allows effective shoring of loads.

Several wooden pallets may be used for the same load.



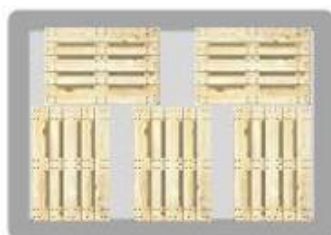
Normally, elementary shoring is not required on rigid pallets. However, common sense should be used (e.g. heavy cargo has small metal footings or casters). An addition, elementary shoring is not required on non-rigid pallets if cargo has flat bottom.

Elementary shoring method requirements and limits:

- Minimum thickness of shoring material not less than 5 cm
- Piece of cargo is limited by 5000 kg;

Typical shoring material:

- Wooden Planks;
- Wooden sheets;
- Plywood (two layers of 2,5 cm is allowed);
- Wooden pallets (up to 1000 kg on non-rigid pallet, or up to 2000 kg on rigid pallet)



Wooden pallets (EPAL's)



Plywood/Fiberboard



Wooden planks

4.6.3 Tie-down (lashing)

Cargo loaded on a pallet is normally restrained by pallet net, the strength of which is certified for the maximum gross weight of the pallet.

4.6.3.1 Supplementary tie-down to pallet in addition to pallet net

Supplementary tie-down of cargo to pallet should be used in order to prevent hazardous shift and/or tilt of cargo under properly installed pallet net.

In the following cases supplementary tie-down is required:

1. Cargo that is of shape and/or density that could become a hazard to the airplane structure or systems under operational loads (e.g. dense or piercing items) must be tied down to the ULD for all five restraint directions with use of supplementary tie-down straps.
2. Empty space left on the pallet between an edge and the load: the load can shift. Such a load should be tied down in order to prevent shifting to empty space.
Very low pallet load: the net even at maximum adjustment may not closely fit the load, hence may leave it free to move below it; The load should be tied down in Upward restraint direction.
3. Tall items which are not surrounded by other load should be tied down in direction(s) of potential tilting.
4. Heavy piece of load in excess of 1000kg weight which is adjacent (on the same pallet) to woundable cargo (e.g. unpacked cargo or cargo packed with use of weak packaging material like fiberboard), because the heavy piece of cargo may damage this adjacent cargo. Tie-down of the heavy piece for the direction toward the woundable cargo should be arranged.

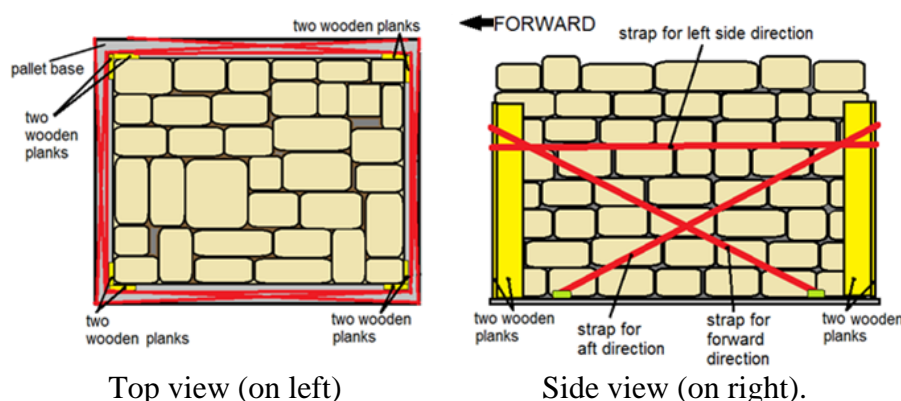
4.6.3.2 Cargo contour change prevention

Cargo contour change such as leant, collapse contour, may constitute a hazard, as the load may impact onto the aircraft structure, but a pallet net may prove insufficient restraint to guarantee against it, for instance:

- there are too numerous (over typically 8) layers of small packages;
- there is naturally unstable or deformable cargo, e.g. textile bundles, etc.

Supplementary tie-downs forming triangles to oppose the possible trend to parallelogram deformation of the net: install tie-down straps at maximum available tightening in the horizontal direction, bearing between half and two thirds of cargo height, prior to installing net. When small to medium size packages are not “T” stacked the tie-down is more effective with continuous boards are installed, prior to strapping, at each corner of the pallet base.

Figure 6.3.2.A Contour change prevention by supplementary tie-down straps



1. When package layers exhibit a tendency to expand or slip over each other, an effective preventive method is wrapping it with tightened straps, rigid banding strip or Shrink Wrap plastic.

- When stacking particularly crushable/deformable packages, e.g. bags, textile bundles, etc., it may be necessary to insert a stable, flat, intermediate floor with planks, plywood, wooden pallets between layers or alternate layers of stiffer packages.

4.6.3.3 Tie-down inside a container

Tie-down inside a container mandatory when:

- Container is not fully filled with load, receptacles with liquid or powder or gels, packages with “This way up” marking, items sensitive against shock or tilting must be restrained by use of tie-down.
- Container is not fully filled with load and contains Dangerous Goods ALL load must be restrained by use of tie-down.
- Heavy pieces (over 150 kg) in container must be tied down individually in any case.

A container is defined as fully filled with load when both conditions are met:

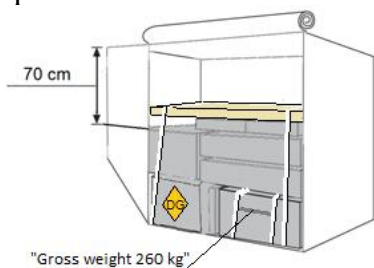
- Entire floor area is occupied with load (free floor area is less than 1 square foot);
- The container is filled with load up to the height of 16 inches (40 cm) below the ceiling (consider distance between the ceiling and the lowest of top packages).

Table 6.3.3.A Tie-down inside the container

What \ Where	If container fully loaded	If container not fully loaded or without DG	If container not fully loaded or with DG
All items	Not required	Not required	Required
Heavy item (over 150 kg)	Required	Required, individually	Required, individually
Package that requires orientation (e.g. with “This side up” marking)	Not required	Required	Required
Dangerous goods	Not required	-	Required

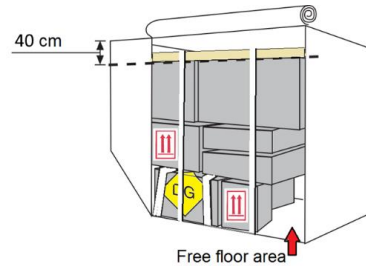
Example 1:

The container is not Completely filled with load because distance between the ceiling and the lowest top package is 70 cm. Tie down of all items is required.



Example 2:

The container is not fully loaded with cargo because there is a big free area on the floor. Tie down of all items inside the container is required. DG item to be tied-down individually.

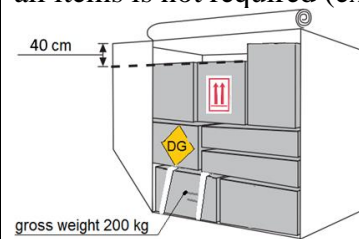


If tie down of ALL load in a container is required then use any of the two following methods:

- ✓ Distribute load so that tops of all packages to be at a similar height. Spread supporting planks or wood platforms across over (on top) of all packages. Put tie-down rope or straps over all planks or platforms and attach it at the tie-down attachment points. HEA pieces must be tied down individually. When this method is not possible use the 2nd method below.

Example 3:

The container is fully filled with load. Tie down of all items is not required (except for HEA item).



4.7. Dangerous goods in BUP/SMU shipments

4.7.1 General

Dangerous Goods (DG) are articles or substances which are capable of posing a hazard to health, safety, property or the environment, when transported by air and which are shown in the list of dangerous goods or classified according to criteria shown in current edition of «Technical Instructions for the Safe Transport of Dangerous Goods by Air» (TI ICAO) or «Dangerous Goods Regulations» (DGR IATA).

A shipper must fully comply (proper classification, identification, marking and labelling, documentation) with TI ICAO/DGR IATA when offering a consignment of dangerous goods to ABC.

4.7.2 DG in BUP/SMU

DG are forbidden under BUP/SMU except listed below:

- UN 2807 Magnetized material (MAG);
- UN 1845 Carbon dioxide, solid (Dry ice) used as a refrigerant for UN 3373 Biological substance, Category B or ID 8000 Consumer commodity or as a refrigerant for other than dangerous goods prepared according to Packing Instruction 954 (ICE);
- ID 8000 Consumer commodities;
- UN 3373 Biological substance, category B (RDS);
- UN 3245 Genetically modified organisms/microorganisms;
- UN 3481 Lithium ion batteries in/with equipment meeting the provisions of Section II of Packing instructions 966, 967 (ELI);
- UN 3091 Lithium metal batteries in/with equipment meeting the provisions of Section II of Packing Instructions 969, 970 (ELM);
- UN 3164 Articles, pressurized, hydraulic or Articles, pressurized, hydraulic pneumatic prepared according to PI 208 (a);
- Dangerous goods in excepted quantities (REQ);

All applicable requirements in IATA DGR/TI ICAO must be observed and complied with.

4.8.ULD handling

ULDs are classified as removable aircraft parts and are therefore subject to certification requirements established by regulatory authorities. A damaged ULD, especially with sharp protrusions, creates a risk of damage to aircraft interiors, loading equipment, cargo and mail, as well as the people handling the ULD.

Whether empty or laden, ULD serviceability check shall be conducted by checking against the ULD damage limits in the course of daily operations, including but not limited to the following occasions:

- prior to build up;
- prior to dispatch to the carrier;
- during inventory check.

4.8.1 ULD handling requirements

1. ABC is the Unilode customer in regard to ULD services and uses mostly Unilode ULD except for the special purpose ULD e.g TCC. So it's generally R7 owner code which is marked on the ULD, however the exceptions may take place and some other owner codes may be met too, such as CV, CX, AC, SV, RU, KE and some others. It is because all those airlines as well as some others are Unilode customers and it can appear that their ULD are not yet re-branded to R7. In case of doubts to what airline the specific ULD relates the request is to be sent to the Unilode address freighters@unilode.com or to ABC .
2. The ULD received from ABC have to be kept separately from other airlines ULD.
3. Storage on the ground is not allowed under any circumstances for laden or empty ULD.
4. Laden ULDs shall only be stored on heavy-duty ULD racks, dollies or slave pallets equipped with casters, rollers, etc.
5. Never move or store laden ULD directly with the forklift tines.
6. Store the containers under cover whenever possible and always on a suitable base support system, e.g. dolly, roller matting. The empty containers may be also stored on the appropriate dunnage.
7. ULD which are store in the open shall be secured against strong winds, rain and other adverse conditions.
8. Containers doors and covers must be kept close.
9. Do not stack the containers.
10. Do not place load on the roof of container.
11. Pallets shall be stacked in pallet racks. In case pallet rack s are not available, the pallets may be stacked in a dedicated spot on appropriate dunnage, so that the pallet do not bow or become out of shape.
12. Containers, pallets and nets shall be checked for damages before storing.
13. ABC operates pallets that have a fixed net attachment. Pallet net must not be removed from the pallet. If the net is damaged or missing, the pallet is deemed unserviceable and must be taken out of service.
14. The unserviceable ULD shall be stored separately until their return to ABC
15. Whenever forklifts are used for positioning ULD, the driver shall have undergone training specific to ULD handling.
16. The forklift must be of appropriate size and for the operations and the forklift tines shall always be of equal and sufficient length to lift the empty ULD across the full dimension of the base.
17. Any purpose- built adaptation to facilitate the use of a forklift in handling ULD shall take into account the fact that ULD are of lightweight structure requiring base support at all times and any deviation may cause damage to the ULD.
18. Do not place pallets on their edges unless they are stored in special pallet rack designed for this purpose.
19. Only trained and authorized persons should have access to the ULD storage area and equipment.
20. Facilities performing transport and movement of ULD shall be equipped such that ULD are exposed to damage. Facilities shall include sufficient equipment to transport or move ULD. All equipment used in the transport and movement of ULD in ULD operations area shall be correctly maintained.
21. Any vehicle used for transport of ULD of airport on road shall comply with the conveyor and restraint functional requirements of AHM960, ULD transport vehicle. Rollers, other hardware, and powered loading system shall be maintained in good working order.

22. During the transfer of ULD, the transferring party shall provide the receiving party a receipt for the transferred unit. The transferring party shall be entitled to a confirmation from the receiving party. In the absence of the receipt, the transferring party shall be responsible for maintaining accurate and easily accessible records of all ULD renders for 360 days after the transfer.
23. Always open container doors and/or remove cargo nets without damaging the door/nets/corner ropes. Doors and/or cargo nets shall never be cut during the breakdown process.
24. Container doors shall be closed and latched shut after the container contents are removed.
25. All other aspects of ULD Handling and the relevant training requirements are enumerated in section 9 of IATA Unit Load Device (ULD) Regulations and have to be adhered to.
The demurrage fees, the non return value for ULD and other relevant information is set forth in “General Terms for the Use of Unit Load Devices and Other Loading Equipment Loaned or Receipt by the Carrier’s Customer” and published on ABC web site: [https://www.air-bridgecargo.com/files/General terms ULD ver 14042015 final.pdf](https://www.air-bridgecargo.com/files/General_terms_ULD_ver_14042015_final.pdf)

4.8.2 ULD Damage Limits

The ULD damage limits are denoted in the ODLN. The ODLN is placed on the ULD, such as the pallet net, the pallet, and the container. A ULD found at serviceability check to exceed one of the allowable damage limits shown on the ODLN is unserviceable (non-airworthy or non-aircraft safe), and must not be loaded onto an aircraft, except where expressly allowed with limited load or other restrictions (e.g. additional tie-down, etc.) in the manufacturer’s documentation (CMM) or ABC instructions based on it.

Notwithstanding the related information shown on the ODLN a pallet or a container shall be deemed unserviceable if exhibits at least one of the following defects:

- a hole, crack, tear in the base sheet;
- any sharp protrusion;
- any protrusion, e.g. hanging rivet, bent profile edge, bulge, burr, etc. below the bottom of the base sheet.

4.8.3 The ODLN marking

Containers:

The size of ODLN is A4. The ODLN is placed on the upper area of the container panels
See example below:

OPERATIONAL DAMAGE LIMITS FOR CONTAINER FOR REFERENCE ONLY			- DO NOT COVER - Visual Check of Container is REQUIRED BEFORE USE	MANUFACTURER XYZ CONTAINER TYPE/SERIES xxxxxx NOTICE Reference No. xxxxxx
Location	Component	Code	ULD may not be used if any of the conditions below are exceeded	
Base	Sheet	SB	No more the xxx inch / xxx mm sized cracks, holes or indentations	
	Extrusion	EB	No broken or missing parts	
			No penetration into hollow chamber	
			No more the xxx inch / xxx mm sized cracks in any direction	
			No more the xxx inch / xxx mm sized gouges	
			No more than 1 inch / 25,4 mm bowed, warped or deflected extrusion	
	Tie-Down	TB	No broken, cracked or deformed Tie-Down Lips	
	Fastener	FB	No loose or damaged attachment to the container structure	
			No more than xxx broken, loose or missing rivets	
			No more the xxx inch / xxx mm between broken, loose or missing rivets	
Fabric Doors	Corner	CB	No deformed, broken or missing corner connections	
	Curtain	CD	No more the xxx inch / xxx mm sized holes	
	Lock	LD	No broken, loose or missing Hardware/Locks	
EITHER OR	Webbing	WD	No damaged / worn-out restraint straps	
			No damaged / missing stitching	
Solid Doors	Panel	PD	No more than within original contour deflection	
	Lock	LD	No broken, loose or missing parts	
			No broken, cracked, bent, loose or missing bottom restraints and easy to lock	
Panels (incl. Doors)	Hinge	HD	No broken, cracked, bent, loose or missing parts	
	Sheet	SP	No more than xxx holes / cracks with no more than xxx inch / xxx mm of size	
			No less than xxx inch / xxx mm between holes/cracks	
			No tears / holes within xxx inch / xxx mm of frame extrusions	
	Extrusion	EP	No more than 1 inch / 25,4 mm deflection of roof sheet	
			No more the xxx inch / xxx mm sized cracks in any direction	
Corner Connections	Fastener	FP	No more than 1 inch / 25,4 mm deflection	
			No broken, fractured or crushed stiffeners	
	Gusset	CP	No more than xxx broken, loose or missing fasteners	
Others	Welding		No less than xxx inch / xxx mm between broken, loose or missing rivets	
	Webbing	WP	No broken, cracked, bent or loose corner gussets	
	TSO	TM	No cracks in original weldings (for welded frames only)	
Special Requirements			No damaged, worn-out or missing pull-straps	
When in doubt refer to CMM			In place and legible	
			Owner Airline / Manufacturer Requirements	
			Notice for operational use ONLY	
			Serviceability NOT affected when missing or legible	

Pallet:

The ODLN is placed in a pallet corner.
The size of ODLN is A4. See example below:

OPERATIONAL DAMAGE LIMITS FOR PALLET FOR REFERENCE ONLY			- DO NOT COVER - Visual Check of Pallet is REQUIRED BEFORE USE	MANUFACTURER XYZ PALLET TYPE/SERIES xxxxxx NOTICE Reference No. xxxxxx
Location	Component	Code	ULD MAY NOT BE USED IF ANY OF THE CONDITIONS BELOW ARE EXCEEDED	
Pallet	Sheet	SB	NO MORE THAN XXX INCH / XXX MM SIZED CRACKS, HOLES OR INDENTATIONS	
	Extrusion	EB	NO BROKEN OR MISSING PARTS	
			NO PENETRATION INTO HOLLOW CHAMBER	
			NO MORE THAN XXX INCH / XXX MM SIZED CRACKS IN ANY DIRECTION	
			NO MORE THAN XXX INCH / XXX MM SIZED GOUGES	
			NO MORE THAN 1 INCH / 25,4 MM BOWED, WARPED OR DEFLECTED EXTRUSION	
	Tie-Down	TB	NO BROKEN, CRACKED OR DEFORMED TIE-DOWN LIPS	
	Fastener	FB	NO CLOGGING WITH DIRT OR OTHER CONTAMINANTS	
			NO MORE THAN XXX BROKEN, LOOSE OR MISSING RIVETS	
	Corner Connection	CB	NO LESS THAN XXX INCH / XXX MM BETWEEN BROKEN, LOOSE OR MISSING RIVETS	
Others	TSO	TM	NO BROKEN, CRACKED, BENT OR LOOSE CORNER CONNECTIONS	
			NO DEFORMED, BROKEN OR MISSING CORNER ASSEMBLIES	
			NO CRACKS IN ORIGINAL CORNER WELDINGS (FOR WELDED PALLET ONLY)	
Special Requirements			IN PLACE AND LEGIBLE	
			OWNER AIRLINE / MANUFACTURER REQUIREMENTS	
When in doubt refer to CMM			Notice for operational use ONLY	
			Serviceability NOT affected when missing or illegible	

Pallet nets:

The size is A5.

The ODLN is placed together with the net TSO marking on a one mesh size placard. See example below:

OPERATIONAL DAMAGE LIMITS FOR PALLET NET			- DO NOT COVER -
FOR REFERENCE ONLY		Visual Check of Cargo Pallet Net is REQUIRED BEFORE USE	
			MANUFACTURER XYZ NET TYPE/SERIES xxxxxx NOTICE Reference No. xxxxxx
Location	Component	Code	ULD MAY NOT BE USED IF ANY OF THE CONDITIONS BELOW ARE EXCEEDED
Braid / Rope	General	GN	NO CONTAMINATION; EXPIRY DATE NOT EXCEEDED
	Mesh + Border-Cords	MN	NO SEVERED OR PARTLY SEVERED CORDS
			NO CUT OR BROKEN STRANDS
			NO MORE THAN SLIGHT ABRASION
	Lashing-Lines	LN	NO MISSING LASHING LINES NO LINES SHORTENED BEYOND THAT REQUIRED FOR THE PALLET LOAD HEIGHT
Hardware	Attachment Fittings	FN	NO MISSING ATTACHMENT FITTINGS
			NO DISTORTION PREVENTING NORMAL USE
			NO CORROSION PREVENTING NORMAL USE
	Adjusting Hooks	HN	NO MORE THAN ONE MISSING FROM ANY NET FACE (IF MORE, ADJUST USING HOOKS ON OTHER THREE FACES)
Labels / Tags	TSO	TM	IN PLACE AND LEGIBLE
Special requirements			NOTE THAT IT MAY BE POSSIBLE TO USE A NET WITH DAMAGE GREATER THAN THE LIMITS SET OUT, BY REDUCING THE MAXIMUM PAYLOAD ON THE PALLET. A PAYLOAD VERSUS DAMAGE TABLE IS INCLUDED IN THE CMM. ALTERNATIVELY, IT MAY BE POSSIBLE TO EFFECT A REPAIR USING A 'TEMPORARY REPAIR STRAP' (SEE CMM FOR DETAILS) IN SOME CIRCUMSTANCES, IT IS PERMITTED TO 'DOUBLE NET' IN ORDER TO
Compatible pallets			CERTIFICATION CODE OF COMPATIBLE PALLET
When in doubt refer to CMM			Notice for operational use ONLY Serviceability NOT affected when missing or illegible

4.8.4 Unserviceable ULD Handling

Unserviceable ULD is to be:

- marked as unserviceable using unserviceable sticker (tag);
- stored in a separate area identified for this purpose;
- reported and returned to the carrier

4.8.5. Tie-down straps and other loading accessories

Pallet net is the primary tie down restraint for BUP/SMU shipments when laden on the aircraft pallet. However, straps may be used as additional tie-down equipment. Straps is provided by the shipper.

4.9. Shipping documents

The shipping documents which are required by customs and other authorities and under IATA TACT RULES, IATA Dangerous Goods Regulations, IATA Perishable Cargo Regulations, IATA Temperature control regulations shall be available including Consolidation List for consolidated cargo, packing list for personnel belongings. The cargo shall not be accepted for carriages in case of shipping documents are missing or insufficient.

4.9.1 Air waybill completion

The agent shall assure that the AWB is completed and issued in accordance with IATA TACT RULES, other IATA requirements and according the instructions received from the airline including but not limited to:

- the quantity, weight, volume/dimensions shown on the AWB must be consistent with actual weighing/measurement values;
- for cargo requiring special conditions for carriage, appropriate information is entered in the 'Handling Information' box, including specific special handling code; for perishable cargo - temperature range if applicable is to be specified in the 'Handling Information' box;

For BUP:

- “Handling information” of MAWB should contain remarks “Shipper Built Unit” and “BUP”;
- Number of ULDs shall be indicated in “Number of pieces” field; actual number of pieces is to be mentioned as SLAC (Shipper Load and Count) in field “Nature and Quantity of Goods”;

No of Pieces RCP	Gross Weight	Kg / lb	Rate Class Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
1	900.0	K	Q	900.0	47.060	42354.00	CONSOLIDATION SHPT AS . PER ATTACHED MANIFEST
1	824.0	K	Q	824.0	47.060	38777.44	70 SLAC AKE12345R7 70 SLAC AKE23456R7

Chargeable weight is to be not less than sum of pivot weights of units;

For SMU:

- “Handling information” of MAWB should contain remarks “Shipper Load Mixed Unit”, “SMU”
- Number of pieces shall be indicated in “Number of pieces” field,
- SLAC number of pieces per each ULD and ULD information (ID number – mandatory input, cargo weight and contour – optional input) shall be specified in “Nature and Quantity of Goods” field or starting from “No of Pieces RCP” field (see the example below).
- in cases where packaging or cargo is evaluated as deformed or decrepit at acceptance, such defects are reflected in the AWB's 'Nature and Quantity of Goods' box, e.g. "deformed packaging" or "decrepit packaging".

No of Pieces RCP	Gross Weight	Kg / lb	Rate Class Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
140	1724.0	K	Q	1724.0	47.060	81131.44	CONSOLIDATION SHPT AS . PER ATTACHED MANIFEST
LOADING INFORMATION:							
70 PCS	LDD ONTO		AKE12345R7	/ 900.0K			
70 PCS	LDD ONTO		AKE23456R7	/ 824.0K			

4.9.1.1 Air waybill completion requirements for pharmaceuticals products

- 1) “Handling information” must contain:
 - required handling temperature regime;
 - emergency contact 24/7.
- 2) “Nature and quantity of goods” must contain:
 - proper shipping name;
 - dry ice information (if applicable);
 - active container information (set temperature, re-charging/re-icing instructions) (if applicable);
 - information regarding data loggers inside packages (if applicable).

Note: Only one temperature range is allowed on the airwaybill.

4.9.1.2 Air waybill completion requirements for perishables

1) “Handling information” box must contain:

- required temperature transportation range (for example +2C+8C);
- Perishable IMP code (for example, PER);
- Health certificates or other official permits (if applicable).

Note: Health certificates/other official permits should be firmly attached to the AWB and not enclosed with the goods.

2) “Nature and Quantity of Goods” must contain:

- Accurate description of goods (for example, chilled meat)

Note: Only one temperature range is allowed on the airwaybill.

4.9.1.3 Air waybill completion requirements for dangerous goods

If a Shipper's Declaration is not required for dangerous goods, the “Nature and Quantity of Goods” box of the AWB must show the following information. The sequence of the information is optional, but that shown below is preferred:

- UN or ID number (not required for Magnetized material);
- Proper shipping name;
- Number of packages;
- Net quantity per package (only required for UN 1845)

Note1: For UN 3373, it is only necessary to show the text “*BIOLOGICAL SUBSTANCE, CATEGORY B*”, “UN 3373” and the number of packages.

Note2: For *REQ* shipment the following endorsement is required in the “Nature and Quantity of Goods” box of the Air Waybill:

- “Dangerous Goods in Excepted Quantities”;
- The number of packages.

Appendix 1. Bulk Unitization Program (BUP) Declaration

The Shipper/Shipper's Agent and Airbridgecargo Airlines LLC (ABC) acknowledge that it is of paramount importance to adhere to certain rules and regulations when utilizing the Bulk Unitization Program (BUP) for the transport of cargo shipments. To ensure a maximum of flight safety, cargo integrity and high-quality air transportation the Shipper/Shipper's Agent and ABC hereby agree that units delivered under the BUP program have to conform to the following rules and regulations to be acceptable for transportation on ABC.

The Shipper/Shipper's Agent confirms that he has notified his staff members entrusted with build-up of units of the here stated exclusions for BUP units. Provided that the cargo is properly booked, declared, labeled and documented by the customer, the Shipper/Shipper's Agent declares to the best of his knowledge that the BUP units which are built up by him and delivered to ABC for transportation **does not contain** any of the special cargo as listed below:

- Cargo subject to special security measures, e.g. valuable cargo (VAL), works of art;
- Live animals (AVI);
- Dangerous goods (DGR), except:
 - UN 2807 Magnetized material (MAG);
 - UN 1845 Carbon dioxide, solid (Dry ice) used as a refrigerant for UN 3373 Biological substance, Category B or ID 8000 Consumer commodity or as a refrigerant for other than dangerous goods prepared according to Packing Instruction 954 (ICE);
 - ID 8000 Consumer commodities;
 - UN 3373 Biological substance, category B (RDS);
 - UN 3245 Genetically modified organisms/microorganisms;
 - UN 3481 Lithium ion batteries in/with equipment meeting the provisions of Section II of Packing instructions 966, 967 (ELI);
 - UN 3091 Lithium metal batteries in/with equipment meeting the provisions of Section II of Packing Instructions 969, 970 (ELM);
 - UN 3164 Articles, pressurized, hydraulic or Articles, pressurized, hydraulic pneumatic prepared according to PI 208 (a);
 - Dangerous goods in excepted quantities (REQ);
- Cargo exceeding contour (with overhang);
- Single weight per piece over 5000 kg;
- Piercing and cutting items;
- Cargo without security status (SPX/SCO/SHR)

Only "Ready for Carriage" BUPs must be delivered (build up in compliance with ABC Operational Guidelines for BUP and SMU Shipments). "Handling information" of MAWB should contain remarks "Shipper Built Unit" and "BUP". Number of ULDs shall be indicated in "Number of pieces" field; actual number of pieces is to be mentioned as SLAC (Shipper Load and Count) in field "Nature and Quantity of Goods", and ABC cannot hold any responsibility for number of pieces in ULD built up by Shipper/ Shipper's Agent.

Furthermore, the Shipper/Shipper's Agent confirms that ABC Operational Guidelines for BUP and SMU Shipments has been handed over to him and is issued to instruct staff members entrusted with ULD build-up about the rules of ABC for build-up, transportation and storage of ULD. Proofs about such instructions must be internally documented and filed by the Shipper/Shipper's Agent.

The declaration is effective from _____ and valid till _____ .

Shipper/Forwarding Agent:

Signature

Name

Job title

Appendix 2 Shipper Loaded Mixed Unit (SMU) Declaration

The Shipper/Shipper's Agent and Airbridgecargo Airlines LLC (ABC) acknowledge that it is of paramount importance to adhere to certain rules and regulations when utilizing a locally agreed Pallet loading and Accounting Program for the delivery of cargo shipments. To ensure a maximum of flight safety, cargo integrity and high-quality air transportation the Shipper/Forwarding Agent and ABC hereby agree that units delivered under the above mentioned program have to conform to the following rules and regulations to be acceptable for transportation on ABC.

The Shipper/Shipper's agent confirms that he has notified his staff members entrusted with build-up of units of the here stated exclusions for Shipper Loaded Mixed Units (SMU). Provided that the cargo is properly booked, declared, labeled and documented by the customer, the Shipper/Forwarding Agent confirms the Unit(s) which is/are built up by the Shipper/Forwarding Agent and delivered to ABC for transportation **does not contain** any of the cargo as listed below:

- Cargo subject to special security measures, e.g. valuable cargo (VAL), works of art;
- Live animals (AVI);
- Dangerous goods (DGR), except
 - UN 2807 Magnetized material (MAG);
 - UN 1845 Carbon dioxide, solid (Dry ice) used as a refrigerant for UN 3373 Biological substance, Category B or ID 8000 Consumer commodity or as a refrigerant for other than dangerous goods prepared according to Packing Instruction 954 (ICE);
 - UN 1845 Carbon dioxide, solid (Dry ice) used as a refrigerant for other than dangerous goods prepared according to Packing Instruction 954 (ICE);
 - ID 8000 Consumer commodities;
 - UN 3373 Biological substance, category B (RDS);
 - UN 3245 Genetically modified organisms/microorganisms;
 - UN 3481 Lithium ion batteries in/with equipment meeting the provisions of Section II of Packing instructions 966, 967 (ELI);
 - UN 3091 Lithium metal batteries in/with equipment meeting the provisions of Section II of Packing Instructions 969, 970 (ELM);
 - UN 3164 Articles, pressurized, hydraulic or Articles, pressurized, hydraulic pneumatic prepared according to PI 208 (a);
 - Dangerous goods in excepted quantities (REQ);
- Cargo exceeding contour (with overhang);
- Single weight per piece over 5000 kg;
- Piercing and cutting items;
- Cargo without security status (SPX/SCO/SHR)

In addition to the above mentioned rules and regulations the Shipper/Shipper's Agent also declares that the individual shipments loaded on this SMU are "Ready for Carriage" according to the respective IATA TACT Rules and ABC Operational Guidelines for BUP and SMU Shipments, and shipments correspond with documents and booked via values especially referring to number of pieces, weight and volume. ULD numbers used for SMU are specified in Air Waybill and ABC cannot hold any responsibility for number of pieces in ULD built up by Shipper /Shipper's Agent.

The Shipper/Shipper's Agent assumes liability for all damages or loss or any other irregularity (inc. piece count) to cargo arising out of or connected with the build-up or the loading of the SMU and shall set free and hold harmless ABC for therewith connected claims made by third parties.

Furthermore, the Shipper/Shipper's Agent confirms that ABC Operational Guidelines for BUP and SMU Shipments has been handed over to him and is issued to instruct staff members entrusted with ULD build-up about the rules of ABC for build-up, transportation and storage of ULD. Proofs about such instructions must be internally documented and filed by the Shipper/Shipper's Agent.

The declaration is effective from _____ and valid till _____ .

Shipper/Shipper's Agent:

Signature

Name

Job title L.S