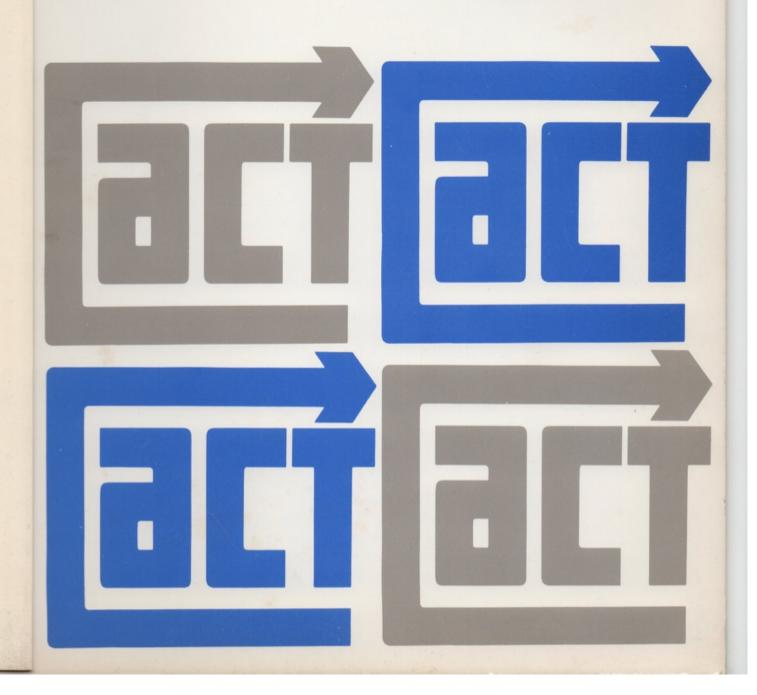
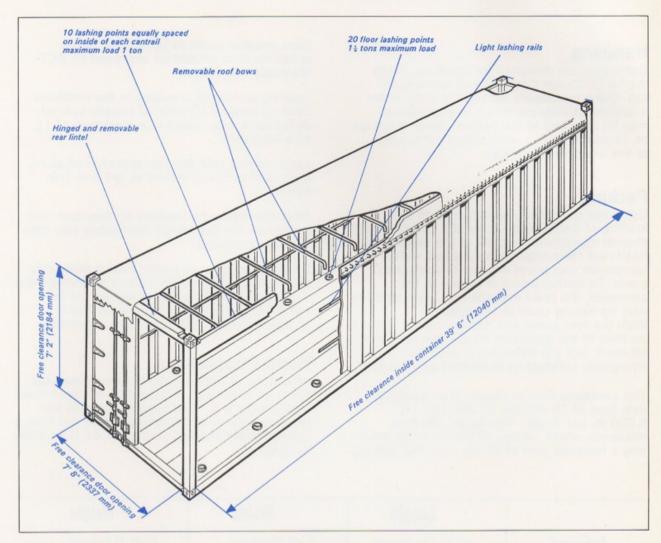
service information







A 40 ft open top container for operation by road, rail and sea of 30 tons gross weight and constructed to Transport International Routier, Lloyds and International Standards Organisation requirements.

Construction

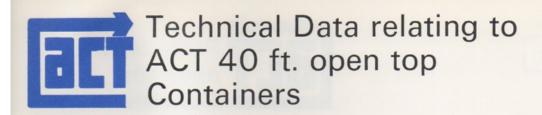
These containers are constructed to stringent specifications to ensure trouble free operation and maximum protection of the cargo. The containers are of welded construction with the end frames, longitudinal members, floor bearers, roof bows, side walls and front bulk head all of steel. Floors are of timber and the doors are of steel faced plywood. Two locking bars are provided on each door and when closed the left-hand door cannot be opened prior to the other door.

The roof is made from reinforced plastic material, fixed round the perimeter so that no water can pass into the unit, and supported by

roof bows so that water will not stand on the top. The cover can be easily rolled back to the front head rail.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.). All timber used in the construction is treated as required by the Australian Commonwealth Department of Health.



Handling

Containers are designed for handling, using the I.S.O. Corner Castings and specialised top-lifting equipment. Where the latter is not available appropriate slings and spreaders may be attached to the bottom corner castings, or, providing only a vertical force is applied, to the top corner castings.

Packing

Open top containers are designed to ease the loading of particularly heavy lifts and awkward shaped equipment. Instead of the usual hard fixed roof the container is supplied with removable roof bows and reinforced plastic cover. To further increase access to the container, the lintel over the end opening doors may be swung open or removed. With the roof bows and lintel removed, there is no limit to the operating head room for a fork lift truck, but the following should be stringently adhered to as regards axle loading.

The container floor is designed to accept an axle load of 16,000 lbs. (7,260 kg), i.e. 8,000 lb. per wheel. This figure assumes minimum wheel centres of 30 ins. (760 mm) and a footprint area of 22 sq. ins. (142 cm sq).

Concentrated loads to be applied to the container floor should be approved by ACT Materials Handling.

Lashing points are provided in the container floor—a total of 20 with 10 equally spaced down each side—rated at a maximum of 1½ tons load each.

Light lashing rails are also provided all along each wall of the container at $\frac{1}{3}$ rd and $\frac{2}{3}$ rds height.

Roof bows may be handled by one man, but to remove the door lintel completely two men would be required.

Since the reinforced plastic roof is inherently prone to damage, cargo subject to damage due to the ingress of rain water should not be moved in this type of container unless it receives some sort of secondary protection.

Road Regulations

Where the container is to be transported on the public highway it should be borne in mind that current U.K. road legislation limits the gross weight of vehicles to 32 tons. For further details please consult your local ACT(A) office or agent.

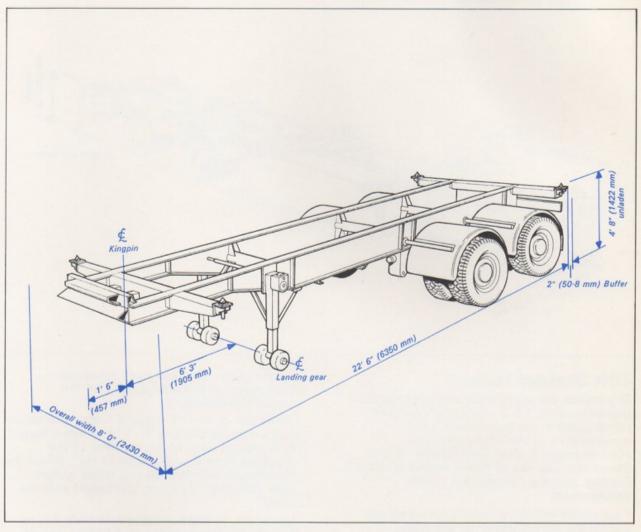
	Length	Width	Height
External	40′ 0″ (12,190 mm)	8′ 0″ (2,435 mm)	8′ 6″ (2,588 mm)
Internal	39′ 6″ (12,040 mm)	6' 5" (1,956 mm) between top rails 7' 8" (2,337 mm) between side panels	7' $9\frac{1}{2}$ " (2,356 mm) at centre 7' 8" (2,337 mm) at sides
Doors		7′ 8″ (2,337 mm)	7′ 5½″ (2,271 mm)
Tare	10,600 lbs. (4,810 kg)	_	_
Payload	56,600 lbs. (25,673 kg)	-	
Capacity	2,300 cu. ft. (65 m ³)	-	



Associated Container Transportation (Australia) Ltd.

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20ft Skeletal Trailers

The trailers are specifically designed for the transport of 20' I.S.O. containers and are constructed in accordance with the requirements of the Motor Vehicles (Construction & Use) Regulations, British Standards, Society of Motor Manufacturers & Traders, and the Department of the Environment.

Four positive locking twistlocks locate and secure the container to the trailer. Two-speed landing legs are provided to enable efficient operation in coupling and uncoupling from the tractor unit.

The air-line coupling points on the trailer are in accordance with S.M.M.T. data sheet T-1H, i.e. service line—C type female coupling, auxiliary line—CA type male coupling. A seven-pin connector is used for the electrical connections.

The depth of the 20' General Cargo Container floors is approximately 6". The unladen height

from ground level to the top face of the container floor is approximately 61". When the container is fully loaded (i.e. gross weight 20 tons) this height reduces to $58\frac{3}{4}$ ".

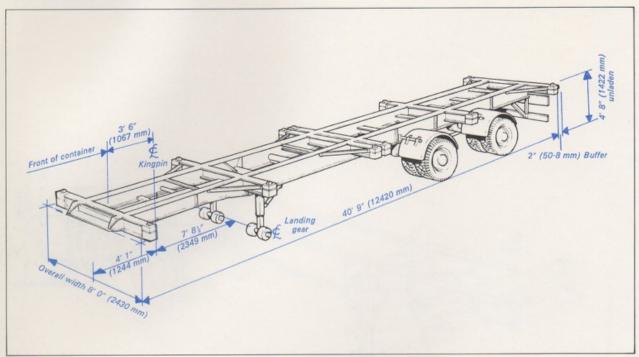
The trailer weights do not exceed $2\frac{3}{4}$ tons. Therefore when coupled to tractor units of not more than $5\frac{1}{4}$ tons, and carrying containers of gross weight 20 tons, the gross vehicle weights do not exceed the current legislative restriction of 28 tons for vehicle combinations of this length.

Tractor units for use with these trailers must be capable of carrying a load of 10 tons on the rear axle and have a fifth wheel coupling plate height of between 49" and 54". The king-pin centre line should be between 12" and 24" forward of the rear axle.

Overall length of the Tractor Unit/Trailer combination will vary depending on which tractor unit is used, but will generally be between 31' and 34'.

See overleaf for Trailers-40-ft. Skeletal





40ft Skeletal Trailers

The trailers are specifically designed for the transport of 40' I.S.O. containers and are constructed in accordance with the requirements of the Motor Vehicles (Construction & Use) Regulations, British Standards, Society of Motor Manufacturers & Traders, and the Department of the Environment.

Four positive locking twistlocks locate and secure the 40' container to the trailer. Two-speed landing legs are provided to enable efficient operation in coupling and uncoupling from the tractor unit.

Extra twistlocks are provided to enable two 20' I.S.O. containers or, alternatively, one centrally mounted 20' I.S.O. container to be carried on the trailer.

These intermediate twistlocks must be retracted below the top face of the container support pad when carrying a 40' I.S.O. container on the trailer.

The air-line coupling points on the trailer are in accordance with S.M.M.T. data sheet T-1H, i.e. service line—C type female coupling,

auxiliary line—CA type male coupling. A seven-pin connector is used for the electrical connections.

The depth of the 40' General Cargo Container floors is approximately 7". The unladen height from ground level to the top face of the container floor is approximately 62". When the container is fully loaded (i.e. gross weight approximately 22½ tons) this height reduces to 59¾".

The trailer weights are approximately 4 tons. Therefore when coupled to a tractor unit of $5\frac{1}{2}$ tons the carrying capacity of the 40' container is limited to $22\frac{1}{2}$ tons gross weight because of the current legislative gross vehicle weight restriction of 32 tons.

Tractor units for use with these trailers must be capable of carrying a load of 10 tons on the rear axle and have a fifth wheel coupling plate height of between 47.5" and 53". The king-pin centre line should be between 12" and 24" forward of the rear axle.

The 3' 6" king-pin position enables the overall length of the majority of Tractor Unit/Trailer combinations to be within the current legislative maximum overall length of 49' 2½".



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Services

Broadly speaking, these fall into two main categories: "FCL" or Full Container Loads, and "LCL" or Less than Container Loads.

The first method is particularly attractive to shippers sending goods in quantities sufficient to fill one or more containers and a utilisation allowance will apply to all such consignments. The second method, in which compatible consignments from two or more shippers share a container, is designed to enable many more exporters to reap the benefits of this improved form of transportation, even when sending relatively small shipments to Australia or New Zealand.

Regardless of which method the individual shipper may elect to use, all cargo shipped by this service is carried in standard containers, conforming not only to International Standards but to the company's own exacting requirements.

Whilst ACT move FCL or LCL cargoes by door-to-door methods from any point in the U.K. to Australia or New Zealand, it is readily appreciated that not all shippers require such a comprehensive service. The result is that the ACT system presents maximum flexibility, enabling the shipper to choose whichever stage or stages of transit suit him best.

The shipper can, for example, deliver an LCL consignment to ACT at any of a series of U.K. containerbases and arrange for it to be collected from any similar containerbase in Australia or New Zealand, or for ACT's associates to deliver it direct to the consignee. Alternatively, ACT will collect the goods direct from the shipper at a U.K. factory and the consignee can collect it from an Australian or New Zealand depot.

ACT will be pleased to prepare quotations for the shipment of goods by any of these methods, thus enabling the shipper to choose whichever suits him best. It should be noted that with a few exceptions any of these main sectors of freight may be invoiced in Australia or New Zealand if desired.

Cargo booking

Having decided which service he requires, the shipper will find the ACT Shipping Instruction Form refreshingly simple.

He can book his cargo with ACT:

- (a) by telephoning or telexing his instructions to the ACT office at the nearest containerbase;
- (b) by posting a completed Shipping Instruction Form direct to the nearest ACT office;
- (c) by arrangement with the local ACT representative, who calls regularly.

The only form involved is the ACT Shipping Instruction Form—a very simple document, which conforms to the Board of Trade aligned series of documents. Completion of this form, giving details of the cargo involved, may be carried out by the shipper, his forwarding agent or, for a nominal extra charge, by ACT.

Customs Procedures

Customs Entry for Export Cargo is the responsibility of the Shipper or his Agent.

H.M. Customs require all cargo to be pre-entered prior to export and shippers or their Agents must obtain from H.M. Customs a Customs Assigned Number (CAN). (H.M. Customs Notice No. 275 of 25th October, 1971.)

Any special cargoes subject to pre-entry (bonded—drawback—licensed, etc.) must be documented in the same manner whether a CAN is used or not. Should you wish ACT to declare and lodge entries on your behalf we shall be pleased to carry out this service for you using our own respective CAN and if required we shall be pleased to accept a standing instruction from you. The form of wording is available from your local ACT Office or Agent.

Transport

On completion and receipt of the Shipping Instruction Form, ACT will confirm the booking to the shipper. Transport arrangements will then be made according to the service selected, as follows:

LCL Cargo for Collection by ACT

- (1) A convenient date and time for collection of the cargo will be agreed with the shipper in advance.
- (2) On arrival at the shipper's premises, ACT's driver will present a "Collection Authority" which, when the cargo has been loaded aboard his vehicle, he will sign and leave with the shipper as a receipt for the cargo.
- (3) The shipper, in turn, will be asked to sign a "Delivery Instruction".

FCL Cargo for Collection by ACT

- A convenient date and time for the delivery of a container will be agreed with the shipper in advance.
- (2) On arrival at the shipper's premises, the ACT driver will present a "Collection Authority" which, when the loading of the cargo into the container is completed, he will sign and leave with the shipper as a receipt for the loaded container.
- (3) The shipper, in turn, will be asked to sign a "Delivery Instruction", entering the date, time of arrival and condition of the ACT equipment.
- (4) On completion of loading, the shipper will be asked to affix an ACT seal to the container and to sign the "Delivery

Instruction" for the second time, verifying that the goods loaded are as stated thereon and securely stowed, entering the time of hand-over, together with the seal number.

An alternative

As previously indicated, the ACT system is extremely flexible and provision is made for the shipper to utilise his own transport if he so wishes, in which case transport arrangements may be made as follows:

LCL Cargo Delivered by the Shipper to the Containerbase

- (1) A convenient date and time for delivery must be arranged by the shipper with the containerbase so that delays due to vehicle congestion can be avoided. Cargo must be accompanied by an appropriate "National Standard Shipping Note".
- (2) On arrival at the containerbase, the shipper's driver will show this "National Standard Shipping Note" to the gate-keeper and receive from him an internal movement pass.
- (3) The Bay Allocation Controller will then direct the driver to the appropriate unloading bay.
- (4) Upon completion of unloading, the Receiving Clerk will sign the "National Standard Shipping Note" and hand a copy to the driver as a receipt for the cargo.
- (5) On leaving the containerbase, the driver will surrender his internal movement pass.

FCL Cargo Delivered by the Shipper to the Containerbase

(This method provides for the shipper to collect an empty ACT container from the containerbase, using his own transport, and for its return in a loaded condition, in readiness for shipment. In addition to the container itself, for which only a lifting charge is made, ACT can also provide a suitable skeletal trailer, for which a hire charge is made.)

In this case the procedure will be as follows:

- (1) A convenient time for collection of the container from the containerbase will be agreed in advance whereupon the shipper will be sent the following documents—2 copies of a "Container Release Authority" and 1 copy of a "Delivery Instruction" or alternatively these can be collected from the ACT office at the base at the time of collection.
- (2) On arrival at the containerbase, the shipper's driver will show these documents to the gate-keeper. He will then be given an internal movement pass.
- (3) The driver will then be directed to the Yard Foreman, who will check the validity of the documents and arrange for the container to be lifted on to the shipper's vehicle, or, if required, for the provision of a container and an ACT trailer.
- (4) The driver should then inspect the container (and trailer, if provided by ACT) to satisfy himself that it is in good condition and roadworthy. The time of handover will then be recorded on the "Release Authority", and any defects in the equipment supplied noted on these documents. They are then signed by the driver and countersigned by the foreman.
- (5) On leaving the containerbase, the driver will surrender the "Release Authority" and the internal movement pass.

- (6) The shipper will then load the container and seal it with an ACT seal. The driver must then be given the "Delivery Instruction", signed by the shipper to verify that the contents of the container are securely packed and as stated thereon.
- (7) On returning the filled container to the containerbase, the driver will again receive an internal movement pass, and be directed to the Yard Foreman.
- (8) The Yard Foreman will inspect the container and ensure that the seal is intact. The condition of the container and trailer and time of hand-over will be recorded on the "Delivery Instruction", which will be signed by both driver and foreman, a copy being retained by the driver as a receipt for the loaded container/trailer.
- (9) On leaving the containerbase, the driver will surrender his internal movement pass.

Documentation

In devising the foregoing, ACT has sought to offer export shippers the maximum range of choice, plus unprecedented simplicity of despatch procedure. Goods sent by any of these methods will be transferred throughout in exact accord with the shipper's instructions—and far more rapidly than ever before. But in order to ensure optimum efficiency, a measure of co-operation is required from the shipper, particularly in respect of the Shipping Instruction Form. Simple though it is, completion of this document is an essential preliminary to the issue of a Bill of Lading and freight invoice. Lack of precise marks, numbers, weights, etc., at the time of booking will not prevent ACT setting the wheels in motion, but movement of the cargo beyond the containerbase stage and the production of final documents cannot proceed until final details of the cargo to be shipped and precise handling instructions have been received.

Immediately this information is available, it will be transmitted to the ACT Computer Control Centre in Southampton, and a Bill of Lading and freight invoice will be produced. Under normal circumstances, these documents will be mailed directly to the shipper—the Bill of Lading can be in his hands days before the ship sails.

The freight invoice will show in detail the make-up of the total freight due, and the shipper should send his remittance directly to the local Associated Container Transportation Regional Office.

The Bill—which is free of charge—can be endorsed freight "due" or "paid", but in the latter case a credit arrangement should be made with ACT beforehand if the shipper wishes to receive his Bill of Lading at the same time as the freight invoice.

Immediately the container ship has sailed, the individual consignment details are transferred on to magnetic tape, which is then flown to Sydney or Wellington for processing on the computer of ACT's Associates. Thus, well before the cargo is due to arrive, the consignee or notify party will be informed and advance arrangements made for its reception.

Advantages to the Export Shipper

The advantages of this greatly simplified system are manifold. No longer will the shipper have to contend with the uncertainty of shut-outs, wasted journeys and delays from congestion at the docks or with excessive documentation and unwarranted delays in acquiring his Bill of Lading.

Instead, by using the ACT service, the shipper will complete only the one simple form, receive the Bill of Lading before the ship sails (it's free of charge), get a single combined account for the entire transaction—and have dealt with only one operator throughout.



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Early Notification

ACT's Australasian agents, record full details of all cargo shipped, using their own computer. As soon as the vessel leaves the last Australasian port of call, this information is transferred to a magnetic tape which is then flown to Southampton for processing by ACT's computer. Immediately after processing the data is used to print a notification which is posted to each consignee and/or notify party named on each Bill of Lading.

This notification is very important and gives the importer vital details about the cargo coming to him at least 12 days before the vessel arrives in the U.K. Information shown includes:

- (i) Details of the cargo and Bill of Lading number.
- (ii) The place to which the shipper has specified the cargo should be delivered.
- (iii) The ACT Regional Office responsible for the cargo.
- (iv) The H.M. Customs long-room at which import customs entries must be made.
- (v) The shipper named on the Bill of Lading.
- (vi) A reminder if any freight is due in the U.K.

The importer is asked whether he wishes to use any of ACT's many services and whether he wishes to take delivery of the cargo at the place stated or whether he would like ACT to deliver the cargo at some other point. But before making any decisions the importer will wish to consider the possibilities open to him and set out below.

ACT has made the distribution of cargo from an incoming ship particularly easy by providing a complete door-to-door through transport service, using inland Customs clearance and distribution points called containerbases. No longer does an importer need to queue in congested docks—instead the containers are transferred directly to the inland containerbases, all sited with a view for easy access. ACT will deliver the cargo to wherever it is required or alternatively a customer may collect his own cargo from these containerbases.

containerbase in the U.K., leaving the importer free to instruct ACT as to where he requires it delivered. Of course, LCL cargo must be consigned to the containerbase serving the area to which it is ultimately to be delivered, but FCL containers may be redirected anywhere in the United Kingdom.

There is only one restriction, and that is time. Because all cargo is being cleared at local containerbases, ACT must provide H.M. Customs with details of the cargo coming to each containerbase at least four working days before arrival of the ship. This means that ACT must be advised of any changes in destination six days before the arrival of the vessel.

ACT can accept changes after the six day period, but the cargo still has to be cleared through the original containerbase and the importer will have to bear any additional transport costs.

But ACT provides much more than just a transport service. ACT Regional Offices, sited at containerbases, are eager to help any importer with any problem that he may have. Advice and help on Customs procedures, fumigation of cargo, are but a few. ACT can also carry out various supplementary tasks such as preparing and lodging customs entries, etc., at normal charges.

FCL or LCL

When cargo is booked for shipment in Australasia it must either be consigned to a containerbase or to an address in the U.K. It may be a full container load (FCL) or a less than container load (LCL). In the former case ACT will deliver the container direct to the customer's door or provide a special trailer for him to remove it from a containerbase. For LCL cargo ACT will unpack the container at the local containerbase and deliver the cargo to wherever required or the customer may collect the cargo from the containerbase himself.

ACT recognises that many importers will not be able to tell Australasian shippers where cargo is ultimately destined for at time of shipment. In this case it can be consigned to a

Customs Procedures

Each containerbase has H.M. Customs landing officers available full-time for the examination and clearance of cargo, but they will not be able to clear the cargo and issue an out of charge note until all import entries and associated papers (invoices, preference certificates, etc.) have passed through their local longroom and all duty has been paid. Longrooms are situated in the same area as containerbases and at one—Leeds—the longroom is actually inside the containerbase. Import entries can be made to these longrooms four days before the arrival of the vessel and must be made at least 24 hours before the cargo is due for delivery to the customer. To help importers, ACT show the longroom associated with each containerbase on the back of the cargo notification which is sent to consignees and/or notify parties. Where cargo is being distributed from Orsett (near Tilbury) containerbase, importers may use either Tilbury or Lower Thames Street, London, E.C.3.

To assist in identifying entries, a second copy of the notification is provided. If this is pinned on to the Entry, H.M. Customs can quickly and easily identify the Entry with the ships's manifest and so further reduce the time to handle documentation.

Release and Distribution of Cargo

ACT will release cargo upon surrender of the Bill of Lading as soon as the Customs have declared it to be out of charge, and the freight paid. The Bill of Lading must be surrendered at the ACT Regional Office through which the cargo is directed and outstanding freight is payable either to that Regional Office or to the Company's Head Office in London. As explained above, ACT will then deliver the cargo or an FCL container to the customer's instructions or the customer may collect the cargo from the local containerbase.

The procedure is as follows:

FCL Cargo Delivered by ACT

- The ACT Regional Office will contact the customer to arrange a convenient time for delivery.
- Upon arrival of the container at the customer's premises, the ACT driver will hand over an "Import Delivery Advice" and will ask for a signature on his "Delivery Instruction", confirming that he has delivered a loaded container.
- The customer may then ask the driver to wait whilst the container is unloaded or to return at a stated time. (ACT's tariff explains the amount of free unloading time allowed.)
- 4. When the container has been unloaded, the driver will ask the customer for a signature on the "Delivery Instruction" acknowledging that the goods have been received.
- ACT's driver will then sign the document to the effect that the container has been returned by the customer.

LCL Cargo Delivered by ACT

- A convenient time for delivery will be agreed with the customer in advance.
- 2. On arrival at the customer's premises, the ACT driver will hand over an "Import Cargo Delivery Advice".
- When the cargo has been unloaded the driver will ask the customer to sign on the "Delivery Instruction", showing that the goods have been received.

FCL Cargo Collected by the Customer from a Containerbase

This method provides for the customer to collect a loaded ACT container from the containerbase, using his own transport, and for its return in an empty condition. In addition to the container itself, for which only a lifting charge is made, ACT can also provide a suitable skeletal trailer for which a hire charge is made.

In this case the procedure will be as follows:

1. A convenient time for collection of the container from the containerbase will be agreed in advance, whereupon the

customer will be sent the following documents: 2 copies of a "Container Release Order", an "Import Container Release Advice" and 2 copies of "Import Container Delivery Instruction" or alternatively these documents may be collected from the ACT office at the base.

- On arrival at the containerbase the customer's driver will show these documents to the gate-keeper. He will than be given an internal movement pass.
- The driver will then be directed to the Yard Foreman, who will check the validity of the documents and arrange for the container to be lifted onto the customer's vehicle, or, if required, for the provision of an ACT trailer.
- 4. The driver should then inspect the container (and trailer, if provided by ACT) to satisfy himself that it is good condition and roadworthy. The time of handover will then be recorded on the "Container Release Authority" and the "Import container Release Advice", and any defects in the equipment supplied noted on these documents. They are then signed by the driver and countersigned by the foreman. The foreman will retain the "Import Container Release Advice".
- On leaving the containerbase the driver will surrender the "Container Release Authority" and the internal movement pass.
- The customer will then unload the container. The driver must then be given the "Import Container Delivery Instruction" (both copies).
- 7. On returning the empty container to the containerbase the driver will again receive an internal movement pass and be directed to the Yard Foreman.
- 8. The Yard foreman will inspect the container. The condition of the container and trailer and time of hand-over will be recorded on the "Import Container Delivery Instruction", which will be signed by both driver and foreman, a copy being retained by the driver as a receipt for the empty container/trailer.
- 9. On leaving the containerbase, the driver will surrender his internal movement pass.

LCL Cargo Collected by the Customer from a Containerbase

- 1. A convenient time for collection of cargo from the containerbase will be agreed in advance to avoid unnecessary delays arising at the base and the customer will be sent an "Import Cargo Release Authority" and an "Import Cargo Delivery Advice" or, alternatively, the documents may be collected from the ACT office at the base.
- 2. On arrival at the containerbase the customer's driver will show these papers to the gatekeeper and receive from him an internal movement pass.
- The Bay Allocation Controller will then direct the driver to the appropriate loading bay.
- 4. Upon completion of loading, the driver will sign the Release Authority and hand it to the Delivery Clerk as a receipt for the cargo.
- On leaving the containerbase the driver will surrender his internal movement pass, retaining the "Import Cargo Delivery Advice".



Associated Container
Transportation (Australia) Ltd.

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Packing of dry cargo Containers

Arrival

ACT containers are cleaned internally and pass stringent inspection before being despatched to customers. It is in your interests to inspect the container for any damage or other deficiency that may affect the proper outturn of your goods at their destination.

Banding

Steel or fabric bands may be used to secure goods together or within the container. Ensure that the resilience of the band or the goods is sufficient to ensure tension throughout transportations. Corner pieces should be used to prevent localised crushing.

Centre of Gravity

Ensure that when loaded the centre of gravity of the container is as low as possible and situated as near as possible to the geometric centre of the container floor (within 18" of the transverse centre line and 6" of the longitudinal centre line).

Chafe

Chafe is a diverse problem involving lashings, packings and goods. Ropes may chafe through if run over sharp corners; sacks, bags and cartons may chafe in contact with more rigid packing. If goods are likely to move relative to each other in transit and it is not possible to prevent it they must be divided and padded. Pay particular attention to areas adjacent to lashing points.

Chocks

With due care the sides, ends, corner posts and floors may be used for strutting and chocking cargo. Struts to corner posts are best located at the top and bottom corners. Sides and ends and roof panels of containers are not designed to accept high point loadings and where struts are placed against the walls' ends or roof some means of spreading the load should be used—preferably horizontal planks. Where no other suitable securing arrangement can be made, chocks may be nailed to container floors but it should be remembered that the floor thickness is approximately 1 inch.

Condensation

Special care must be taken of goods likely to suffer under conditions of condensation and those likely to give off moisture or raise the relative humidity of air inside the container. In any event two such differing commodities should not be put in the same container. Electrical goods should be protected with silica gell and bright metalwork with rust inhibitor.

Density

Avoid placing heavy cargoes on top of light cargoes.

Distributing Loads

Packaging may not sustain full stack heights. To improve the situation if pallets are not used place closely spaced timber or hardboard between layers to distribute loads over the lower sections of the cargo.

Doors

Do not forget that on arrival the doors have to be opened and packing must ensure that the first tiers do not fall out as a result of dislodging during transit.

Drums

Drums should be very thoroughly lashed and chocked within the container. Drums placed on their sides on top of drums on end should be supported on planks with chocks nailed to the planks.

Dry Cargo

Dry cargo should be placed on top of wet if they must be put in the same container, but remember that leakage may affect the relative humidity (refer: condensation).

Floor Loading

Container floors are designed to sustain a laden fork-lift truck of particular proportions and axle loadings. (See container brochures.) It is not possible to prescribe simple rules to govern floor loadings and concentrated loads should be referred to ACT Cargo Handling for approval.

Hazardous Cargo

Obnoxious or dangerous cargo must be declared to ACT regional offices well in advance. Special provisions may have to be made and the company reserves the right to reject a cargo as unsuitable for carriage. Dangerous goods are classified and their handling prescribed for each mode of transport in each country concerned. ACT offices or Cargo Handling Division are available to advise on all aspects of the movement of such goods. As far as the United Kingdom is concerned dangerous cargo must comply in all respects with the provisions of The Merchant Shipping (Dangerous Goods) Rules 1965 (S.I. 1965 No. 1067 as amended by S.I. 1968 No. 332).

Heavy Loads

The paragraph on floor loading applies to heavy loads but in general the point loads must be distributed using wooden cradles and chocks. Large pieces of equipment must be positively located within the container. Lashings are not sufficient and should be doubled with struts back to the corner post both to the equipment and to the cradle or skid. (Refer to Centre of Gravity.)

Impact

Packaging must either be sufficiently resilient to absorb impact loadings or sufficiently rigid to prevent deformation. Once cargo becomes loose in a container the condition can worsen under continued movement while travelling with extensive damage resulting.

Lashing

General cargo containers are provided with lashing points (refer container brochures), which should be used for securing loads with ropes, straps, steel bands or nets. Ensure that chafe to the lashing is not likely or, if possible, protect with parcelling.

Long Loads

Ensure firstly that the overall length plus the packing will fit within the specified container and secondly that they are adequately restrained on despatch. Note that in commodities such as steel bars damage can be caused to the container if the ends walls and doors are not suitably protected against sliding of the individual sections.

Modules

Where possible modules—pallets or packings—should be sized for convenient placing in containers. Where this is not possible plan the packing beforehand knowing the internal dimensions of the containers. (Refer container brochures.)

Nets

Nets are useful for restraining fragile cargo and also to prevent the load falling out when the doors are open.

Overloading

Containers are designed to accept particular maximum pay loads which must not on any account be exceeded. (Refer: container brochures). Negligence in this respect must be viewed seriously in light of safety considerations. Rectification of such a fault is therefore entirely at the cost of the shipper.

Packaging

One of the benefits of containerisation is the reduction and simplification of packaging. It must be borne in mind that the packaging may have to sustain a full stack of, say, 8 feet, generally a domestic rather than export pack is sufficient but movements subsequent to discharge of the container must be considered.

Pallets

If possible pallets should be selected for optimum space utilisation in the container. Loads must be effectively secured by strapping or gluing to the pallet so that movement cannot take place which would make mechanical discharge unsafe or impossible.

Quarantine

Vegetable or animal products may be subject to quarantine regulations at their destination. ACT experts will advise on these requirements. A case in point is Australia where strict regulations are applied to imported timber. Where quarantine regulations apply, certificates of treatment meeting local requirements should be forwarded in advance to the consignee to avoid costly delays. SEE INFORMATION SHEET No. 115.

Selection

Select cargoes that are to occupy the same container on the basis of compatability. Most damage to cargoes is caused by incompatible goods or packing.

Soft Packing

Soft packings must be effectively protected from damage by other goods. For instance, if sacks are placed on top of crates hardboard or planks should be used to protect them.

Stack Height

Stack height should be adjusted so that the floor area of the container is completely utilised. Close packing goods from wall to wall and door to end reduces dunnage requirements.

Stresses

Containers are subjected to all stresses experienced by road, rail and sea. A container which is being loaded on a trailer will experience, in transit, forces of 1.8 times gravity, horizontally, but vertically aboard ship. It is not, therefore, sufficient to load it as one would load a lorry.

Transit

Containers are designed to protect your cargo in transit, but bear in mind that conditions will vary from temperate to full tropical conditions.

Taint

Certain commodities are liable to become tainted if stowed together with high odour cargoes or with chemicals. Advice on compatability is always available from ACT regional offices or Cargo Handling.

Ventilation

The ACT general cargo container is not ventilated. Cargoes that require continuous ventilation should be referred to ACT regional offices in good time so that we may advise whether a special container can be made available. Such special containers are necessarily limited in number so that ample notice must be given.



Associated Container
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A 20-ft ACT container being packed by a fork lift truck at one of our terminals.

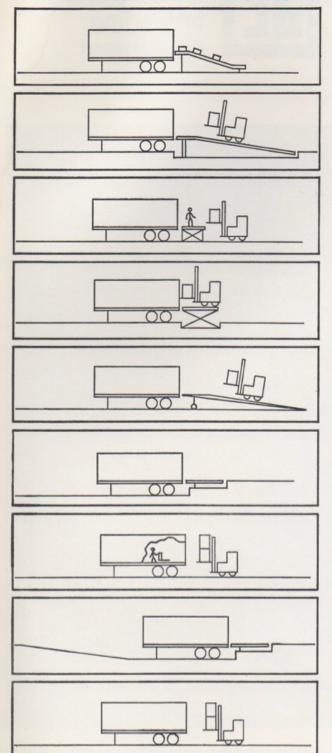
General

With regard to fork lift truck operation three points should be borne in mind. Firstly, side shift of the forks enables speedier loading; secondly, headroom is limited and measures should be taken to prevent damage to the container roof; and, thirdly, a level section at entry to the container must be provided

to allow loading of the last tier. If diesel trucks must be used some form of ventilation is essential. L.P.G. or battery trucks obviate this requirement.

Lighting within the container, especially 40-footers, is a great advantage.

Methods of goods handling in general cargo containers.



a

Manual stowage with the aid of powered or gravity conveyors. Ability to slew and elevate the conveyor is of advantage.

b

Rising and falling ramp providing access for fork lift trucks and unobstructive when not in use. Dock levelling is integral in the design. The ramp should be at least 35 feet long and may cause traction problems if exposed to inclement weather.

C

Manual loading from pallets delivered by fork lift. A staging is not essential but eases the loading of the last layer.

d

Rising platforms may either be permanent or mobile and should be designed to accept the fully loaded truck or hand pallet truck.

e

Portable ramps are a cheaper version of (b) but have the same disadvantages.

f

Conventional loading bays must be provided with dock levelling equipment to provide a bridge for fork lift trucks

g

Fork lift trucks delivering to a hand pallet truck. Pallet trucks may overload the floor when operating with high density goods because of their small fork rollers.

h

Excavation can be used to solve a situation in which the warehouse floor is at grade. Dock levelling equipment is required.

ı

Pallets are delivered two high by fork lift and slid into place on Joloda or Rolamat handlers.



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This section is designed to assist the shipper of dangerous or obnoxious cargo with regard to his obligations.

Dangerous goods are any which are classed as such in "the Carriage of Dangerous Goods in Ships" (Blue Book), the I.M.C.O. Code of Carriage, any Statutory Order made under the Petroleum Consolidation Act (1928), British Rail List of Dangerous Goods (B.R. 22426), or any which, although not listed, are of a dangerous nature.

ACT will be pleased to carry dangerous or obnoxious cargo (other than explosives that are not within the Safety Class as set out and defined in the Blue Book, but shippers are reminded that:

 DANGEROUS CARGO MUST COMPLY IN ALL RESPECTS WITH THE PROVISIONS OF THE MERCHANT SHIPPING (DANGEROUS GOODS) RULES 1965 (S.I. 1965 No. 1067 AS AMENDED BY S.I. 1968 No. 332 AS AMENDED BY S.I. 1972 No. 666).

This in turn means compliance with the recommendations set out in the Report of the Standing Advisory Committee to the Board of Trade (1966)—CARRIAGE OF DANGEROUS GOODS IN SHIPS (The Blue Book) and with amendments or other Department of Trade and Industry advice issued from time to time.

In certain instances it may also be necessary to comply with additional road, rail, port or other land regulations, both in the United Kingdom and Australia. Any existing port restrictions at present in force in Australia will continue to apply.

- 2. The foregoing makes it essential that:
- (a) All dangerous cargo must be declared to ACT by proper completion of the Carrier's Appropriate Booking Form for Special and Dangerous Cargo and by delivery of the said form to the ACT Regional Office. Dangerous cargo will not be received by ACT for shipment until acceptance of such booking has been given to the shipper and the proper declaration completed. In general a particular date and time will be arranged for delivery, as storage of certain dangerous goods will not be possible and special containers may be needed for substances having particular properties.
- (b) A signed copy of the Carrier's Appropriate Booking Form for Special and Dangerous Cargo accompanies the goods to the point where they are packed into a container. At such point a further certificate (The Packing Certificate) covering the whole container as a package is required to be completed and signed by a person responsible for packing the goods into the container. On the issue of this certificate the necessity for the Carrier's Appropriate Booking Form for Special and Dangerous Cargo to accompany the goods ceases. In the case of an L.C.L. this Packing Certificate will be issued by the Containerbase Company after receiving the cargo and packing the container. In the case of an F.C.L. the Packing Certificate will be issued by the shipper or his agent at his premises. Such Certificate will then in all cases accompany the goods; no container will be allowed to enter the ACT system until this certificate has been issued and signed.

Blank copies of the Packing Certificate are available from ACT.

- (c) Blue Book recommended packings must be adhered to. The law does not permit any relaxation in the case of goods moving in containers.
- (d) Individual packages are appropriately marked and labelled accordingly.
- (e) If a commodity is not listed in the Blue Book it cannot be assumed to be non-dangerous, as the rules refer to classes not commodities. (See extracts from the rules at the end of this pamphlet.) Goods not in the Blue Book should be given a class corresponding to the principal hazard, and not Class 9 Miscellaneous Dangerous Substances. It is the shipper's responsibility to declare such hazards.
- (f) Consignees may be required to accept containers or goods immediately on landing.
- Those responsible for packing the container, whether at shippers/suppliers' premises or at a Containerbase or other cargo consolidation centre, must ensure that the recommendations on pages 11/12, paragraphs 26, 27, 28 and 30 of the Blue Book are complied with and that, inter alia:
- (a) Incompatible commodities are not placed in the same container.
- (b) The condition of individual packages is good. Doubtful packages must be rejected, and re-coopering of damaged packages should generally only be carried out under the supervision of the shipper/consignee.
- (c) Goods are not loaded in a wet condition.
- (d) Stowage in the container is tight and well dunnaged so as to ensure security of the goods during the various stages of the journey.
- (e) The container is marked with the appropriate Blue Book (IMCO) labels on the sides and left hand door of the container approximately 5' up from the base, also that it is marked on the left-hand door with a list of the correct technical name or names of the dangerous commodities packed in the container. This is the responsibility of the packer of the container and failure to comply with the regulations at present in force may cause delay or even rejection. ACT Regional Offices will, if required, supply suitable labels on request.
 - Containers carrying substances with a flash point below 22°C. (73°F.), Corrosives and Organic Peroxides by road must be labelled to comply with the Road Regulations.
- (f) The container generally is unlikely to be opened again until it reaches the consignee's premises or delivery depot; therefore those packing it bear a considerable responsibility for safety of life and property throughout the journey.
- 4. Obnoxious cargo by which is meant cargo (not necessarily chemicals) which may cause damage to other goods, to carriers' equipment or discomfort to personnel handling it, is to be declared in advance to the ACT Regional Offices similarly to dangerous cargo. In many instances, the cargo will be accepted and called forward specially.

Marking of containers is generally not required but in other respects those packing containers should treat obnoxious cargo as if dealing with dangerous cargo.

- In respect of Dangerous or Obnoxious Cargo ACT reserve the right:
- (a) To refuse to carry cargo if it is considered unsuitable for shipment whether it complies with regulations or not.
- (b) To stipulate particular packings or other treatment, which may be in excess of the minimum requirements of the regulations.
- (c) To hold shippers, suppliers and/or those responsible for packing containers, fully responsible for the consequences arising from non-compliance with the various rules and regulations concerning the commodities being shipped which may from time to time be in force.
- NORTHBOUND, AUSTRALIAN REQUIREMENTS
 Cargo possessing dangerous or obnoxious characteristics
 must be correctly declared at the time of booking and can
 only be accepted by prior arrangement. The appropriate
 declaration is to be signed and submitted before tender of
 the goods to the Carrier or its agents.

Such cargo must be labelled in accordance with the Australian Department of Shipping and Transport Regulations and the U.K. Department of Trade and Industry Regulations. The attention of shippers is drawn to the serious consequences incurred as a result of sending cargo forward without, or bearing incorrect, labels.

The attention of shippers is drawn to the provisions of the Merchant Shipping Act, 1894, and to the Hague Rules and to the statutory modifications and re-enactments thereof, with regard to the shipment of goods of an inflammable, explosive or dangerous nature.

7. ACT are ready to meet requests for further technical advice or information. Details of packages of dangerous goods which are approved by the Board of Trade, but of an unusual design or having features requiring special consideration in stowage and transport, should be submitted to ACT as early as possible. Any enquiries may be addressed to Regional Offices or to Associated Container Transportation (Australia) Limited, 136 Fenchurch Street, London, E.C.3 (01–626 3233).

Extracts from the Merchant Shipping (Dangerous Goods) Rules 1965

Description and Classification of Dangerous Goods Paragraph 2

- (1) It shall be unlawful for dangerous goods to be taken on board any ship to which this Rule applies for carriage in that ship unless the shipper of the goods has furnished the owner or master of the ship with a certificate or declaration in writing that the shipment offered for carriage is properly marked and labelled in accordance with the provisions of these Rules and is packed in a manner adequate to withstand the ordinary risks of handling and transport by sea having regard to their nature.
- (2) Such certificate or declaration shall indicate with the correct technical name, the identity of the goods and shall indicate to which of the following classes the goods belong: Note: The Certificate requirements referred to in this extract are fulfilled by completion of the ACT Shipping Instruction Form (Special and Dangerous Cargo) and the Packing Certificate. In addition, Special Certificates are occasionally required for "Weathering", etc., where so these must accompany the application.

Class	1	Explosives
Class	2	Gases: compressed, liquefied or dissolved under pressure
Class	3	Inflammable liquids
Class	4(a)	Inflammable solids
Class	4(b)	Inflammable solids or substances liable to spontaneous combustion
Class	4(c)	Inflammable solids or substances which in contact with water emit inflammable gases
Class	5(a)	Oxiding substances
Class	5(b)	Organic peroxides
Class	6(a)	Poisonous (Toxic) substances
Class	6(b)	Infectious substances
Class	7	Radioactive substances
Class	8	Corrosives
Class	9	Miscellaneous dangerous substances, that is any other substance which experience has shown or may show to be of such a dangerou
Class	10	character that these Rules should apply to it.
Class	10	Dangerous Chemicals in limited quantities.



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a) Reasons why they are necessary:

These are designed to protect the Australian timber forests from attack by insects harmful to soft woods.

Many insects are involved but the most dangerous is the Sirex Wood Wasp. These wasps exist in U.K., the Continent and America but cause no great concern as they are controlled to a large extent by natural predators. No such predators exist in Australia or New Zealand, therefore the introduction of these insects may result in wholesale destruction of the timber forests in each country.

On average a female wasp bores some 400 holes into which she inserts the eggs. These are protected by a fluid which causes serious wood rotting. This could cause the death of a live tree in which it is placed.

The wasp also attacks cut timber and can cause untold harm throughout the processing of this timber.

The life span of a wasp is in the region of two years.

Other harmful insects may be harboured in certain packing materials such as straw, rice hulls, etc., and therefore fall in the restricted import category. Soil and animal products may also carry disease and infestation, therefore it is important to ensure that all packages or materials are free from possible contamination.

b) How they are applied:

To prevent entry of the Sirex Wood Wasp and other harmful insects, the Australian Department of Health has issued Quarantine Regulations, these are summarised in the C. of A. Department of Health publication "Cargo Containers and Unit Loads, Quarantine Aspects and Procedures" available from the Department of Health, Canberra, Australian Capital Territory or from the Chief Quarantine Officer, Australia House, London.

The publication contains a number of acceptable methods for the treatment of timber used for packing cases, pallets, dunnage, etc. These include chemical treatments, heat treatment, immersion and fumigation treatments. To assist the shipper, we would recommend one of the following methods.

1. Chemical Impregnation with any of the following:

- (a) Tanalith
- (b) Celcure
- (c) Treatim
- (d) Drilon
- (e) Protim Salts

This method is suitable for dunnage, pallets, etc. Suppliers of impregnated timber are too numerous to list but the address of the nearest stockist may be obtained on application to:

The British Wood Preserving Association, 62 Oxford Street, London, W1. Telephone: 01–580 3185

2. Heat Treatment

The timber must be dried shortly before shipment according to an approved kiln-drying procedure. The moisture content after treatment must be less than 14%. This method is suitable for timber up to 2" thick only. The name of the nearest stockist may be obtained from:

The Timber Trade Federation, Clareville House, Whitcomb Street, London WC2. Telephone: 01–839 1891

3. Fumigation Treatment

This may be by the application of a fumigant (normally Methyl Bromide) either under sheeting or in chambers. The application rate may vary but for Methyl Bromide a figure of 3 lb of fumigant per 1,000 cu. ft. for 24 hours at a temperature of 21 °C (70°F).

This method is suitable for all types of timber up to 4" maximum thickness, provided that the treatment is carried out immediately prior to use.

The name of the nearest fumigator able to perform this operation is available from:

The British Pest Control Association, Alembic House, 93 Albert Embankment, London, S.E.1.

Telephone: 01–582 8268 and a list is available in their publication "Pest Control Products and Services".

c) Requirements from Shippers

All shippers should note that the regulations also apply to any timber component contained in the manufactured article, i.e. wooden handles to tools, etc. Whilst infestation is unlikely in such timbers the Quarantine Authorities expect the consignee to declare the use of timber and demand a certificate of treatment for such timber.

F.C.L. Shippers:

The Australian Quarantine Authorities are vigorous in enforcing the regulations. Spot checks are carried out frequently even on cargoes covered by documentary evidence of treatment. If any indication of infestation is found, remedial action is taken immediately, a charge would be levied to cover this and serious delays to delivery could occur. Subsequent shipments would be suspect and liable to extensive inspection.

To safeguard against these possible delays and expenses and to ensure that the cargo is released immediately for onward movement to the consignee, we would recommend that the regulations are strictly complied with, where a suitable alternative is available to wood or plywood, use that in preference. This becomes more feasible with container carriage as the same amount of packaging is not generally necessary for handling purposes.

These alternatives consist of paper products, hard/ fibre board, cardboard, plastic products or metal.

Wooden dunnage requirements may well be substituted by materials acceptable to the Quarantine Authorities, these are rope or fibre securing to the securing rings provided in all ACT general containers, plastic foam, rubber products (Hairlock, etc.), inflatable dunnage, etc. Paper products, pads or shredded, are also acceptable.

If wood or laminated plywood has to be used the following must be noted.

- 1. The timber must be suitably treated.
- 2. Proper documentary evidence must be available, this includes the signed declaration on the ACT Shipping Instruction Form; a dated certificate from the supplier or fumigator of your timber, stating the method of treatment and date of treatment. A certificate is required for every individual container, therefore sufficient copies should be organised to cover your requirements (a photo-copy is generally acceptable).
- 3. Any timber showing evidence of insect attack should be rejected, even if this took place prior to treatment. This is particularly relevant to the kiln-drying method as there is no physical evidence of treatment.

The New Zealand Forest Service do not insist on treated dunnage and packaging but if timber is not treated a signed declaration must be provided showing that all wooden or plywood packing cases, crates, pallets or packing blocks used in packing containers are completely free of bark, soil or plant material and without visible sign of insect or fungal attack. The Forest Service recommends the use of preservative treated timber and it will therefore greatly assist in the movement of goods and containers if shippers apply the same rules as for cargoes to Australia.

L.C.L. Shippers

The same basically applies as for F.C.L. Shippers. Containers are unpacked at the Australian Depots where full-time Quarantine staff are in attendance. All cases are inspected, especially those specifying untreated timber and if any infestation or evidence of the same is found, all timber from that container must be subjected to fumigation before it is allowed to leave

The cost, in the shape of treatment, delay and inconvenience, may well outweigh any additional cost of using treated timber when making up the packages, therefore we strongly recommend to all shippers that the precautions advised by the Australian Authorities and in this pamphlet are closely followed, delays can be expensive and irritating to all concerned not least to the ultimate sufferer, i.e. the purchaser of your



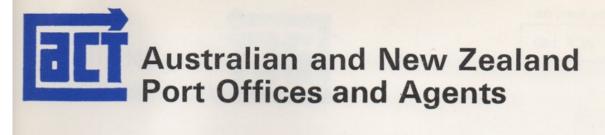
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136 Fenchurch Street, London EC3M 6DD. Telephone No. 01–626 3233. Telex: 886381 Telegraphic Address: Inland/Overseas: Linercon, London, E.C.3

Southern Region	Basildon	Northgate House, 2 High Pavement, Town Centre, Basildon, Essex
		Tel. Basildon (0268) 3993. Telex 995175
	Bristol	40 Park Street, Bristol BS1 5JG
		Tel. 0272 25557/9. Telex: 449297
	Orsett	Orsett Depot, Brentwood Road,
		Orsett, Essex RM16 3PB
		Tel. Grays Thurrock (0375) 891180. Telex: 27602
Midland Region	Birmingham	College Road, Perry Barr, Birmingham B44 8DR
		Tel. 021-356 9151. Telex: 338094
North-West Region	Manchester	Barton Dock Road, Urmston, Manchester M31 2LP
		Tel. 061-748 4077. Telex: 668423
	Liverpool	Orrell Lane, Bootle, Liverpool L20 6NR
		Tel. 051-523 2515. Telex: 629666
North-East Region	Leeds	Valley Farm Way, Wakefield Road, Stourton,
		Leeds LS10 1SE
		Tel. 0532 712211. Telex: 557336
Scottish Region	Coatbridge	Gartsherrie Road, Gartsherrie, Coatbridge,
		Lanarkshire ML5 2DU
		Tel. 0236 27371. Telex: 778582
Agents:—		
Belfast	Lawther & Har	rvey Limited
		e, Cupar Street, Belfast BT13 2LT
	Tel. 0232 2024	14. Telex: 74498
Dublin		ncies & Shipping Ltd.
		5/17 Eden Quay, Dublin 1, Eire
	Tel. 788816 &	744948. Telex: 31154



ACTA Pty. Ltd.

HEAD OFFICE: 447 Kent Street, Sydney, N.S.W. 2001, Box No. 4006

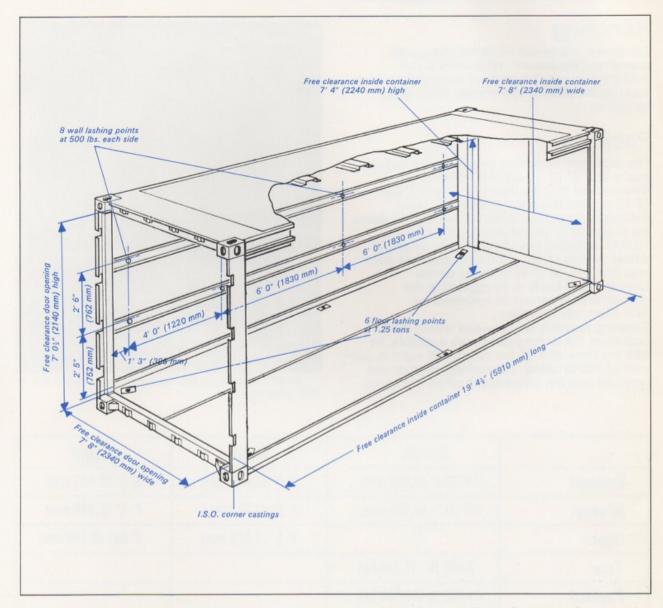
Telephone: 290-0234 Telex: AA 21369 Cables: ACTAUST

New South Wales	447 Kent Street, Sydney, 2000,			
	Box No. Q.21			
	Telephone: 290-0234 Telex: AA 21369			
Victoria	60 Market Street, Melbourne, Victoria 3000, Box No. 247.B Telephone: 62-0601 Telex: 30949			
Queensland	380 Queen Street, Brisbane, Queensland 4000			
	Telephone: 221-3116 Telex: 40719			
South Australia	12 Todd Street, Port Adelaide 5015			
	Telephone: 47-4300 Telex: 82483			
West Australia	3 Packenham Street, Fremantle 6160			
	Telephone: 35-4866 Telex: 92376			
Tasmania	Associated Shipping Agency Pty Ltd., 115 Collins Street,			
	Hobart 7000			
	Telephone: 23-2744 Telex: 58085			

Blueport A.C.T. (NZ) Ltd.

Wellington	I.B.M. Centre, 157 The Terrace, P.O. Box 192, Wellington Telephone: 729–779 & 739–029 Telex: NZ 3583	
Auckland	5th Floor, Bank of New South Wales Building, 79/85 Queen Street, P.O. Box 3859, Auckland 2 Telephone: 30–965 Telex NZ 2556	
Lyttelton	154 Manchester Street, Christchurch 1 Telephone: 66-029 Telex: NZ 4872	
Port Chalmers	Tapley Swift Shipping Agencies Ltd., 40 Jetty Street, Dunedin Telephone: 77-810 Telex: NZ 5788	





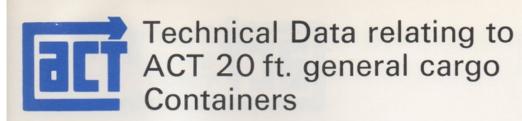
A 20 ft. General Cargo Container for operation by road, rail and sea of 20 tons gross weight and constructed to Transport International Routier E.C.E. Customs requirements, Lloyds and International Standards Organisation requirements.

Construction

These containers are constructed to stringent specifications to ensure trouble-free operation and complete protection of the cargo. The main structural members, the end frames, are of steel. The aluminium weather panels are placed inside the side framing so that they are backed by the full height exterior grade plywood lining. The doors are of plywood with an interior facing of galvanised steel. Two locking bars are provided on each door which ensure proper sealing of the doors and when closed the left-hand door cannot be opened prior to the other door.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.). All timber used in the construction is treated as required by the Australian Commonwealth Department of Health.

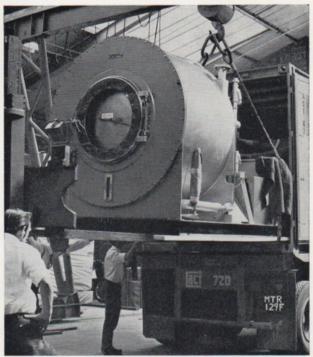


Handling

Containers are designed for handling with specialised equipment. Where this is not available use may be made of the bottom corner castings for affixing appropriate slings and spreaders.

Packing

The maximum operating headroom for fork-lift trucks is 7' 3" (2.21 m), but it should be remembered that the door opening is 7' 01/2" (2·15 m) and this may be reduced by the thickness of loading ramp toes. Container floors are designed to accept axle loadings of 12,000 lb (5,460 kg) (6,000 lb per wheel) at wheel centres of 30" (760 mm) and foot print area of 22 sq. in. (142 cm2) minimum. Concentrated loads to be applied to the container floor should be approved by ACT Materials Handling. Securing facilities are provided within the container. Six lashing points are available, let into the floor, of 1.25 ton rating and eight in each wall of 500 lb rating. The lashing rings do not protrude into the cargo space when not in use.



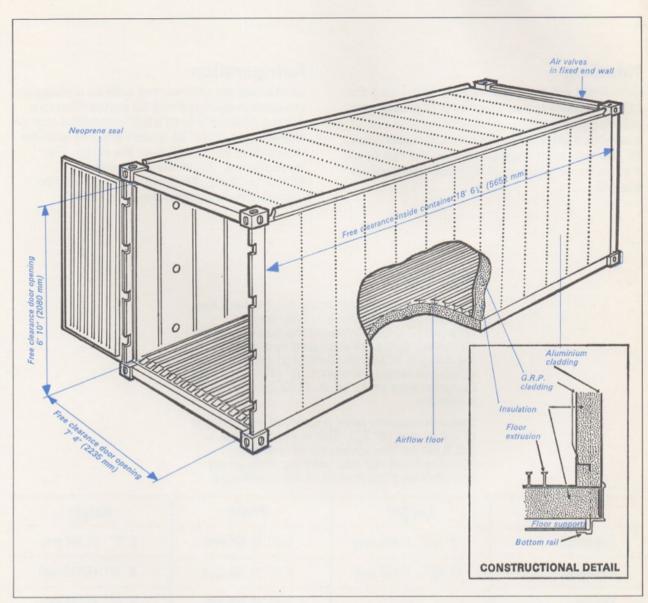
Heavy industrial washing equipment being loaded into an ACT container.

	Length	Width	Height
External	19' 10½" (6,050 mm)	8' 0" (2,430 mm)	8' 0" (2,430 mm)
Internal	19' 4½" (5,906 mm)	7' 8" (2,340 mm)	7′ 4″ (2,240 mm)
Doors	_	7' 8" (2,340 mm)	7' 0½" (2,140 mm)
Tare	3,800 lb (1,723 kg)		
Payload	41,000 lb (18,596 kg)		
Capacity	1,080 cu.ft. (30·6 m³)		



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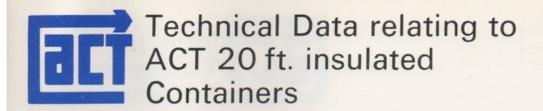
An ACT insulated T.I.R./I.S.O./Lloyds approved container suitable for carrying refrigerated cargoes by rail, road and sea of 20 tons gross weight and 930 cu. ft. capacity.

Construction

Basically the construction consists of a high tensile welded steel framework clad on the outside with aluminium fibreglass or plywood and on the inside with glass reinforced plastic. The 3" intervening void is filled with rigid polyurethane foam to form the insulation barrier. Doors are of the same basic construction with two camlocks each to ensure proper sealing. Both inside and outside skins are fully sealed and waterproofed.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.).



Handling

Containers are designed for handling, using the I.S.O. standard corner castings and specialised top lifting equipment. Where the latter is not available, appropriate slings and spreaders may be attached to the bottom corner castings or to the top corner castings if a vertical force only is applied.

Refrigeration

Containers are constructed with air circulation plenums in the fixed end for connection to a ducted air supply or to a self-contained clip-on refrigeration unit. The design ensures uniform distribution of cold air over the cargo. The nominal heat loss of the container is 45 B.T.U./°f./hr. Refrigerated cargo may be carried at temperatures down to -20°C.

Packing

The maximum operating head room for a fork lift truck is 6′ 10″ (2·0 m). This may be reduced by the thickness of loading ramp toes. Container floors are designed to accept axle loadings of 12,000 lb (5,460 kg) (6,000 lb per wheel) at wheel centres of 30″ (760 mm) and footprint area of 22 sq in. (142 cm²) minimum.

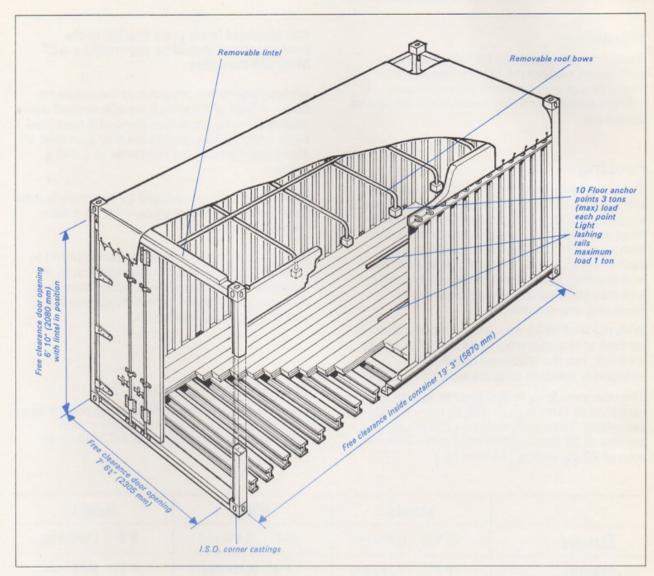
Some containers have a reduced door height of 2,030 mm (6' $7\frac{7}{8}$). This is indicated by a red flash on the underside of the door opening head rail and warning notices on one door and inside wall of the containers.

	Length	Width	Height
External	19' 10½" (6,050 mm)	8' 0" (2,430 mm)	8′ 0″ (2,430 mm)
Internal	18' 6½" (5,652 mm)	7′ 4″ (2,235 mm)	6′ 10″ (2,080 mm)
Doors	_	7′ 4″ (2,235 mm)	6′ 10″ (2,080 mm)
Tare	5,600 lb (2,540 kg)		
Payload	39,200 lb (17,800 kg)		
Capacity	930 cu. ft. (26.3 m³)		



Associated Container Transportation (Australia) Ltd.





A 20-ft open top container for operation by road, rail and sea of 20 tons gross weight and constructed to Transport International Routier Lloyds and International Standards Organisation requirements.

Construction

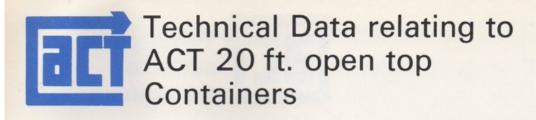
These containers are constructed to stringent specifications to ensure trouble free operation and maximum protection of the cargo. The container end frames, longitudinal members, floor bearers, roof bows, sides and front bulk head are of steel. Floors are of timber and doors may be either of steel or steel-faced plywood. Two locking bars are provided on each door and when closed the left-hand door cannot be opened prior to the other door.

The roof is made from reinforced plastic material, fixed round the perimeter so that no water can pass into the unit, and supported by roof bows so that water will not stand on the

top. The cover is permanently secured to the front head rail and can be rolled back to this position by two men.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.). All timber used in the construction is treated as required by the Australian Commonwealth Department of Health.



Handling

Containers are designed for handling with specialised equipment. Where this is not available use may be made of the bottom corner castings for fixing appropriate slings and spreaders.

Packing

Open top containers are designed to ease the loading of particularly heavy lifts and awkward shaped equipment. Instead of the usual hard fixed roof the container is supplied with roof bows and a P.V.C. tarpaulin covering. To further increase the access the lintel over the end opening doors is removable by two men and may be hinged in either direction by removing one or other pin.

With the roof bows and lintel removed, there is no limit to the operating head room for a fork lift truck, but the following should be stringently adhered to as regards axle loading.

The container floor is designed to accept an axle load of 16,000 lb (7.260 kg), i.e. 8,000 lb per wheel. This figure assumes minimum wheel centres of 30 inches (760 mm) and a footprint area of 22 sg. inches (142 cm sg.).

Concentrated loads to be applied to the container floor should be approved by ACT Materials Handling.

Lashing points are provided in the container floor—a total of 10 with 5 equally spaced down each side—rated at a maximum of 3 tons load each. Light lashing points are also provided all along each wall of the container at $\frac{1}{3}$ and $\frac{2}{3}$ height.

Roof bows may be handled by one man, but to remove the door lintel completely two men would be required.

Since the tarpaulin roof is inherently prone to damage, cargo subject to damage due to the ingress of rain water should not be moved in this type of container unless it receives some sort of secondary protection.

Over-height Cargo

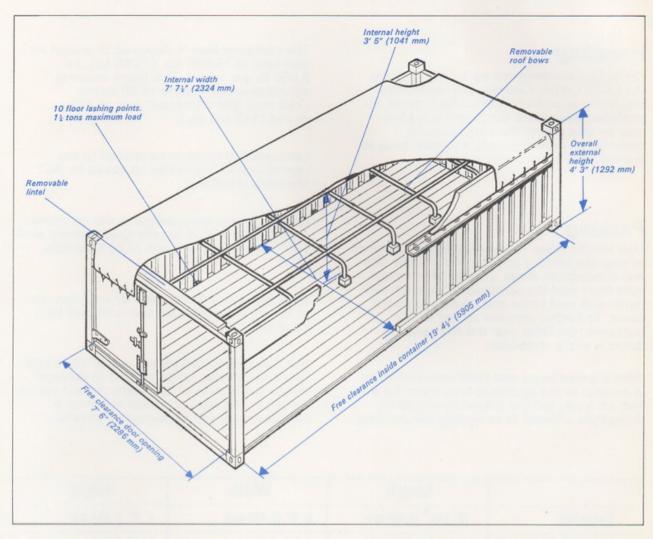
Cargo with a centre height in excess of 7 ft $2\frac{7}{8}$ ins may be considered for acceptance with prior reference to your local ACT Office or Agent.

	Length	Width	Height
External	19′ 10½″ (6,050 mm)	8′ 0″ (2,430 mm)	8′ 0″ (2,430 mm
Internal	19′ 3″ (5,870 mm)	7' 2" (2,184 mm) Between Top Rails 7' 6≩" (2,305 mm) Between Side Panels	7' 2½" (2,207 mm Centre 7' 0¾" (2,153 mm Sides
Doors	_	7′ 6¾″ (2,305 mm)	6′ 10″ (2,080 mm)
Tare	5,600 lb (2,540 kg)	_	no da Taran
Payload	39,200 lb (17,780 kg)	<u>-</u>	_
Capacity	1,040 cu. ft. (29.5 m³)		



Associated Container Transportation (Australia) Ltd.





Construction

These containers are constructed to stringent specifications to ensure trouble free operation and maximum protection of the cargo. The containers are of welded construction with the end frames, longitudinal members, floor bearers, roof bows, side walls and front bulk head all of steel. Floors are of timber and the doors are of steel faced plywood. One locking bar is provided on each door and when closed the left-hand door cannot be opened prior to the other door.

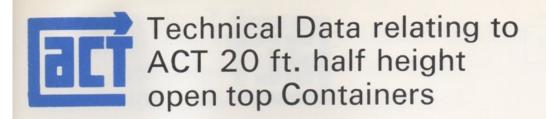
The roof is made from reinforced plastic material, fixed round the perimeter so that no water can pass into the unit, and supported by

A 20 ft. open top half height container for operation by road, rail and sea of 20 tons gross weight and constructed to Transport International Routier, Lloyds and International Standards Organisation requirements.

roof bows so that water will not stand on the top. The cover can be easily rolled back to the front head rail.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.). All timber used in the construction is treated as required by the Australian Commonwealth Department of Health.



Handling

Containers are designed for handling, using the I.S.O. Corner Castings and specialised top-lifting equipment. Where the latter is not available appropriate slings and spreaders may be attached to the bottom corner castings, or, providing only a vertical force is applied, to the top corner castings.

Packing

Half Height Open Top containers are designed to ease the loading of particularly heavy lifts and deadweight cargo. Instead of the usual hard fixed roof the container is supplied with removable roof bows and reinforced plastic cover. To further increase access to the container, the lintel over the end opening doors is easily removable.

With the roof bows and lintel removed, there is no limit to the operating head room for a fork lift truck, but the following should be stringently adhered to as regards axle loading.

The container floor is designed to accept an axle load of 16,000 lbs. (7,260 kg), i.e. 8,000 lb. per wheel. This figure assumes minimum wheel centres of 30 inches (760 mm) and a footprint area of 22 sq. inches (142 cm. sq.).

Concentrated loads to be applied to the container floor should be approved by ACT Materials Handling.

Lashing points are provided in the container—a total of 10 with 5 equally spaced down each side—rated at a maximum of $1\frac{1}{4}$ tons load each.

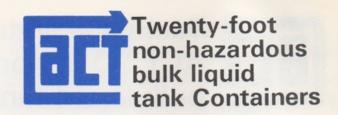
Roof bows may be handled by one man, but to lift out the door lintel two men may be required.

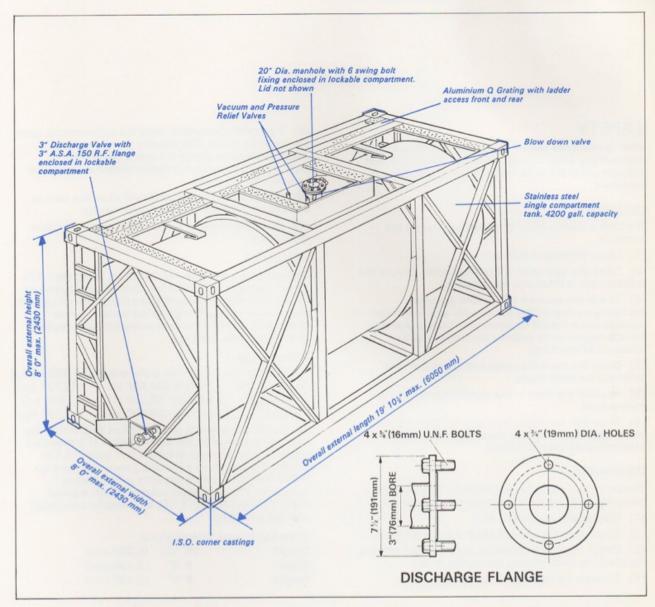
Since the reinforced plastic roof is inherently prone to damage, cargo subject to damage due to the ingress of rain water should not be moved in this type of container unless it receives some sort of secondary protection.

	Length	Width	Height
External	19' 10½" (6,050 mm)	8′ 0″ (2,430 mm)	4′ 3″ (1,292 mm)
Internal	19′ 4½″ (5.905 mm)	7' 4" (2,234 mm) between top rails 7' 7½" (2,323 mm) between side panels	3′ 5″ (1,041 mm)
Doors	-	7′ 6″ (2,286 mm)	3′ 3½″ (1,003 mm)
Tare	3,800 lbs. (1,723kg)	_	Hel-Link
Payload	41,000 lbs. (18,597 kg)	_	-
Capacity	525 cu. ft. (14.9m³)	_	_



Associated Container Transportation (Australia) Ltd





A non-hazardous tank container for operation by road, rail and sea of 20 tons gross weight and constructed to Transport International Routier E.C.E. Customs requirements, Lloyds and International Standards Organisation requirements.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organization.

Construction

The cylindrical stainless-steel tank is mounted horizontally on bearers supported in a steel framework provided with I.S.O. corner castings.

The tank is provided with two lockable enclosures. The first is mounted on top of the tank and access to it is provided by an integral ladder and walkway. It houses a 20" manhole with a stainless steel lid which can be hermetically sealed. Adjacent to the manhole are pressure- and vacuum-relief valves and a blowdown valve. The manhole is slightly offset longitudinally so that the dipstick guide inside the collar is directly over the volumetric centre of the tank.

The second enclosure is mounted on the frame at the bottom and at one end of the tank. It contains a 3" discharge valve connected to the tank and fitted with an A.S.A. 150 3" raised face flange.

No provision is made for heating or insulating the tank. All metal parts likely to come in contact with the cargo are of stainless steel and gaskets are of P.T.F.E.

SAFETY

After opening the sealed enclosures do not operate or unscrew any other fittings before equalizing the tank pressure using the blow-down valve in the top enclosure.

LOADING

The tank is designed for free loading through the manhole.

- (1) Open the blow-down valve.
- (2) Close the discharge valve if it is open. Ensure the sealing plate is fitted and tightened up.
- (3) Check the vacuum relief valve in the top enclosure by depressing the spindle with one finger no more force should be necessary. Ensure that the spindle returns to its original position under the influence of its spring.
- (4) Open the manhole cover and check the tank internally for cleanliness.
- (5) Position the hose in the manhole and fill to the correct load.
- (6) Close the manhole cover and the blow-down valves and check that the discharge valve and blanking plate are not leaking.

DISCHARGE

The tank may be discharged either by gravity or by pumping. In either case the sequence is the same :—

- (1) Open the blow-down valve.
- (2) Check that the vacuum relief valve is working.
- (3) Check that the outlet valve is closed and remove the blanking plate leaving the gasket in situ.
- (4) Connect up the hose.

- (5) If possible, bearing in mind the environment, open the manhole cover. This ensures the absence of negative pressure above the liquid but would probably only make a significant difference to a high volume delivery pump.
- (6) Open the discharge valve and allow the tank to drain or start the pump as the case may be.
- (7) When discharging is completed close all valves and covers.

HANDLING

Containers are designed for handling, using the I.S.O. corner castings and specialised top-lifting equipment. Where the latter is not available appropriate slings and spreaders may be attached to the bottom corner castings or, providing only a vertical force is applied, to the top corner castings.

Dimensions

Cubic Capacity 4,200 imp. galls. gross (19,093 Litres) Gross Weight 20 tons (44,800 lb) (20,321 kg) Tare Weight 2.55 tons (5,710 lb) (2,590 kg) Payload 17.45 tons (39,090 lb) (17,731 kg)

For liquids of a specific gravity of less than 0.977 the capacity is limited by the rated volume. It is therefore possible in such cases to load 4,000 galls (18,184 Litres). For liquids of a specific gravity greater than 0.977 the rated weight capacity is the limiting condition. The equivalent volume to the payload weight of 39,090 lb (17,731 kg) must be calculated and not exceeded.

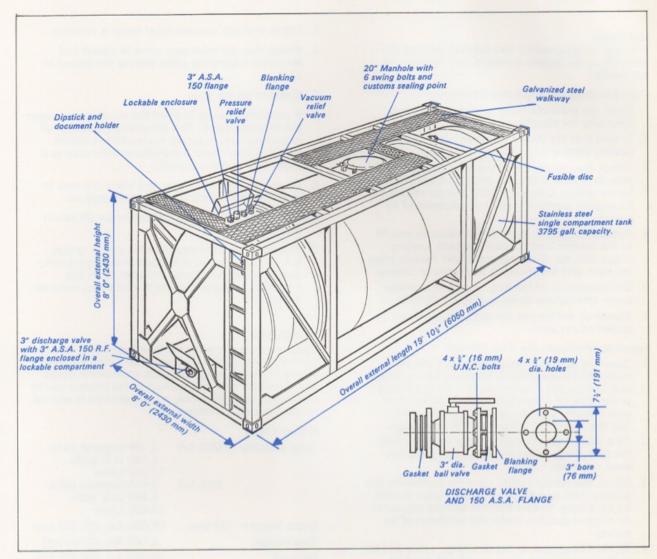
Exterior Frame Dimensions

Length 19' 10½" (6,050 mm) Width 8' 0" (2,430 mm) Height 8' 0" (2,430 mm)



Associated Container Transportation (Australia) Ltd.





A hazardous tank container for operation by road, rail and sea of 20 tons gross weight and constructed to Transport International Routier E.C.E. Customs requirements, Lloyds and International Standards Organisation requirements.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.), the recommendations of the International Standards Organisation and are approved for use in Australia, North America and Europe.

Construction

The cylindrical stainless steel tank is mounted horizontally and supported by a steel framework provided with I.S.O. corner castings.

The tank is provided with three lockable enclosure.

The tank is provided with three lockable enclosures. The first is mounted at the centre of the top of the tank and access to it is provided by an integral ladder and walkway. It houses a 20" (510 mm)

diameter manhole with a stainless steel lid which can be hermetically sealed. A dipstick guide is provided on the inside of the collar. The dipstick may be housed either in this collar or in a holder located at the top corner of the container frame.

The second enclosure is mounted at the end of the top of the tank and houses the pressure and vacuum relief valves and a filling or discharge A.S.A. 150-3" raised face flange.

The third enclosure is mounted on the frame at the bottom and at one end of the tank. It consists of a 3" discharge valve connected to the tank and fitted with an A.S.A. 150-3" raised face flange.

No provision is made for heating or insulating the tank. All metal parts likely to come into contact with the cargo are of stainless steel. The manhole gaskets will be of sweetened rubber for foodstuffs or of asbestos impregnated with P.T.F.E. for chemicals. All other gaskets are of P.T.F.E.



Technical Data relating to ACT 20 ft. hazardous bulk liquid tank Containers

LOADING

The tank is designed for free loading through the manhole or, for certain commodities, through the top flange.

Free Loading through the Manhole

- 1. Open the manhole cover and check the tank internally for cleanliness.
- 2. Ensure that the discharge valve is closed and the sealing plate is fitted and tightened up.
- 3. Check the vacuum relief valve by depressing the spindle with one finger-no more force should be necessary. Ensure that the spindle returns to its original position under the influence of its
- 4. Position the filling hose in the manhole and fill to the correct load. Concurrent with loading check that the discharge valve and sealing plate are tight and not showing any signs of leaking.
- 5. On completion of loading, close the manhole cover and tighten down evenly on all bolts.
- 6. Ensure all enclosures are customs or otherwise sealed as required.

Loading through the Top Flange

- 1. Open the manhole cover and check the tank internally for cleanliness. Remove the top flange and fit (i) a filling tube through the top flange to the bottom of the tank; (ii) a sealing plate over the tank bottom outlet from the inside; (iii) the discharge valve onto the top flange.
- 2. Fit a sealing plate to the bottom outlet outside the tank, from where the discharge valve has been removed.
- 3. Check the vacuum relief valve by depressing the spindle with one finger-no more force should be necessary. Ensure that the spindle returns to its original position under the influence of its spring.
- 4. Fit the filling hose to the discharge valve and fill to the correct load. Concurrent with loading check that the lower discharge sealing plate is not leaking.
- 5. On completion of loading close the valve and remove the filling hose. Fit a sealing plate to the valve. Close the manhole cover and tighten down evenly on all bolts.
- 6. Ensure all enclosures are customs or otherwise sealed as required.

The tank may be discharged by either gravity or pumping through the bottom outlet or pumping through the top flange. In each case the sequence is the same.

- 1. Check that the vacuum relief valve is working.
- 2. Check that the discharge valve is closed and remove the blanking plate leaving the gasket in
- 3. Connect up the hose.
- 4. If possible, bearing in mind the environment, open the manhole cover. This ensures the absence of negative pressure above the liquid but would probably only make a significant difference to a high volume delivery pump.
- 5. Open the discharge valve and allow the tank to drain or start the pump as the case may be.
- 6. When discharging is completed close all valves and covers.
- 7. The Merchant is responsible for ensuring that the tank is returned in a clean and cargo worthy condition, which means not only clean but gas freed, and a certificate to that effect must be supplied.

HANDLING

Containers are designed for handling, using the I.S.O. corner castings and specialised top-lifting equipment. Where the latter is not available appropriate slings and spreaders may be attached to the bottom corner castings or, providing only a vertical force is applied to the top corner castings.

Dimensions

Tank Capacity 100% full 3,795 Imperial galls. 4,560 U.S. galls. 17,250 Litres 95% full 3,615 Imperial galls. 4,340 U.S. galls. 16,430 Litres Gross Weight 20 tons 44,800 lbs. (20,320 kg) 8,160 lbs. (3,700 kg) Tare Weight Payload 36,640 lbs. (16,620 kg)

For liquids of a specific gravity of less than 1.015 the capacity is limited by the rated volume. It is therefore possible in such cases to load 3,615 Imperial Gallons. For liquids of a specific gravity greater than 1.015 the rated weight capacity and the % tank fill are the limiting conditions.

The equivalent volume to payload weight of 36,640 lbs. and the % tank fill must be calculated. These details plus the cargo to be carried must be submitted to ACT for approval.

Exterior Frame Dimensions.

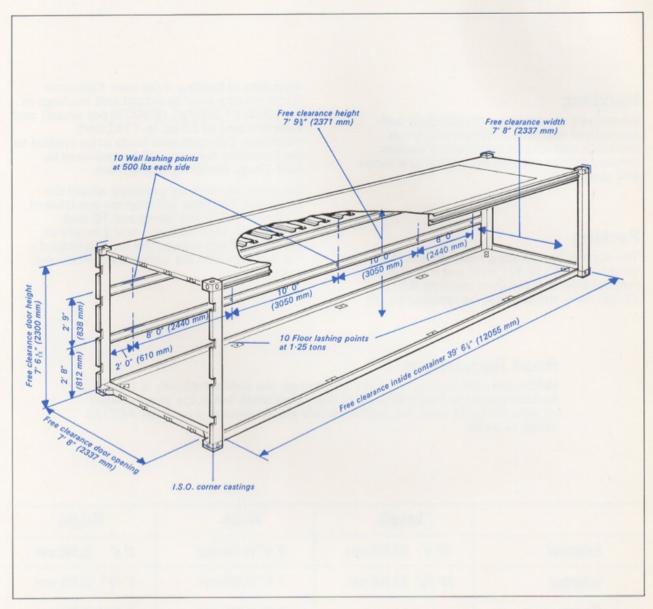
Length 19' 10½" (6,050 mm) Width 8' 0" (2,430 mm) 8' 0" (2,430 mm) Height



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136 Fenchurch Street, London, EC3M 6DD Tel: 01-626 3233 Telex: 886381 Grams: Linercon, London, E.C.3





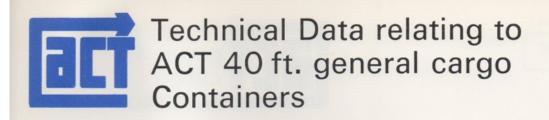
Construction

These containers are constructed to stringent specifications to ensure trouble-free operation and complete protection of the cargo. The main structural members, the end frames, are of steel. The aluminium weather panels are placed inside the side framing so that they are backed by the full height exterior grade plywood lining. The doors are of plywood with an interior facing of galvanised steel. Two locking bars are provided on each door which ensure proper sealing of the doors and when closed the left-hand door cannot be opened prior to the other door.

A 40' General Cargo Container for operation by road, rail and sea of 30 tons gross weight and constructed to Transport International Routier E.C.E. Customs requirements, Lloyds and International Standards Organisation requirements.

Classification

Containers are inspected during manufacture by Lloyds Register of Shipping and are certified by them before use. The containers also comply with the requirements of Transport International Routier (T.I.R.) and the recommendations of the International Standards Organisation (I.S.O.). All timber used in the construction is treated as required by the Australian Commonwealth Department of Health.



Handling

Containers are designed for handling with specialised equipment. Where this is not available, use may be made of the bottom corner castings for affixing appropriate slings and spreaders.

Packing

The maximum operating headroom for fork-lift trucks is 7' $9\frac{3}{8}$ " (2,371 mm) but it should be remembered that the door opening is 7' $6\frac{9}{16}$ " (2,300 mm) and this may be reduced by the

thickness of loading ramp toes. Container floors are designed to accept axle loadings of 16,000 lb (7,280 kg) (8,000 lb per wheel) and footprint area of 22 sq. in. (142 cm²) minimum. Concentrated loads to be applied to the container floor should be approved by ACT Cargo Handling Department.

Securing facilities are provided within the container. Ten floor lashings are available of 1.25 ton (1,270 kg) rating and 10 wall lashings on each wall at $\frac{1}{3}$ and $\frac{2}{3}$ height of 500 lb (227 kg) rating. The lashing rings do not protrude into the cargo space when not in use.

Road Regulations

Where the container is to be transported on the public highway it should be borne in mind that current U.K. road legislation limits the gross weight of vehicles to 32 tons. For further details please consult your local ACT(A) office or agent.

	Length	Width	Height
External	40' 0" (12,190 mm)	8' 0" (2,430 mm)	8′ 6″ (2,590 mm
Internal	39' 6½" (12,055 mm)	7′ 8″ (2,337 mm)	7′ 9¾″ (2,371 mm)
Doors		7′ 8″ (2,337 mm)	7′ 6 ⁹ / ₁₆ ″ (2,300 mm
Tare	7,300 lb (3,320 kg)		
Payload	60,100 lb (27,260 kg)		
Capacity	2,360 cu. ft. (66.5 m³)		noiterater



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