



STARMARINE SERVICES LTD.

**CONTAINER
TYPES & SPECIFICATIONS**

CONTAINER TYPES & SPECIFICATIONS

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CONTAINER TYPES & SPECIFICATIONS

STANDARD CONTAINERS

Standard containers are also known as general purpose containers. They are closed containers, i.e. they are closed on all sides. These can fit most of your common needs. Standard containers are designed and constructed for transportation of general cargo on sea, rail and land. They are able to withstand extreme temperatures ranging from -40°C (-40°F) to 70°C (158°F) without affecting their strength and water-tightness. Standard containers are used for all types general cargo (dry cargo). High-cube containers are used for all types general cargo (dry cargo). However, they are particularly suitable for transporting light, voluminous cargoes and overheight cargoes up to a maximum of 2.70 m tall.

Standard containers are mainly used as 20' and 40' containers. Containers with smaller dimensions are very seldom used. Indeed, the trend is towards even longer dimensions, e.g. 45'.



20' Dry Container

Dimensions*	Length	Width	Height
External	6096 mm	2362 mm	2590 mm
Internal	5944 mm	2337 mm	2388 mm
Door Openings		2337 mm	2286 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
24000 kg	2080 kg	21920 kg	33.9 cub.m



40' Dry Container

Dimensions*	Length	Width	Height
External	12192 mm	2438 mm	2591 mm
Internal	12014 mm	2286 mm	2388 mm
Door Openings		2337 mm	2286 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	3900 kg	26580 kg	67.7 cub.m



40' High Cube Container

Dimensions*	Length	Width	Height
External	12192 mm	2438 mm	2896 mm
Internal	11963 mm	2362 mm	2692 mm
Door Openings		2286 mm	2591 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	4150 kg	26330 kg	76.4 cub.m

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

PALLET WIDE CONTAINERS

Europe has its own domestic pallet wide containers that are slightly different dimensionally than the standard ISO boxes. Typically they are wider (usually 2.5 meters) to accommodate European pallets (in the case of dry vans). Pallet wide containers' characteristics are equal to standard containers' ones, except dimensions. Although pallet wide containers are typically not used in worldwide service.



Pallet Wide Container

Size	Weights*			Capacity*	Dimensions*	Length	Width	Height
	Max. Gross	Tare	Max. Payload					
20' Pallet Wide Ctnr	30480 kg	2550 kg	27930 kg	39 cub.m	Internal	5903 mm	2434 mm	2686 mm
					Door Openings		2436 mm	2592 mm
40' Pallet Wide Ctnr	34000 kg	4200 kg	29800 kg	78.6 cub.m	Internal	12050 mm	2422 mm	2692 mm
					Door Openings		2390 mm	2260 mm
40' High Cube Pallet Wide Ctnr	38270 kg	4270 kg	34000 kg	79.2 cub.m	Internal	12100 mm	2442 mm	2680 mm
					Door Openings		2394 mm	2565 mm

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

HARD TOP CONTAINERS

Hard top container has two typical distinguishing structural features. On the one hand, it is equipped with a removable steel roof. In some types, this roof has points for accommodating forklift trucks, allowing the roof to be lifted by forklift truck. The roof weighs approx. 450 kg. In addition, the door header may be swivelled out. These two structural features greatly simplify the process of packing and unpacking the container. In particular, it is very easy to pack and unpack the container from above or through the doors by crane or crab when the roof is open and the door header is swivelled out. In the case of transport of an overheight cargo, the container roof may be left open and fastened directly to a side wall on the inside of the container. To do this, the roof only needs approx. 13 cm (5 1/8") of space. Usual hard-top container dimensions are 20' and 40'.

Hard-top containers are used for all types general cargo (dry cargo). Their principal uses are as follows:

- Heavy cargo
- Tall cargo
- Loading from above or through the doors by crane or crab



Hard Top Container

Size	Weights*			Capacity*	Dimensions*	Length	Width	Height
	Max. Gross	Tare	Max. Payload					
20' Hard Top Ctnr	67200 kg	2590 kg	27890 kg	32.8 cub.m	External	6096 mm	2362 mm	2590 mm
					Internal	5886 mm	2342 mm	2388 mm
					Door Openings		2336 mm	2276 mm
					Roof Openings	5590 mm	2208 mm	
40' Hard Top Ctnr	30480 kg	4700 kg	25780 kg	67.2 cub.m	External	12192 mm	2438 mm	2591 mm
					Internal	12020 mm	2342 mm	2388 mm
					Door Openings		2336 mm	2292 mm
					Roof Openings	11724 mm	2208 mm	
40' High Cube Hard Top Ctnr	30480 kg	4900 kg	25580 kg	75.8 cub.m	External	12192 mm	2438 mm	2896 mm
					Internal	12020 mm	2342 mm	2693 mm
					Door Openings		2336 mm	2597 mm
					Roof Openings	11724 mm	2208 mm	

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

OPEN TOP CONTAINERS

Open top container has the following typical distinguishing structural features: the roof consists of removable bows and a removable tarpaulin. The door header may be swivelled out. These two structural features greatly simplify the process of packing and unpacking the container. In particular, it is very easy to pack and unpack the container from above or through the doors by crane or crab when the roof is open and the door header is swivelled out. It should be noted, however, that the purpose of the roof bows of an open-top container is not solely to support the tarpaulin but also to contribute to container stability. Usual open-top container dimensions are 20' and 40'.

Open-top containers are used for all types of general cargo (dry cargo). Their principal uses are as follows:

- Packing and unpacking from above or through the doors by crane or crab
- Tall cargo



Open Top Container

Size	Weights*			Capacity*	Dimensions*	Length	Width	Height
	Max. Gross	Tare	Max. Payload					
20' Open Top Ctnr	30480 kg	2350 kg	28130 kg	32.5 cub.m	External	6096 mm	2362 mm	2590 mm
					Internal	5888 mm	2345 mm	2365 mm
					Door Openings		2335 mm	2280 mm
					Roof Openings	5415 mm	2205 mm	
40' Open Top Ctnr	30480 kg	3850 kg	26630 kg	66.4 cub.m	External	12192 mm	2438 mm	2591 mm
					Internal	12029 mm	2342 mm	2376 mm
					Door Openings		2336 mm	2230 mm
					Roof Openings	11544 mm	2230 mm	

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

FLAT RACK CONTAINERS

Flatracks consist of a floor structure with a high loading capacity composed of a steel frame and a softwood floor and two end walls, which may either be fixed or collapsible. The end walls are stable enough to allow cargo securing means to be attached and several flatracks to be stacked on top of one another. Flatracks are available in 20' and 40' sizes. Flatracks are mainly used to transport heavy-lifts and overheight or overwidth cargoes.



20' Flat Rack Container



40' Flat Rack Container



40' High Cube Flat Rack Container

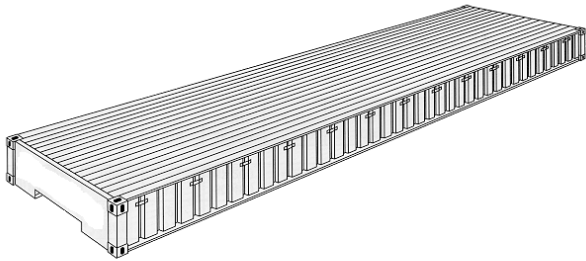
Size	Weights*			Internal Dimensions*		
	Max. Gross	Tare	Max. Payload	Length	Width	Height
20' Flat Rack Container	34000 kg	2740 kg	31260 kg	6038 mm	2438 mm	2213 mm
40' Flat Rack Container	30480 kg	4200 kg	26280 kg	12086 mm	2224 mm	1981 mm
40' High Cube Flat Rack Container	45000 kg	5700 kg	39300 kg	12060 mm	2365 mm	2245 mm

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

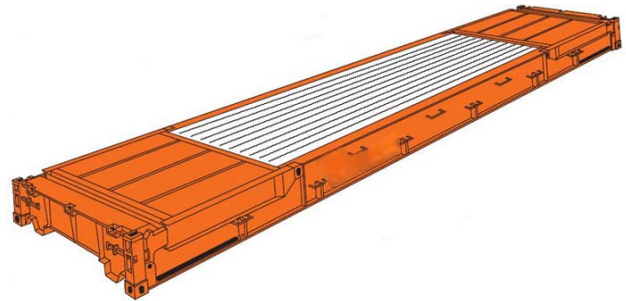
CONTAINER TYPES & SPECIFICATIONS

PLATFORMS (PLATS)

Platforms consist solely of a floor structure with extremely high loading capacity; they have no side or end walls. This high loading capacity makes it possible to concentrate heavy weights on small areas. A platform consists of a steel frame and a wooden floor structure. Platforms are available in 20' and 40' sizes. Platforms are used principally for oversized and very heavy cargoes.



Platform



Platform, Converted From a Flat Rack Container

Size	Weights*			Dimensions*		
	Max. Gross	Tare	Max. Payload	Length	Width	Floor Height
20' Platform	30480 kg	2520 kg	27960 kg	6058 mm	2438 mm	370 mm
40' Platform	45000 kg	5700 kg	39300 kg	12192 mm	2245 mm	648 mm

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

VENTILATED CONTAINERS

Ventilated containers are also known as passive (naturally) ventilated or coffee containers. Ventilation is provided by ventilation openings in the top and bottom side rails. The openings do not let in spray, to prevent depreciation of the cargo by rain or spray, for example. The common size for ventilated containers is 20'. Ventilated containers are used especially for cargoes which have to be ventilated in transit. One of the most significant of such commodities is green coffee beans, hence the name coffee container.



20' Ventilated Container

Dimensions*	Length	Width	Height
External	6068 mm	2438 mm	2591 mm
Internal	5888 mm	2325 mm	2392 mm
Door Openings		2334 mm	2290 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	2400 kg	28080 kg	33.0 cub.m

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

REFRIGIRATED AND INSULATED CONTAINERS

Refrigerated and insulated containers are mainly available as 20' and 40' containers. A distinction may be drawn between two different systems:

1. Integral Units (Integral Reefer Containers, Integrated Units)

This type of refrigerated container has an integral refrigeration unit for controlling the temperature inside the container. When being transported by ship, integral units have to be connected to the on-board power supply system. For transport by road and rail, most integral unit refrigeration units are operated by a generator set (genset). This may either be a component of the refrigeration unit or connected to the refrigeration unit. Refrigerated containers are used for goods which need to be transported at a constant temperature above or below freezing point. These goods are divided into chilled goods and frozen goods, depending on the specified transport temperature. They principally include fruit, vegetables, meat and dairy products, such as butter and cheese. High-cube integral units are used in particular for voluminous and light goods (e.g. fruit, flowers). Nowadays, goods requiring refrigeration are mostly transported in integral units, which have a markedly higher market share than porthole containers.



20' Reefer Container

Dimensions*	Length	Width	Height
External	6096 mm	2370 mm	2591 mm
Internal	5455 mm	2260 mm	2275 mm
Door Openings		2237 mm	2260 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
27000 kg	3050 kg	23950 kg	28.0 cub.m



40' Reefer Container

Dimensions*	Length	Width	Height
External	12192 mm	2438 mm	2591 mm
Internal	11555 mm	2286 mm	2280 mm
Door Openings		2285 mm	2245 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	4370 kg	26110 kg	60.2 cub.m

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

REFRIGIRATED AND INSULATED CONTAINERS

1. Integral Units (Integral Reefer Containers, Integrated Units)



40' High Cube Reefer Container

Dimensions*	Length	Width	Height
External	12192 mm	2438 mm	2895 mm
Internal	11560 mm	2286 mm	2500 mm
Door Openings		2286 mm	2478 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	4200 kg	26280 kg	60.2 cub.m

2. Insulated Containers (Porthole Containers)

This type of container is often referred to not as a refrigerated container but as an insulated container, as it has no integral refrigeration unit. On board, the inside of the container is supplied with cold air via the ship's central cooling plant. The air flows through the container in the same way as in integral units. Cold air is blown in at the bottom and the "warm" air is removed at the top.



20' Insulated Container

Dimensions*	Length	Width	Height
External	6096 mm	2362 mm	2590 mm
Internal	5724 mm	2286 mm	2014 mm
Door Openings		2286 mm	2067 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
24000 kg	2550 kg	21450 mm	26.4 cub. m



40' Insulated Container

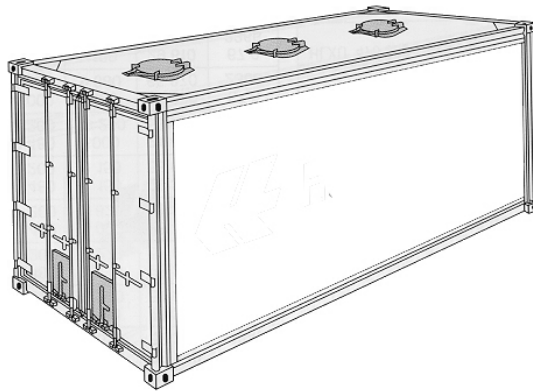
Dimensions*	Length	Width	Height
External	12192 mm	2438 mm	2591 mm
Internal	11840 mm	2286 mm	2120 mm
Door Openings		2286 mm	2195 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
30480 kg	3850 kg	26630 kg	60.6 cub. m

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

CONTAINER TYPES & SPECIFICATIONS

BULK CONTAINERS

Bulk (or bulk cargo) containers have three loading hatches in the roof, each of a diameter of approx. 455 mm (1 3/4'). The distance between the hatches (center to center) is 1.83 m (6'). On the door side, there are two discharge hatches, which are sometimes equipped with short discharge tubes for guiding the bulk cargo. Alternatively, two unloading hatches may be mounted in the doorways, for emptying the containers. Bulk containers are used in particular for transporting bulk cargo, such as grain, feedstuffs, spices. However, they may also be used for transporting general cargo.



20' Bulk Container

Dimensions*	Length	Width	Height
External	6096 mm	2362 mm	2590 mm
Internal	5934 mm	2358 mm	2340 mm
Door Openings		2335 mm	2292 mm
Weights*			Capacity*
Max. Gross	Tare	Max. Payload	
24000 kg	2450 kg	21550 kg	32.9 cub.m

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer

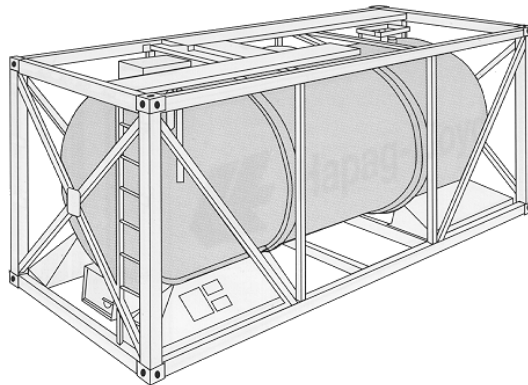
CONTAINER TYPES & SPECIFICATIONS

TANK CONTAINERS

Tank containers are used for liquid cargoes, such as:

- Foodstuffs: fruit juices, spirits, sweet oils
- Chemicals: hazardous materials, such as fuels, toxic substances, corrosion protection agents.

If the cargo requires temperature-controlled transport, tank containers can be equipped with insulation or heating.



20' Tank Container

External Dimensions To ISO*		
Length	Width	Height
6058 mm	2438 mm	2438 mm
Weights*		
Max. Gross	Tare	Max. Payload
30480 kg	4190 kg	26290 kg

* Container can slightly differ in dimensions, weights and capacity from mentioned above owing to its manufacturer