DIVISION 07 . SB-CTN

Double-Truss Container Shelters

ISO containers as walls and ballast

A double-truss arch sitting on ISO 40 ft containers, which act as both side wall and ballast. Length is always a whole number of containers, so the building grows in 12.192 m steps.

CLEAR SPAN **10 - 28 m**	LENGTH STEP **12.192 m**	MEMBRANE **950 g/m2**
WALL **ISO 40 ft**	BALLAST **Container**	ERECTION **No excavation**

Structure

· Double-chord tube truss arch, hot-dip galvanised, seated on the container corner castings.
· Length in whole containers: 1, 2, 3 ... containers = 12.19, 24.38, 36.58 m and so on.
· Containers provide the ballast and the side wall at the same time; no concrete foundation.
· Arch feet bolted to a steel sill beam that spans between containers.

Membrane & envelope

· 950 g/m2 PVDF roof, translucent, tensioned over the truss.
· End walls in membrane, container doors, or a framed opening for plant access.
· Gap between containers closed with a galvanised infill panel.
· Roof water collected in a gutter over the container line.

Openings & options

· Container doors retained as access, or cut for a roller door.
· Container interior used as store, workshop or office.
· Solar-ready roof, lighting, and ventilation.
· Relocatable: the whole building can be unbolted and moved.

What we need in order to quote

Site location and altitude drives snow and wind, not just the tier	**Clear span and length** whole bays; whole containers for DIV-07	**Opening size** door or end wall clear width and height
Largest machine or aircraft sets the door, not the span	**Floor and foundations** slab by others, or our anchor design	**Services** lighting, power, ventilation, fire strategy



ISO containers as side wall and ballast, arch bolted to the sill beam.

Size and price matrix

EXW price per square metre of covered area, standard configuration, excluding installation, freight, concrete and VAT. The three columns are the snow-load packages L1 to L3; steel weight is the L2 column.

Clear span x length	Area	Steel	L1 0.5 kN/m2	L2 2.0 kN/m2	L3 3.5 kN/m2
10 x 12.19 m	122 m2	16 kg/m2	$72	$75	$87
14 x 24.38 m	341 m2	19 kg/m2	$65	$68	$82
18 x 36.58 m	658 m2	22 kg/m2	$65	$70	$85
22 x 48.77 m	1073 m2	24 kg/m2	$68	$72	$90
26 x 60.96 m	1585 m2	27 kg/m2	$71	$76	$95
28 x 73.15 m	2048 m2	28 kg/m2	$72	$78	$98

Load basis

Tier	Snow load	Equivalent snow depth	Typical use
L1	**0.5 kN/m2**	**250 mm at 200 kg/m3**	**Sheltered sites, temporary cover, low-altitude temperate**
L2	**2.0 kN/m2**	**900 mm at 220 kg/m3**	**Central and northern Europe, most of North America**
L3	**3.5 kN/m2**	**1,250 mm at 280 kg/m3**	**Alpine, Nordic, Canadian prairie, heavy drift sites**

Wind: designs are checked against the basic wind speed for the site, up to 180 km/h at the lightest tier. Snow and wind are always recalculated for the project; the tier is a commercial package, not the site load.

Typical applications

Remote mining camps, equipment and parts storage, waste and recycling bays, temporary workshops, port laydown.

Notes, exclusions and basis of quotation

- Container condition and grade are client-supplied or quoted separately.
- Span is limited by the container footprint; wider buildings need a different system.
- Length must be quoted in whole container steps, not in round metres.

Design basis: ASCE 7-16 or EN 1991-1-3 / 1-4 as applicable; steel to Q235B / Q355B; hot-dip galvanising to ISO 1461; membrane PVDF-polyester, PVC on request. Certification documents, mill certificates and membrane test reports are issued with the shipping documents. Warranty: 25 years on the structure, membrane per manufacturer's data.