

# ISO Storage Reefers / Insulated Containers

with Strut Channel Panel framing

40ft - 20ft - 10ft - 8ft



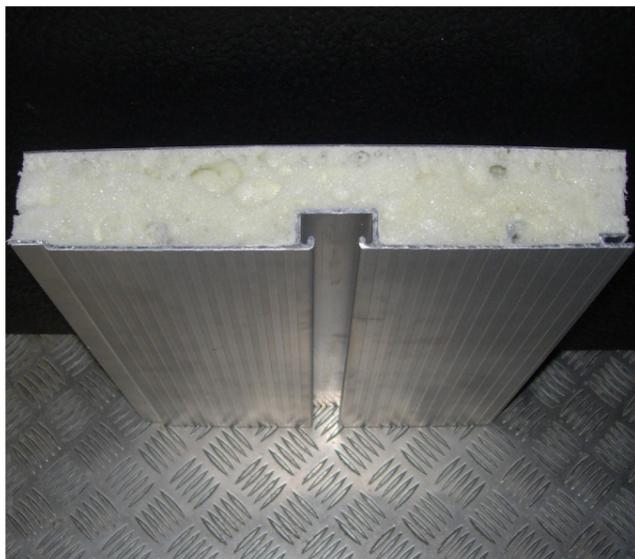
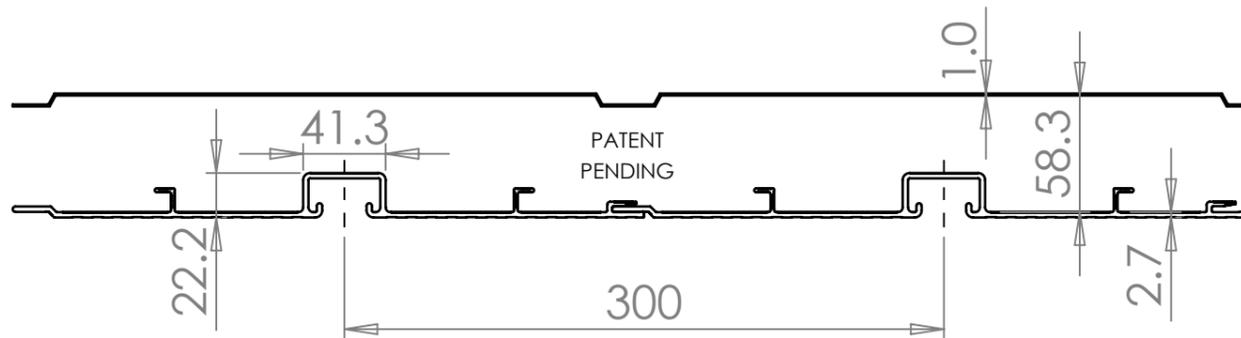
## STRUT CHANNEL PANEL

The first Strut Channel framing system was developed by Charles Attwood in 1940 and is still sold worldwide today, mostly recognised by the original brand name 'Unistrut'.

Globally standardised Strut Channel products are now used extensively in the construction and energy industries for light structural applications, supporting electrical and mechanical components such as power, plumbing and HVAC systems.

Using aluminium extrusion technology, we have moulded the well-established 41mm x 21mm Strut Channel profile into the side walls of a standard ISO reefer container - creating a new recessed framing system which provides structural connection points without protruding into the internal building envelope, maximising volume for storage or conversion.

The result is a multifunctional container, that can be outfitted with cost-effective and readily available Strut Channel fixings, without any cutting, welding or drilling.



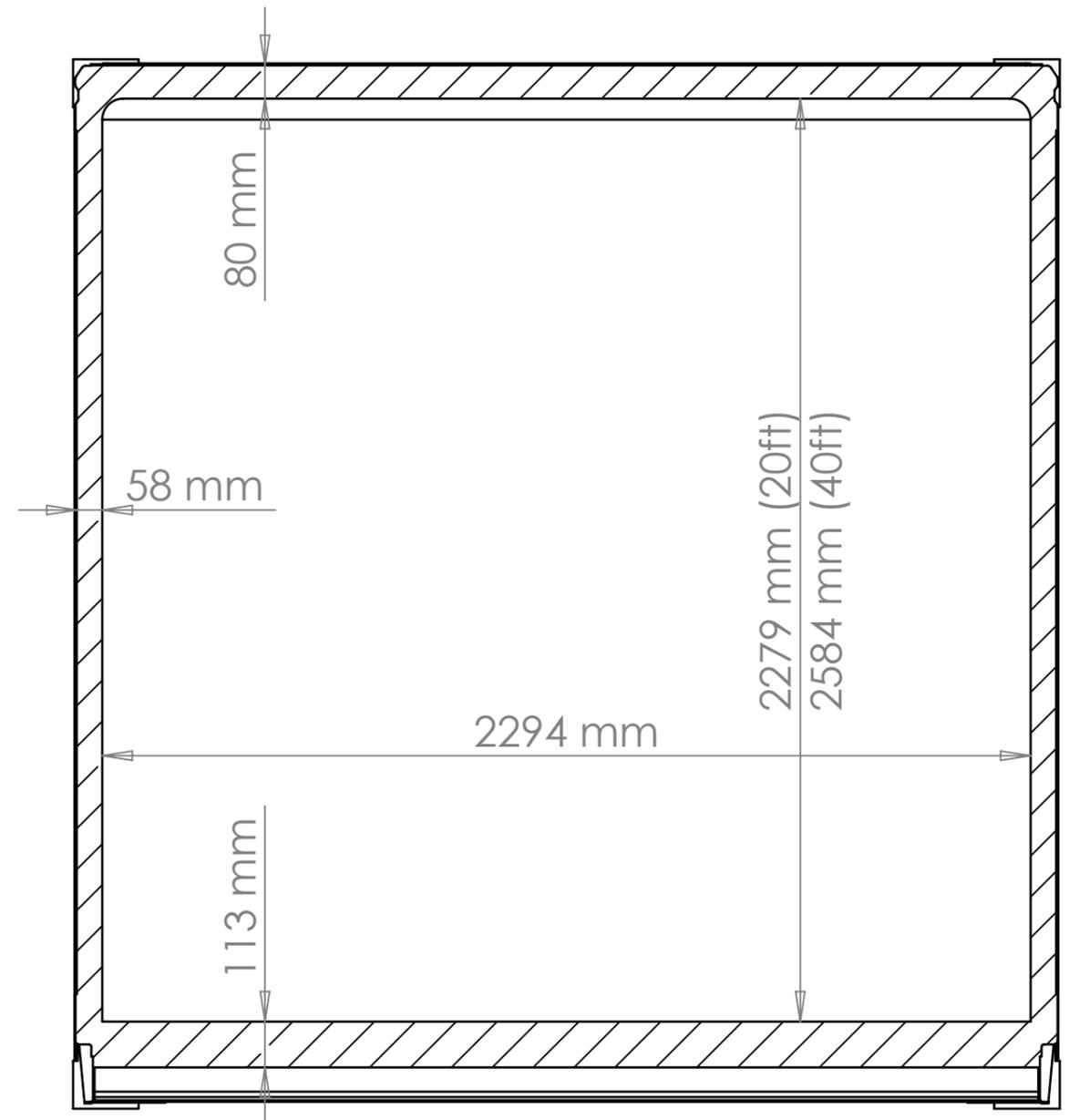
## HIGH QUALITY INSULATION

Our full SCP container range is designed and manufactured according to ISO 1496-2:2018 (Thermal Containers) standards and CSC certified at leading reefer factories across China.

*INSULATION DESIGN: Polyurethane (PUR) foam with Cyclopentane (non-CFC) blowing agent:*

LOCATION	Thickness	k-value	U-Value	R-Value (SI)	R-Value (I-P)	R-Value (I-P)
	<i>m</i>	<i>W/(m.K)</i>	<i>W/m<sup>2</sup>.K</i>	<i>K.m<sup>2</sup>/W</i>	<i>oF.ft<sup>2</sup>.h/BTU</i>	<i>per inch</i>
ROOF	0.080	0.022	0.275	3.636	20.655	6.558
WALL	0.058	0.022	0.379	2.636	14.975	6.558
FLOOR	0.113	0.022	0.196	5.114	29.045	6.558
DOOR	0.074	0.022	0.297	3.364	19.105	6.558

*NOTE: Imperial expressed R-Values (e.g. USA) are a factor of 5.68 x Metric R-Values (e.g. Europe)*



## COLD STORAGE

Domestic storage reefers normally have additional features such as; flat aluminium floor, rail mounted cooling curtains, built in interior lighting, easy open door handles, and internal safety escape mechanisms. Our integrated Strut Channel Panel lining can further enhance functionality of cold storage containers by providing an easy-to-use framing system which is ready to accommodate a wide range of shelving and racking brands with simple bolt and (zebedee) nut installation by local semi-skilled workers (weld-free and drill-free). This maximises internal space available while enhancing safety for the end customer (ensuring cold cargo is securely stacked).

## DRY STORAGE

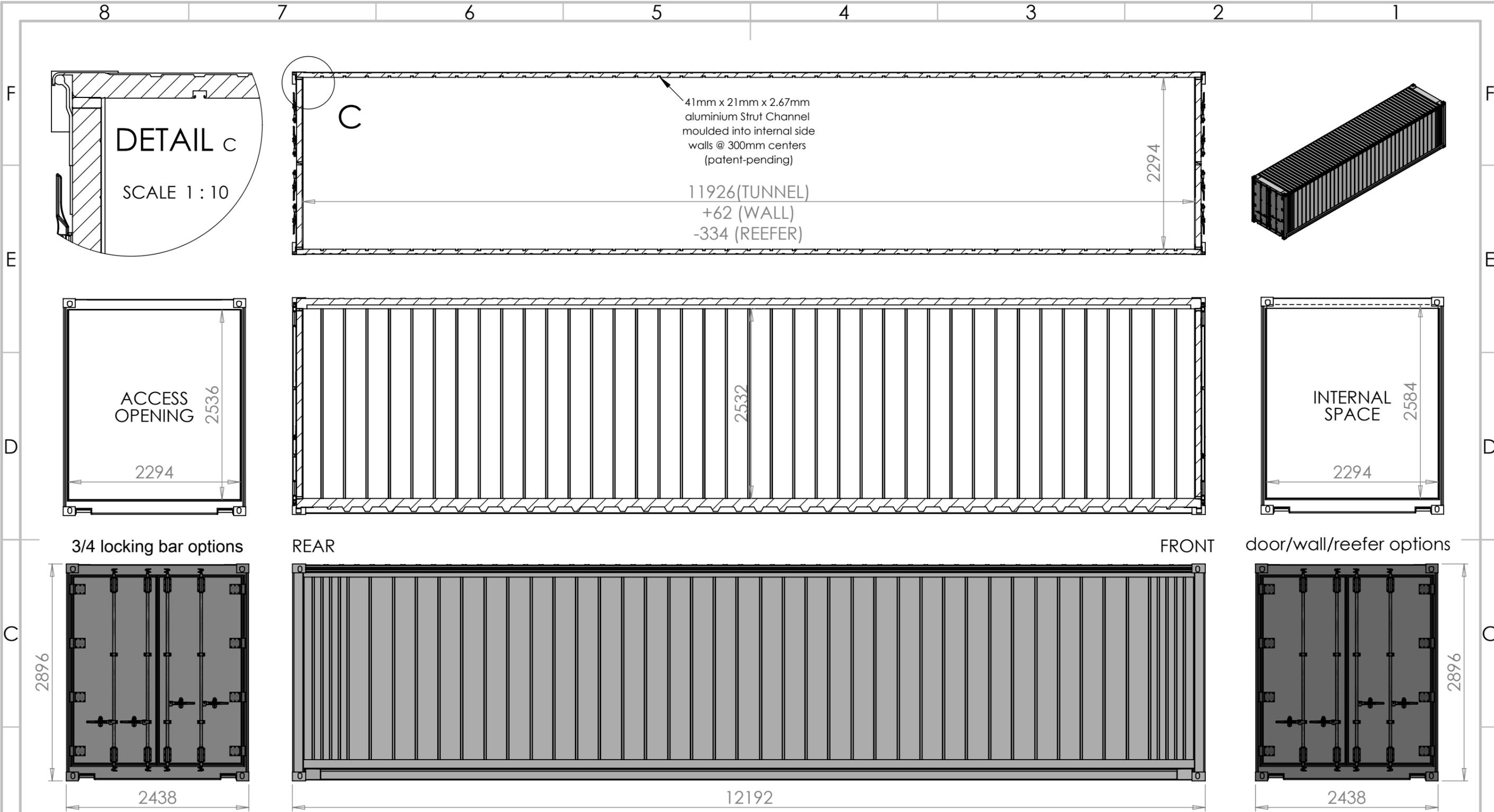
Insulated shipping containers are ideal for situations where controlled refrigeration is not essential but protection from extreme hot and cold temperature fluctuations is required. The high performing insulation within the side walls, roof, floor and doors creates a perfect thermal envelope to help maintain quality and lifetime of the goods stored within (e.g. pharma, medical devices, foodstuffs, antiques, electronics). Self-Storage site operators can utilise our factory insulated ISO containers to charge higher rental rates to specialist customers as well as gain extra revenue from shelving and racking hire. Containers are ready to be used directly after 'One-Trip' delivery.

## CONVERSION

The first few stages of shipping container conversion traditionally includes framing, insulating and lining - to create a habitable space for accommodating personnel. Pre-Framed, Pre-Insulated and Pre-Lined containers with fixed internal dimensions can instead be efficiently transformed for alternative uses with significantly less effort, utilising premanufactured modules, pods and furniture (IKEA approach to outfitting). The submerged Strut Channels can also be used as recessed electrical conduit further optimising the internal building envelope for Battery Storage, Data Centres, Vertical Farms, Tool Workshops, Site Offices, Events Spaces and Temporary Accommodation.

INSULATED SHIPPING CONTAINERS (NO REFRIGERATION MACHINERY)		8ft Mini	10ft Standard	20ft Standard	20ft Tunnel	40ft HC Standard	40ft HC Tunnel
EXTERNAL DIMENSIONS	LENGTH (mm)	2,438	2,991	6,058	6,058	12,192	12,192
	WIDTH (mm)	2,200	2,438	2,438	2,438	2,438	2,438
	HEIGHT (mm)	2,260	2,591	2,591	2,591	2,896	2,896
INTERNAL DIMENSIONS	LENGTH (mm)	2,234	2,787	5,854	5,792	11,988	11,927
	WIDTH (mm)	2,056	2,294	2,294	2,294	2,294	2,294
	HEIGHT (mm)	1,990	2,321	2,279	2,279	2,584	2,567
DOOR OPENING	WIDTH (mm)	2,056	2,294	2,294	2,294	2,294	2,294
	HEIGHT (mm)	1,944	2,275	2,231	2,231	2,536	2,519
CARGO ACCESS HEIGHT (mm)		1,940	2,271	2,227	2,227	2,532	2,515
INTERNAL CUBIC CAPACITY (cu.m)		9.1	14.8	30.6	30.3	71.1	70.2
MAX. GROSS WEIGHT (kg)		7,000	15,000	30,480	30,480	34,000	34,000
TARE WEIGHT (kg)		1,200	1,600	2,700	2,700	4,500	4,500
MAX. PAYLOAD (kg)		5,800	13,400	27,780	27,780	29,500	29,500
800mm x 1200mm pallet capacity		4	5	11	11	24*	24*
1000mm x 1200mm pallet capacity		3	4	10	10	21	21

ISO Insulated Containers have similar pallet capacity as ISO Dry General-Purpose Containers except\* (Dry 40ft containers can hold up to 25 Euro Pallets).



**INSULATION DESIGN: Polyurethane (PUR) foam with Cyclopentane (non-CFC) blowing agent:  $\lambda = 0.022 \text{ W/m.K}$**

LOCATION	Thickness mm	U-Value W/m <sup>2</sup> .K	R-Value (SI) K.m <sup>2</sup> /W	R-Value (I-P) °F.ft <sup>2</sup> .h/BTU	R-Value (I-P) per inch
ROOF	80	0.275	3.636	20.655	6.558
WALL	58	0.379	2.636	14.975	6.558
FLOOR	113	0.196	5.114	29.045	6.558
DOOR	74	0.297	3.364	19.105	6.558

NOTE: Imperial expressed R-Values (e.g. USA) are a factor of 5.68 x Metric R-Values (e.g. Europe)

CLASSIFICATION		DIMENSION	
EXTERNAL	LENGTH	12,192 mm (+0/-6)	40 ft
	WIDTH	2,438 mm (+0/-5)	8 ft
	HEIGHT	2,896 mm (+0/-5)	9ft 6in
INTERNAL	LENGTH	11,926 mm (+0/-12)	
	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,567 mm (+0/-10)	
DOOR OPENING	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,519 mm (+0/-10)	
CARGO ACCESS HEIGHT		2,515 mm (+0/-10)	
INTERNAL CUBIC CAPACITY		70.2 m <sup>3</sup>	2,480 ft <sup>3</sup>
MAX. GROSS WEIGHT		34,000 kg	74,960 lbs
TARE WEIGHT (±2%)		4,600 kg	10,140 lbs
MAX. PAYLOAD		29,400 kg	64,820 lbs
STACKING TEST LOAD		97,200 kgf/post	214,290 lbf/post
FLOOR STRENGTH		7,260 kg	16,000 lbs
HEAT LEAKAGE (U20)		45.9 W/K	39.5 kcal/hr°C
AIR LEAKAGE (1" WGP)		5.0 m <sup>3</sup> /h	176.6 ft <sup>3</sup> /hr

PART NAME		MATERIAL	REMARK	
FRAME	SIDE TOP RAIL	SPA-H	4.0 mm	
	SIDE BOTTOM RAIL	SPA-H	4.0 mm	
	END FRAME	SPA-H	3.0/4.0/6.0 mm	
	FORK POCKET	SPA-H	4.0 mm	
PANEL	ROOF	MGSS	0.8 & 1.0mm	
	SIDE	MGSS	1.0 mm	
	DOOR	MGSS	1.6 mm	
	SUB-FLOOR	MAIN	SPA-H	1.6 mm
		ROOF	AA5052-H16/H46	0.8 mm
	INSIDE LINING	SIDE	AA6061-T6	2.67 mm
		DOOR	BN4 or eq. SS	0.7 mm
FLOOR (FLAT)		AA6061-T6	H30	
CORNER FITTING		SCW 480	H118 x W162 x L178	
INSULATION		POLYURETHANE	0.022 W/m.k	
DOOR HARDWARE		HOT DIP GALVANIZED STEEL		

DRAWN: Niall McDermott      DATE: 2024-09-29

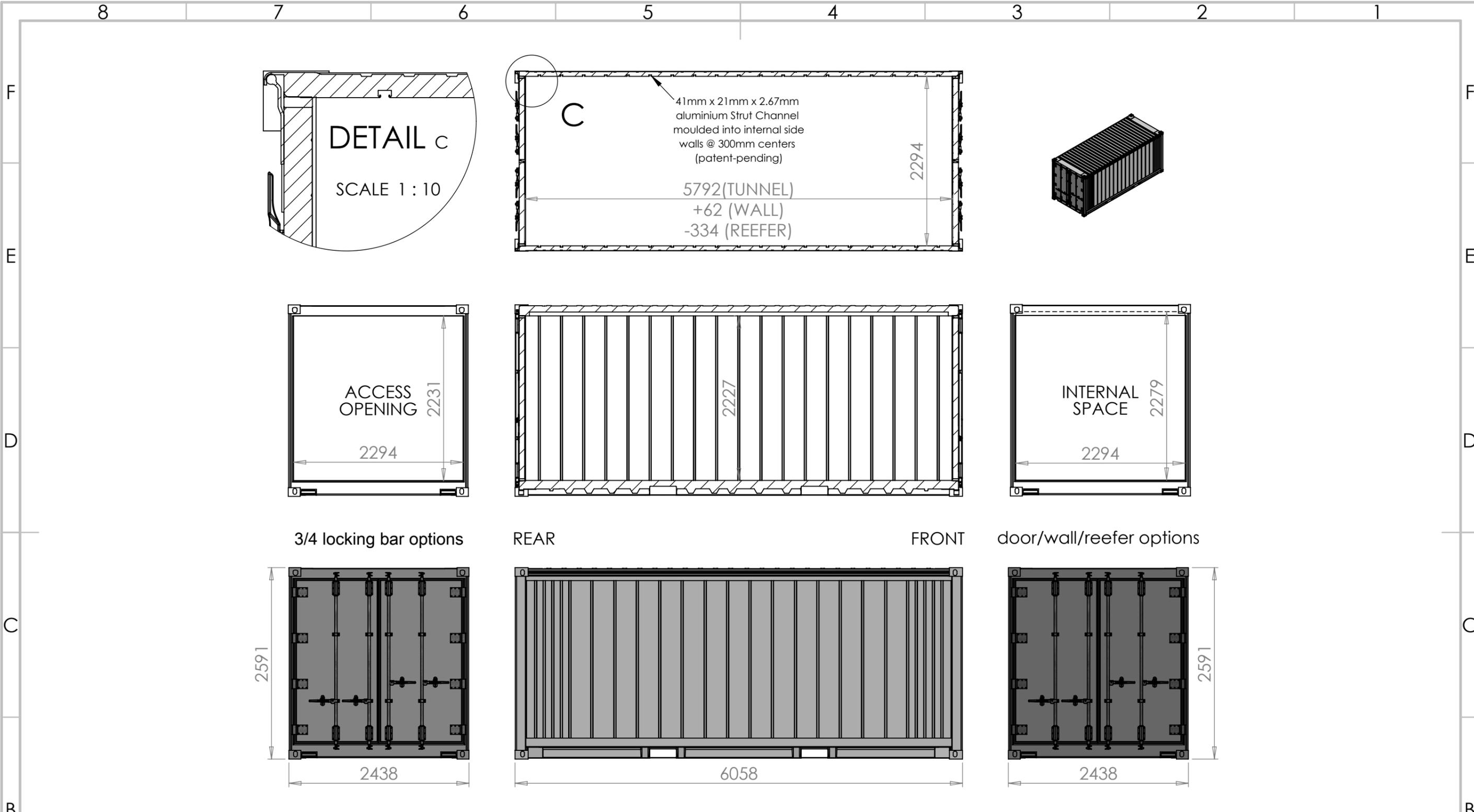
UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS IN MILLIMETERS

TITLE  
40ft ISO Insulated Shipping Container  
with integrated Strut Channel framing

General Arrangement Drawing

DWG NO.      REVISION:  
SCP40896HT      B

A3      SHEET SCALE: 1:50      SHEET 1 OF 1



**INSULATION DESIGN: Polyurethane (PUR) foam with Cyclopentane (non-CFC) blowing agent:  $\lambda = 0.022 \text{ W/m.K}$**

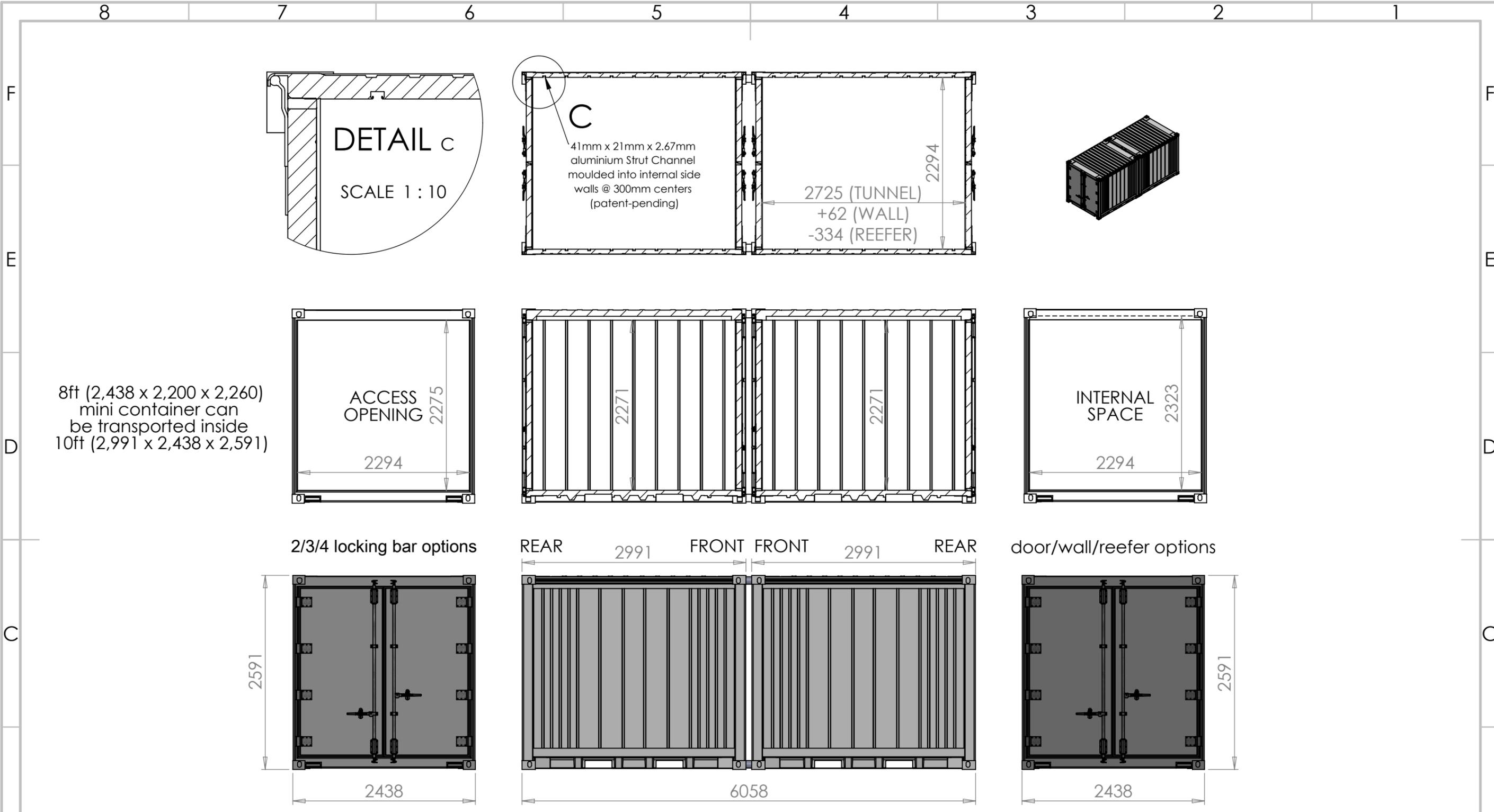
LOCATION	Thickness mm	U-Value W/m <sup>2</sup> .K	R-Value (SI) K.m <sup>2</sup> /W	R-Value (I-P) °F.ft <sup>2</sup> .h/BTU per inch
ROOF	80	0.275	3.636	20.655
WALL	58	0.379	2.636	14.975
FLOOR	113	0.196	5.114	29.045
DOOR	74	0.297	3.364	19.105

NOTE: Imperial expressed R-Values (e.g. USA) are a factor of 5.68 x Metric R-Values (e.g. Europe)

CLASSIFICATION		DIMENSION	
EXTERNAL	LENGTH	6,058 mm (+0/-6)	20 ft
	WIDTH	2,438 mm (+0/-5)	8 ft
	HEIGHT	2,591 mm (+0/-5)	8ft 6in
INTERNAL	LENGTH	5,792 mm (+0/-12)	
	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,279 mm (+0/-10)	
DOOR OPENING	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,231 mm (+0/-10)	
CARGO ACCESS HEIGHT		2,227 mm (+0/-10)	
INTERNAL CUBIC CAPACITY		30.3 m <sup>3</sup>	1,070 ft <sup>3</sup>
MAX. GROSS WEIGHT		30,480 kg	67,200 lbs
TARE WEIGHT (±2%)		2,700 kg	5,950 lbs
MAX. PAYLOAD		27,780 kg	61,250 lbs
STACKING TEST LOAD		97,200 kgf/post	214,290 lbf/post
FLOOR STRENGTH		7,260 kg	16,000 lbs
HEAT LEAKAGE (U20)		27.3 W/K	23.5 kcal/hr°C
AIR LEAKAGE (1" WGP)		2.0 m <sup>3</sup> /h	71 ft <sup>3</sup> /hr

PART NAME		MATERIAL	REMARK	
FRAME	SIDE TOP RAIL	SPA-H	4.0 mm	
	SIDE BOTTOM RAIL	SPA-H	4.0 mm	
	END FRAME	SPA-H	3.0/4.0/6.0 mm	
	FORK POCKET	SPA-H	4.0 mm	
PANEL	ROOF	MGSS	0.8 & 1.0mm	
	SIDE	MGSS	1.0 mm	
	DOOR	MGSS	1.6 mm	
	SUB-FLOOR	MAIN	SPA-H	1.6 mm
		ROOF	AA5052-H16/H46	0.8 mm
	INSIDE LINING	SIDE	AA6061-T6	2.67 mm
		DOOR	BN4 or eq. SS	0.7 mm
FLOOR (FLAT)		AA6061-T6	H30	
CORNER FITTING		SCW 480	H118 x W162 x L178	
INSULATION		POLYURETHANE	0.022 W/m.k	
DOOR HARDWARE		HOT DIP GALVANIZED STEEL		

DRAWN: Niall McDermott		DATE: 2024-09-29	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MILLIMETERS			
TITLE 20ft ISO Insulated Shipping Container with integrated Strut Channel framing General Arrangement Drawing			
DWG NO. SCP20886HT		REVISION: B	
A3	SHEET SCALE:1:50	SHEET 1 OF 1	



INSULATION DESIGN: Polyurethane (PUR) foam with Cyclopentane (non-CFC) blowing agent:  $\lambda = 0.022 \text{ W/m.K}$

LOCATION	Thickness mm	U-Value W/m <sup>2</sup> .K	R-Value (SI) K.m <sup>2</sup> /W	R-Value (I-P) °F.ft <sup>2</sup> .h/BTU	R-Value (I-P) per inch
ROOF	80	0.275	3.636	20.655	6.558
WALL	58	0.379	2.636	14.975	6.558
FLOOR	113	0.196	5.114	29.045	6.558
DOOR	74	0.297	3.364	19.105	6.558

NOTE: Imperial expressed R-Values (e.g. USA) are a factor of 5.68 x Metric R-Values (e.g. Europe)

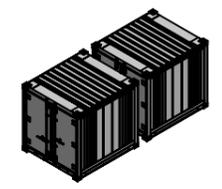
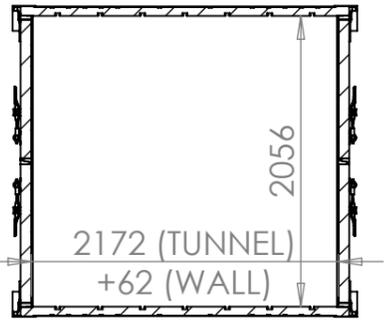
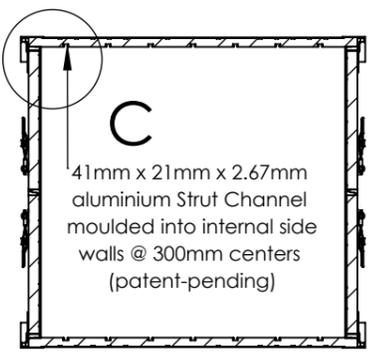
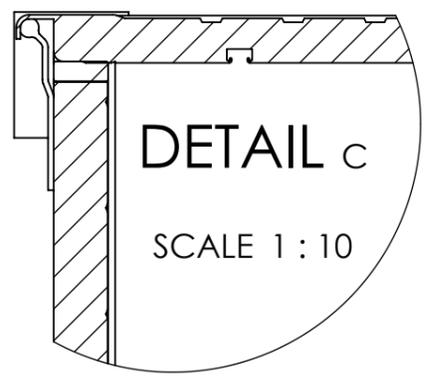
CLASSIFICATION		DIMENSION	
EXTERNAL	LENGTH	2,991 mm (+0/-6)	10 ft
	WIDTH	2,438 mm (+0/-5)	8 ft
	HEIGHT	2,591 mm (+0/-5)	8ft 6in
INTERNAL	LENGTH	2,725 mm (+0/-12)	
	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,323 mm (+0/-10)	
DOOR OPENING	WIDTH	2,294 mm (+0/-10)	
	HEIGHT	2,275 mm (+0/-10)	
CARGO ACCESS HEIGHT		2,271 mm (+0/-10)	
INTERNAL CUBIC CAPACITY		14.5 m <sup>3</sup>	512 ft <sup>3</sup>
MAX. GROSS WEIGHT		15,000 kg	33,070 lbs
TARE WEIGHT (±2%)		1,700 kg	3,750 lbs
MAX. PAYLOAD		13,300 kg	29,320 lbs
STACKING TEST LOAD		97,200 kgf/post	214,290 lbf/post
FLOOR STRENGTH		7,260 kg	16,000 lbs
HEAT LEAKAGE (U20)		15.0 W/K	13.0 kcal/hr°C
AIR LEAKAGE (1" WGP)		2.0 m <sup>3</sup> /h	71 ft <sup>3</sup> /hr

PART NAME		MATERIAL	REMARK	
FRAME	SIDE TOP RAIL	SPA-H	4.0 mm	
	SIDE BOTTOM RAIL	SPA-H	4.0 mm	
	END FRAME	SPA-H	3.0/4.0/6.0 mm	
	FORK POCKET	SPA-H	4.0 mm	
PANEL	ROOF	MGSS	0.8 & 1.0mm	
	SIDE	MGSS	1.0 mm	
	DOOR	MGSS	1.6 mm	
	SUB-FLOOR	MAIN	SPA-H	1.6 mm
		ROOF	AA5052-H16/H46	0.8 mm
	INSIDE LINING	SIDE	AA6061-T6	2.67 mm
		DOOR	BN4 or eq. SS	0.7 mm
FLOOR (FLAT)		AA6061-T6	H30	
CORNER FITTING		SCW 480	H118 x W162 x L178	
INSULATION		POLYURETHANE	0.022 W/m.k	
DOOR HARDWARE		HOT DIP GALVANIZED STEEL		

DRAWN: Niall McDermott		DATE: 2024-09-29	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MILLIMETERS			
TITLE 2 x 10ft ISO Insulated Shipping Container with integrated Strut Channel framing General Arrangement Drawing			
DWG. NO. SCP10886HT		REVISION: B	
A3	SHEET SCALE: 1:50	SHEET 1 OF 1	

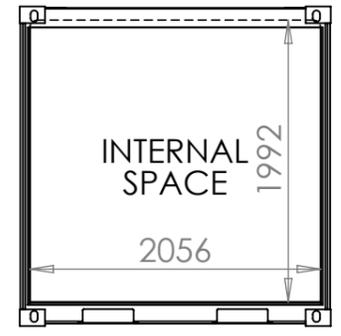
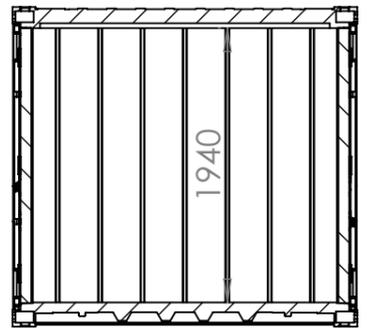
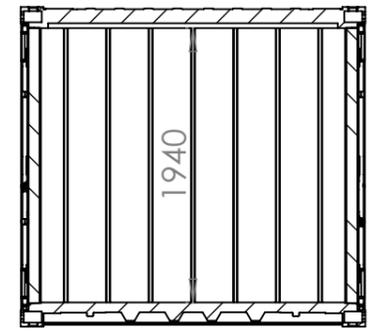
8 7 6 5 4 3 2 1

F



E

8ft (2,438 x 2,200 x 2,260) mini container can be transported inside 10ft (2,991 x 2,438 x 2,591)



D

2/3/4 locking bar options

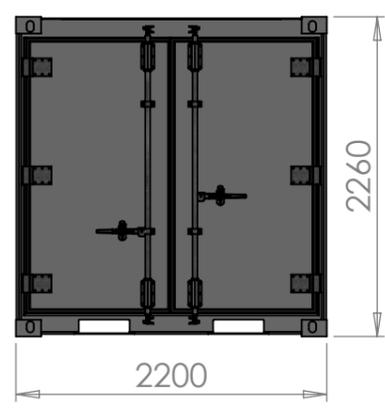
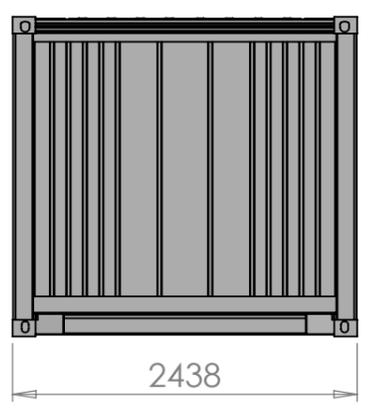
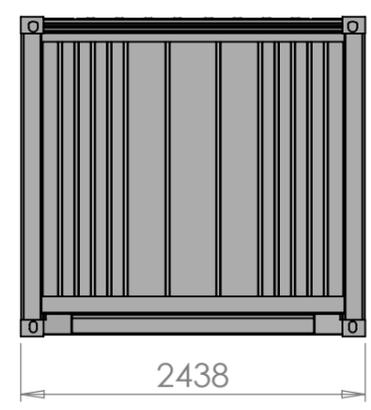
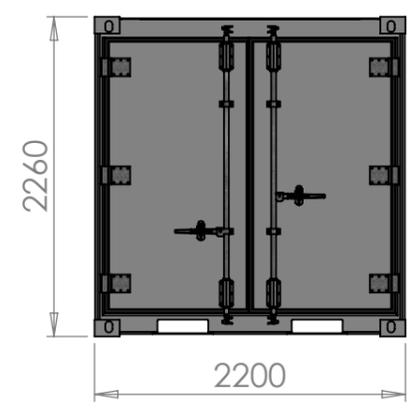
REAR

FRONT

FRONT

REAR

door/wall/reefer options



C



CLASSIFICATION		DIMENSION	
EXTERNAL	LENGTH	2,438 mm (+0/-6)	8 ft
	WIDTH	2,200 mm (+0/-5)	7ft 2in
	HEIGHT	2,260 mm (+0/-5)	7ft 4in
INTERNAL	LENGTH	2,172 mm (+0/-12)	
	WIDTH	2,056 mm (+0/-10)	
	HEIGHT	1,992 mm (+0/-10)	
DOOR OPENING	WIDTH	2,056 mm (+0/-10)	
	HEIGHT	1,944 mm (+0/-10)	
CARGO ACCESS HEIGHT		1,940 mm (+0/-10)	
INTERNAL CUBIC CAPACITY		8.9 m³	314 ft³
MAX. GROSS WEIGHT		7,000 kg	15,430 lbs
TARE WEIGHT (±2%)		1,300 kg	2,870 lbs
MAX. PAYLOAD		5,700 kg	12,560 lbs
STACKING TEST LOAD		97,200 kgf/post	214,290 lbf/post
FLOOR STRENGTH		7,260 kg	16,000 lbs
HEAT LEAKAGE (U20)		15.0 W/K	13.0 kcal/hr°C
AIR LEAKAGE (1" WGP)		2.0 m³/h	71 ft³/hr

PART NAME		MATERIAL	REMARK	
FRAME	SIDE TOP RAIL	SPA-H	4.0 mm	
	SIDE BOTTOM RAIL	SPA-H	4.0 mm	
	END FRAME	SPA-H	3.0/4.0/6.0 mm	
	FORK POCKET	SPA-H	4.0 mm	
PANEL	ROOF	MGSS	0.8 & 1.0mm	
	SIDE	MGSS	1.0 mm	
	DOOR	MGSS	1.6 mm	
	SUB-FLOOR	MAIN	SPA-H	1.6 mm
		ROOF	AA5052-H16/H46	0.8 mm
	INSIDE LINING	SIDE	AA6061-T6	2.67 mm
		DOOR	BN4 or eq. SS	0.7 mm
	FLOOR (FLAT)	AA6061-T6	H30	
CORNER FITTING	SCW 480	H118 x W162 x L178		
INSULATION	POLYURETHANE	0.022 W/m.k		
DOOR HARDWARE	HOT DIP GALVANIZED STEEL			

DRAWN: Niall McDermott		DATE: 2024-09-29	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN MILLIMETERS			
TITLE 2 x 8ft mini Insulated Shipping Container with integrated Strut Channel framing General Arrangement Drawing			
DWG NO. SCP08886HT		REVISION: B	
A3	SHEET SCALE:1:50	SHEET 1 OF 1	

A

NOTE: Imperial expressed R-Values (e.g. USA) are a factor of 5.68 x Metric R-Values (e.g. Europe)

8 7 6 5 4 3 2 1



The image shows the interior of a shipping container. The walls and ceiling are made of dark grey corrugated metal. The floor is made of light-colored wooden planks. At the far end of the container, there are two white doors. The lighting is even, highlighting the texture of the metal and wood.

## CONTACT

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