

INTERMODAL CONTAINERS

Chart's ISO Intermodal Cryogenic Containers (ICC) are considered the best value available on the market. The intermodal containers are used to transport cryogenic bulk liquids– nitrogen, oxygen, argon, liquid natural gas, nitrous oxide, ethylene and carbon dioxide– world-wide by ship, rail or road.

Using state-of-the-art technology from Chart-Ferox, a.s. allows you to take advantage of the many benefits and features. Count on Chart to help you transport cryogenic liquids with ease.

ISO intermodal containers TVAC, PVAC, COVAC utilize rugged, durable design features:

- Maximized payload
- Highly-efficient multi-layer super insulation system $NER_{max} = 0,25\% LOX/day$
- Solid, reliable construction
- Low maintenance
- Engineered for safe operation
- Worldwide sales, distribution service



TVAC & PVAC Intermodal Container

TVAC & PVAC 20 ft. Intermodal Container

- The TVAC Intermodal Containers come in pressure 10, 18, 24 bar for European design and 100, 150, 180, 230 psig for ASME/DOT.
- The TVAC come with a pressure building vaporiser for pressure transfer.
- The PVAC Intermodal Containers utilize similar features as the TVAC, but is designed for pump use with a self-contained pump transfer system.



COVAC Intermodal Container

COVAC 20 ft. Intermodal Container

- The COVAC is a vacuum insulated ISO container designed to meet the needs of CO2 producers for transporting liquid carbon dioxide by ship, rail and road.
- The superior thermal performance of the vacuum and multi-layer super insulation system allows hold times from 18 to 24 bar more than 54 days without the use of refrigeration system.

40 ft. Intermodal Container

- Intermodal Container comes in pressure 10 bar.
- Container designed and optimized for liquid nature gas service.
- Container popular for ethylene service thanks to high payload: 19 – 22.5 tons.



40 ft. Intermodal Container



Innovation. Experience. Performance.

Chart Ferox, a.s., a Chart Industries Company

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INTERMODAL CONTAINERS

Technical Specification

20 ft. TVAC - EN

Code	Model	Service	Gross Water Capacity (liters)	MAWP* (bar)	Length (mm)	Width (mm)	Height (mm)	Tare Weight (kg)	Max. Gross Weight (kg)	Hold Time LoX (days)	Pump**
EN, ADR	ICC-20-P-10	LIN, LOX,	20 370	10 bar	6 058	2 438	2 591	6 625	34 000	79	n/a
IMDG, RID,	ICC-20-P-18	LAR, LNG,	20 160	18 bar						102	n/a
ISO	ICC-20-P-24	Ethylene, CO ₂ , N ₂ O	20 080	24 bar						114	n/a

20 ft. TVAC - ASME/DOT

Code	Model	Service	Gross Water Capacity (liters)	MAWP* (PSI)	Length (mm)	Width (mm)	Height (mm)	Tare Weight (kg)	Max. Gross Weight (kg)	Hold Time LoX (days)	Pump**
ASME/DOT,	ICC-54-P-100	LIN, LOX, LAR, LNG, Ethylene	20 380	100	6 058	2 438	2 591	6 625	34 000	65	n/a
ADR, IMDG,	ICC-54-P-150		20 360	150						80	n/a
RID, ISO	ICC-53-P-180		20 160	180						87	n/a
	ICC-53-P-230		20 160	230						97	n/a

40 ft. TVAC - EN

Code	Model	Service	Gross Water Capacity (liters)	MAWP* (bar)	Length (mm)	Width (mm)	Height (mm)	Tare Weight (kg)	Max. Gross Weight (kg)	Hold Time LNG (days)	Pump**
EN, ADR IMDG, RID, ISO	TVS-43-PB-10	LNG, Ethylene	43 500	10	12 192	2 438	2 591	11 500	30 480	80	n/a

20 ft. PVAC

Code	Model	Service	Gross Water Capacity (liters)	MAWP* (bar/PSI)	Length (mm)	Width (mm)	Height (mm)	Tare Weight (kg)	Max. Gross Weight (kg)	Hold Time LNG (days)	Pump**
ASME/DOT ADR, IMDG, RID, ISO	ICC-54-P-100	LIN, LOX, LAR	20 370	100 PSI	6 058	2 438	2 591	6 975	34 000	79	Cryostar GBS 155
EN, ADR IMDG, RID, ISO	ICC-20-E-10	LIN, LOX, LAR	20 370	10 bar	6 058	2 438	2 591	6 975	34 000	79	Cryostar GBS 155

20 ft. COVAC - EN

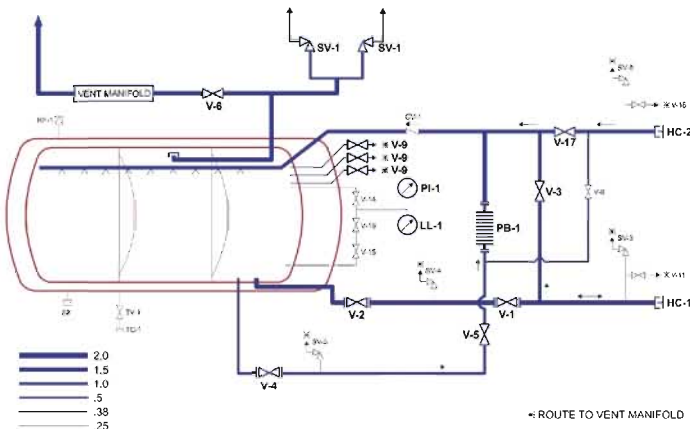
Code	Model	Service	Gross Water Capacity (liters)	MAWP* (bar)	Length (mm)	Width (mm)	Height (mm)	Tare Weight (kg)	Max. Gross Weight (kg)	Hold Time LNG (days)	Pump**
EN, ADR IMDG, RID ISO	ICC-20-E-24	CO ₂ , N ₂ O	20 080	24	6 058	2 438	2 591	9 325	34 000	54+	Smith MC3 or CEHA 5101

* MAWP – Maximum Allowable Working Pressure

** Additional options available

Specification of TVAC model Nomenclature (standard model)

V-1	FILL & DRAIN VALVE
V-2	FILL/DRAIN BLOCK VALVE
V-3	TOP FILL VALVE
V-4	PBU FIRE BLOCK VALVE
V-5	PRESSURE BUILD VALVE
V-6	MANUAL VENT VALVE
V-8	PRESSURE FORCE FEED
V-9	TRYCOCK VALVES
V-10	LIQUID SAMPLE VALVE
V-11	FILL LINE BLEED VALVE
V-14	LP ISOLATION VALVE
V-15	PANEL ISOLATION VALVE
V-16	LL GAUGE EQUALIZER VALVE
V-17	PUMP RECIRCULATION VALVE
V-18	RECIRCULATION LINE BLEED VALVE
TC-1	THERMOCOUPLE / VAC. PROBE
RF-1	JACKET VACUUM RELIEF
SV-3/8	RELIEF VALVES
CV-1	DISCHARGE LINE CHECK VALVE
PB-1	PRESSURE BUILDUP COIL
HC-1	FILL & DRAIN CONN.
HC-2	PUMP RECIRCULATION CONN
LL-1	LIQUID LEVEL GAUGE
PI-1	VESSEL PRESSURE GAUGE
SV-1	INNER VESSEL RELIEF VALVES
EP	EVACUATION PORT



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