



FLEX-FLOW Urethane Insulated CO₂ Storage

Flex-Flow Horizontal and Vertical Storage Units

Recognizing the need for versatility in the changing Flex-Flow industry, TOMCO₂ Systems designed and introduced the Flex-Flow urethane insulated horizontal and vertical CO₂ storage units. These CO₂ storage units offer minimal maintenance, efficient operation in heat and humidity, manway for inspection and cleaning, evaporator coil inside the vessel and an optional refrigeration unit.

The Flex-Flow product line is available in nominal capacities of 6 tons to 120 tons (5.4 MT to 109.0 MT) in both horizontal and vertical CO₂ storage units to meet your needs. All CO₂ storage units are manufactured using a normalized SA-612 carbon steel plate.

GENERAL SPECIFICATIONS

Pressure Vessel: Constructed in accordance with Section VIII, Division 1 of the ASME Code for Unfired Pressure Vessels for a maximum allowable working pressure (MAWP) of 350 psig (24.1 bar). 2" NPS and under tank nozzles are schedule 80 stainless steel.

Seismic for Horizontal Units: Per UBC 1997 seismic zone 4, importance factor of 1.25, soil profile types Sa, Sb, Sc, Sd or Se, 2 km or less to a type A seismic source. Design to other codes available on request.

Seismic for Vertical Units: Per UBC 1997 seismic zone 4, importance factor of 1.0, soil profile types Sa, Sb, Sc, Sd or Se, greater than 10 km or less to a type A seismic source. Design to other codes available on request.

Piping: Schedule 80 seamless pipe, 2,000 lb. forged steel fittings, 1/4 turn stainless steel isolation valves.

Refrigeration: Optional. Manway installed for internal inspection and ease in cleaning. Refrigeration evaporator coil installed inside vessel.

Safeties: Dual ASME approved direct spring operated, sized for unconfined outdoor installation. Larger capacity relief valves will be required for installation when located indoors or in a fire area.

Insulation: 6" (152 mm) polyurethane

Outer Jacket: 0.063" (1.6 mm) aluminum with F&D aluminum heads

Vaporizers Optional: Steam, water or electric capacities to 12,000 lbs./hr. (2,722 kg/hr)

Liquid Level Gauge: Differential pressure indicator type with 6" (152 mm) dial

Pressure Gauge: 0 to 600 psig with 6" (152 mm) dial

Horizontal Models	Nominal Ton Capacity	Height*	Length*	Width*	Approx. Empty WT.**
681FFH	6 tons	9'0"	12' 11"	6' 2"	9,000 lbs.
	5.4 MT	2.74 m	3.94 m	1.88 m	4,082 kg
1481FFH	14 tons	10' 3"	17' 4"	7' 8"	14,000 lbs.
	12.7 MT	3.12 m	5.28 m	2.34 m	6,350 kg
2681FFH	26 tons	10' 3"	29' 4"	7' 8"	23,500 lbs.
	23.6 MT	3.12 m	10.16 m	2.34 m	10,659 kg
3081FFH	30 tons	10' 3"	33' 4"	7' 8"	26,500 lbs.
	27.2 MT	3.12 m	10.16 m	2.34 m	12,020 kg
3481FFH	34 tons	10' 3"	37' 4"	7' 8"	29,000 lbs.
	30.8 MT	3.12 m	11.38 m	2.34 m	13,154 kg
5081FFH	50 tons	11' 0"	53' 4"	7' 8"	40,000 lbs.
	45.4 MT	3.35 m	16.26 m	2.34 m	18,144 kg
6081FFH	60 tons	11' 0"	63' 4"	7' 8"	45,000 lbs.
	54.4 MT	3.35 m	19.3 m	2.34 m	20,412 kg
7781FFH	77 tons	13' 5"	44' 0"	10' 4"	60,200 lbs.
	69.9 MT	4.09 m	13.41 m	3.15 m	27,307 kg
9181FFH	91 tons	13' 5"	51' 7"	10' 4"	69,000 lbs.
	82.6 MT	4.09 m	15.72 m	3.15 m	31,298 kg
10681FFH	106 tons	13' 5"	59' 2"	10' 4"	78,000 lbs.
	96.2 MT	4.09 m	18.03 m	3.15 m	35,380 kg
12081FFH	120 tons	13' 5"	66' 8"	10' 4"	82,500 lbs.
	108.9 MT	4.09 m	20.32 m	3.15 m	87,421 kg

Vertical Models	Nominal Ton Capacity	Height	Length	Width*	Approx. Empty Weight**
681FFV	6 tons	15' 3"	7' 11"	6' 9"	10,000 lbs.
	5.4 MT	4.35 m	2.41 m	2.06 m	4,536 kg
1481FFV	14 tons	19' 10"	8' 11"	8' 4"	15,500 lbs.
	12.7 MT	6.05 m	2.72 m	2.54 m	7,031 kg
2681FFV	26 tons	31' 4"	8' 11"	8' 4"	25,000 lbs.
	23.6 MT	9.55 m	2.72 m	2.54 m	11,340 kg
3081FFV	30 tons	35' 4"	8' 11"	8' 4"	30,000 lbs.
	27.2 MT	10.77 m	2.72 m	2.54 m	13,608 kg
5081FFV	50 tons	38' 9"	10' 7"	9' 9"	40,000 lbs.
	45.4 MT	11.81 m	3.23 m	2.97 m	18,144 kg
7581FFV	75 tons	45' 3"	11' 3"	10' 9"	55,000 lbs.
	68.04 MT	13.79 m	3.43 m	3.28 m	24,948 kg

*Shipping dimensions- for verticals over 6 Tons size

**Weights include insulation, saddles/legs and nozzles for a standard vessel. Actual weights may vary. There are no refrigeration unit on these tanks so that weight is not included.

