



Type IV HDPE-Lined Composite Pressure Vessel for CNG

- Carbon epoxy composite construction with E-glass epoxy outer layer(s) for increased durability and damage tolerance
- Towpreg composite for improved resin content, reduced weight and quality process control
- High Density Polyethylene (HDPE) liner
- Boss or strap mountable
- Innovative 2-piece boss design for leak-proof boss/liner interface and increased load capability & stiffness
- Up to 70% weight savings over TYPE 1 steel cylinders
- Service life of 20 years with superior fatigue tolerance
- Corrosion resistant

Driving the standards in lightweight gas containment. Designed and manufactured in accordance with ISO11439 and NGV2 specifications.

FIBA's Type 4 plastic-lined composite pressure vessel consists of a durable plastic liner fully wrapped with a high performance carbon fiber reinforced plastic (CFRP) shell. A sacrificial E-glass composite covering is applied over the primary structural shell to enhance the durability and damage resistance of the vessel. The plastic liner is a non-structural permeation barrier for the containment of gases at high pressure. It is formed from a High-Density Polyethylene (HDPE) co-polymer specifically designed for industrial gas and/or wastewater treatment piping. By virtue of its relatively low modulus, the liner carries almost no

load in comparison with the composite shell. The primary advantage a flexible plastic liner offers is its general durability and high cycle life. A plastic liner is also insensitive to material flaws and loading. The structural carbon composite shell is the load-carrying element of the vessel. It is a continuous, carbon fiber and epoxy resin composite in towpreg form fabricated by filament winding. Carbon fiber provides high strength-to-weight performance, excellent fatigue properties, insensitivity to environmental degradation, and performance reliability.

CNG - Operating Pressure 3,600 PSI (248 Bar); 18 In. O.D.

LENGTH		VESSEL WEIGHT		WATER VOLUME		CNG WEIGHT		CNG PAYLOAD	
FEET	METERS	POUNDS	KILOGRAMS	CUBIC FEET	LITERS	POUNDS	KILOGRAMS	STANDARD CUBIC FEET	NORMAL CUBIC METERS
10.0	3.0	259	117	14.2	403	190	86	4,219	120
12.5	3.8	324	147	17.8	504	237	107	5,274	150
18.5	5.6	479	217	26.3	746	351	159	7,806	222