# TUFFSHELL® all-composite Type 4 CNG Cylinders





# **Features and Benefits**



## Lightweight

TUFFSHELL all-composite Type 4 cylinders combined with aluminum construction offer the lightest weight per unit volume of any CNG fuel system. Weighing only 30% of the weight of steel cylinders, they improve vehicle range, payload, handling, and fuel efficiency



### **Long Cycle Life**

Type 4 cylinders have a plastic liner that does not experience corrosion or metal fatigue after repeated fill and discharge cycles



#### Maintenance-Free

Designed to be maintenance-free with reduced inspection costs



#### Global

TUFFSHELL cylinders are used in over 50% of European and 80% of North America CNG commercial vehicles



#### **Durable**

High-strength, super-tough construction reduces impact damage and fatigue. Type 4 cylinders have built-in dome protection against abrasions and scuffs



#### Leak-Free

Precision-machined valve interface ensures leak-free operation



#### Compact

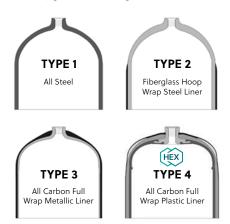
Wide range of standard sizes available in strap mount, boss mount, and mixed mount designs for maximum packaging efficiency



#### Vocation

Installed in a variety of commercial vehicles, including transit and coach buses, heavy goods vehicles, refuse collection vehicles, concrete mixers, and delivery trucks

## **Cylinder Types Comparison**



## **Hexagon Agility's Rigorous Testing**



All Hexagon Agility cylinders undergo extensive tests, including those required for certification and additional tests designed by Hexagon Agility to ensure durability and safety over the long haul

Flaw Tolerance Test

Permeation Test

**Pneumatic Cycling Test** 

Leak Before Break Test

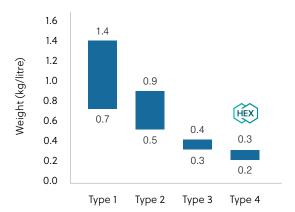
#### **Required Tests:**

**Drop Test Bonfire Test** Penetration Test **Accelerated Stress Rupture Test** Gas Cycling

**Additional Hexagon Agility Tests:** 

**Acid Exposure** Cold Fast Fill Weld Strength Fast Blow Down

## Weight Per Unit Volume by Type



## **Hexagon Agility Cylinder Certifications**



Hexagon Agility's cylinders are designed, manufactured, tested, and qualified according to the requirements of the U.S. Department of Transportation (US DOT), National Highway Traffic Safety Administration (NHTSA), Federal Motor Vehicle Safety Standard (FMVSS) 304, Compressed Natural Gas Fuel Container Integrity. They also meet the requirements of ANSI/NGV 2 (2016), Basic Requirements for Compressed Natural Gas Vehicle (NGV) Fuel Containersa. Our cylinders exported globally meet ISO 11439, ECE R110, India CCOE, ADR/TPED, Russian GOST, Korean KGSC, and many other national standards

# **Specifications**

Part #	Mount	Diameter	Length	Empty Weight	Full Weight	Water Volume	Nominal Capacity		Working Pressure
		in	in	lb	lb	L	DGE	GGE	psi
240270-053A	Boss	16	81	109	204	200	15	17	3,600
240270-022A	Boss	16	100	131	248	246	18	21	3,600
240270-064A	Strap	16	120	161	120	315	24	27	3,600
240270-057A	Neck	16	124	163	315	315	24	27	3,600
240270-058A	Neck	16	147	196	380	384	28	32	3,600
240270-034A	Strap	16	120	162	313	315	24	27	3,600
240328-021A	Strap	21	60	141	262	252	19	21	3,600
240328-018A	Boss	21	86	187	357	354	26	30	3,600
240258-031A	Strap	26	40	143	252	226	17	19	3,600
240258-015A	Boss	26	80	255	490	490	37	41	3,600
240258-016A	Boss	26	90	286	555	565	42	48	3,600
240258-030A	Mixed	26	118	380	761	800	60	67	3,600
240258-018A	Boss	26	120	378	754	789	59	66	3,600
240287-004A	Boss	27	60	216	368	395	30	33	3,600
240287-002A	Boss	27	81	268	546	580	43	49	3,600
240287-006A	Boss	27	106	375	680	790	59	66	3,600