



HEXAGON
COMPOSITES



HYDROGEN STORAGE AND TRANSPORTATION SYSTEMS

TYPE 4 HYDROGEN CYLINDERS

Hexagon Composites is a globally leading supplier of Type 4 high-pressure composite cylinders and systems for storage and transport of various gases under pressure. Type 4 tanks are the best combination of safety, efficiency and durability available. Their lightweight construction improves vehicle range, payload and handling.



Hexagon Composites is well positioned across the hydrogen value chain with vehicle tanks for cars and buses, ground storage, transportation and backup power solutions.

Development and production take place at modern facilities in Lincoln, Nebraska/USA, Kassel/Germany and Raufoss/Norway.

FUEL CELL VEHICLES

Hexagon Composites has developed high-pressure hydrogen cylinders for fuel cell vehicles, which are fueled by hydrogen and produce no harmful emissions when operating.

GROUND STORAGE

The introduction of fuel cell vehicles will drive the demand for Hydrogen refueling stations (HRS). The fatigue-resistant cycling properties of composite pressure cylinders make them more suitable for storage than steel alternatives.

GAS DISTRIBUTION

Demand for Hydrogen distribution solutions will grow strongly as a function of the demand for transportation of hydrogen from renewable sources. Hexagon Composites' Mobile Pipeline® and

X-STORE® solutions are certified for Hydrogen distribution. Type 4 tanks allow more gas to be transported in a given trailer space.

BACKUP POWER

Hydrogen fuel cells are an efficient and emerging choice for low-emission, reliable backup power used for telecommunications, emergency services and in remote locations. Hexagon Composites offers backup power solutions with lightweight Hydrogen tanks that enhance system performance and payback.

MARINE AND RAIL

Hexagon Composites is at the forefront of developing hydrogen solutions for the marine and rail industry.

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HEXAGON COMPOSITES HYDROGEN TYPE 4 CYLINDER INFORMATION

Type 4 cylinders designed and manufactured by Hexagon Composites* wholly owned subsidiaries Hexagon Lincoln, Hexagon Raufoss and xperion Energy & Environment*.

REF	NOMINAL WORKING PRESSURE (15° C)		OUTSIDE DIAMETER		OVERALL LENGTH		WEIGHT		WATER VOLUME		HYDROGEN CAPACITY	
	MPa		MM		MM		KG		L		KG	
A**	20		315		1 060		16		46		0.7	
B	25		541		2 783		164		450		8.0	
C	25		503		2 342		94		350		6.0	
D	30		509		2 342		112		350		7.2	
E	35		420		3 190		101		312		7.5	
F	35		509		2 342		112		350		8.4	
G	50		565		3 277		280		530		16.5	
H	50		531		2 424		229		347		10.7	
I	70		319		906		34		36		1.4	
J	70		238		1 600		29		39		1.6	
K	70		420		845		43		64		2.6	
L	70		440		1 050		59		76		3.1	
M	95		515		2 783		365		254		12.4	

* In 2016 Hexagon Composites acquired xperion Energy & Environment in Germany to strengthen its position in the global composite pressure cylinder and systems market. xperion Energy & Environment, located in Kassel, Germany, is a leading manufacturer of Type 4 high pressure cylinders for the automotive industry and gas transportation.

** Portable cylinder including hexagonal plastic shaped casing for protection.

Per 1 February 2017