

40' High Cube MEGC

For transportation of CNG and Biomethane

LOWEST COST TYPE IV IN THE MARKET



Virtual pipeline
Maximise payload.
Minimise total cost
of ownership.

Full composite cylinders



High gas-to-weight ratio



Intermodal for transport
or stationary use



Up to 50% higher gas storage
capacity than steel Type 1 cylinders

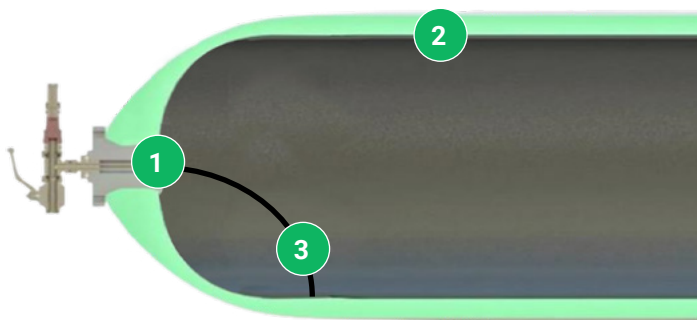


UMOE Advanced Composites (UAC) is the leading global supplier of large glass fibre Type IV cylinders and MEGCs for storage and transportation of hydrogen, biogas and CNG for land-based, marine and offshore applications.

Type IV glass fibre composite cylinder technology

CYLINDER DESIGN

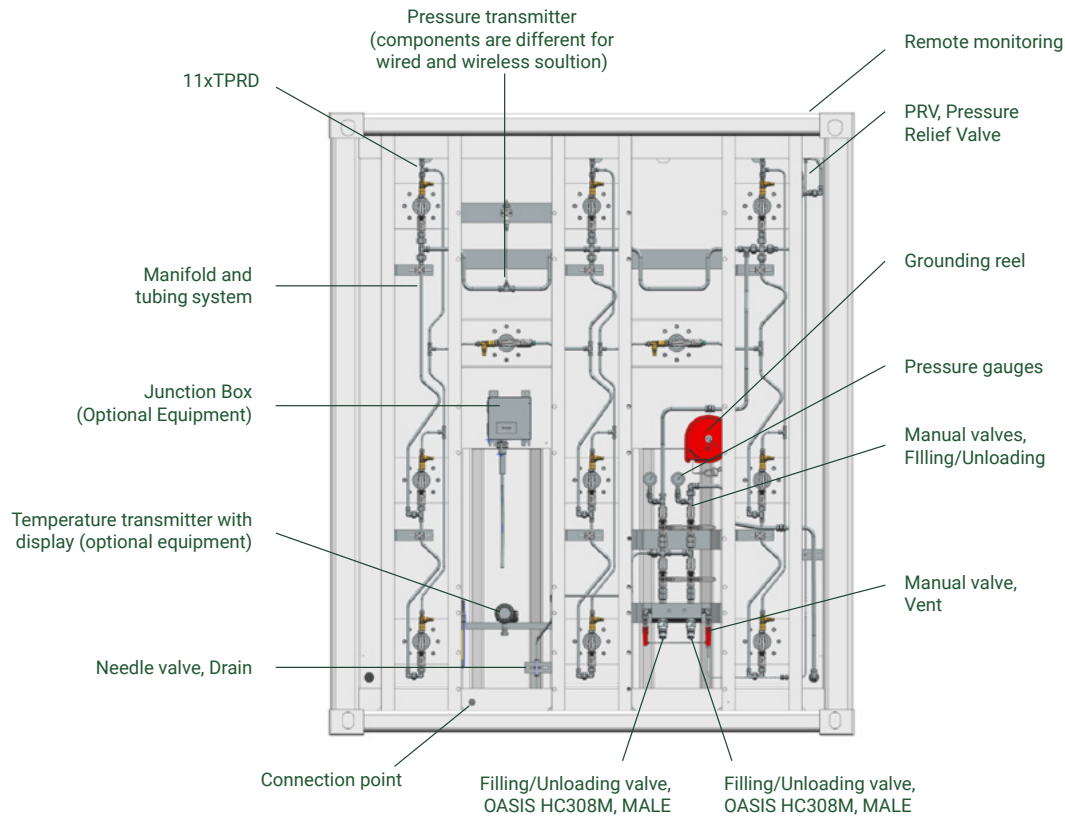
- 1** **Stainless steel (SS316) leak-proof end bosses, embedded for maximum strength**
 - Optional customization of manifold configurations
 - “Leak-before-burst” safety philosophy, ensuring controlled failure and enhanced operational safety
- 2** **High-density polyethylene (HDPE) inner liner, fully protected and heavily reinforced**
 - High-strength glass fibre overwrap
 - Epoxy resin matrix for structural integrity
- 3** **Dip tube**
 - For drainage of residuals



CYLINDER BENEFITS

- 01. Impact resistance comparable to steel** delivering high safety margins with significantly lower weight
- 02. Best in class fire performance** exceeding stringent international safety standards
- 03. Low maintenance** with zero corrosion risk from environmental exposure, internal gas, or contaminants
- 04. Cost-effective glass fibre construction** offering a lower-cost alternative to Type IV carbon fibre cylinders
- 05. Exceptional durability and long-term reliability** even in extreme climates and demanding operating conditions





Container Dimensions	According to ISO 668 standard: L 12,192 m × W 2,438 m × H 2,894 m
Gas Type	CNG / Biomethane
Nominal Working Pressure	250 bar
Total Gas Capacity*	7,772 kg / 10,800 Nm ³
Maximum Allowable Working Pressure	312 bar @ +65 °C
Cylinder Count	22 cylinders / 1,666 Litres / Total water capacity 36,652 Litres
Cylinder Diameter	710 mm
Cylinder Length	6,600 mm
Container Weight (Empty)	30 tonnes
Container Weight (Full)	37.7 tonnes
Design Temperature	-40 °C to +65 °C
Certification	ADR / TPED / PED / DOT / RID
Production Standard	EN 12245:2022
Intended Use	Transportation and storage of compressed gas
Cylinder Construction	Type IV Glass fibre cylinders
C5 paint	Corrosion protection

*based on a gas density of 0.212 g/cm³ at 15°C

OPTIONAL FEATURES FOR ISO STANDARD OR HIGH CUBE

Pneumatically actuated main / sections valves	For externally controlled fill/discharge
Manual shut down buttons front and rear side	Manually shut down pneumatic valves when filling/discharging
Immobilizer /Anti-tow-away	Activation of trailers parking brake when charging / discharging
Additional connection points	More unloading/filling valves
Customizable connections	Preferred connections available
Remote Monitoring	GPS, Online access and MEGC surveillance
Logo or customized text foiled on container walls	Customer branding
Cascade design	Design option of PID

UAC'S MEGC PORTFOLIO OVERVIEW

Container Size	UNIT	20' ISO STANDARD*	20' ISO HIGH CUBE*	40' ISO STANDARD	40' ISO HIGH CUBE	45' ISO HIGH CUBE
Number of cylinders	#	9	11	18	22	22
Cylinder volume	l	1,666	1,666	1,666	1,666	1,925
Total storage volume (wc)	l	15,000	18,326	30,000	36,652	42,350
Storage capacity (Wp 250 bar) at 15°C	kg	3,180	3,886	6,360	7,772	8,981
Storage capacity	Nm ³	4,468	5,460	8,936	10,916	12,614
Height	mm	2,590	2,894	2,590	2,894	2,894
Filled Weight	kg	14,800	17,350	28,650	34,500	39,900

* 20 foot containers available as a Hook Container



CERTIFICATION OVERVIEW

Certification	Purpose
EN 12245:2022	International standard for composite gas cylinders, including Type IV designs
PI Mark	"Pressure Vessel for Industrial use" – indicates type approval under EN 12245:2022
Rho Mark (ρ)	For UK applications
TPED / ADR / PED	European transport compliance (Transportable Pressure Equipment Directive/ADR)
DOT-SP 21935	For US applications

CONTACT DETAILS



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