



Lightweight Hydrogen Storage

Leaders in High-Performance
Composite Overwrapped
Pressure Vessels
(COPVs)



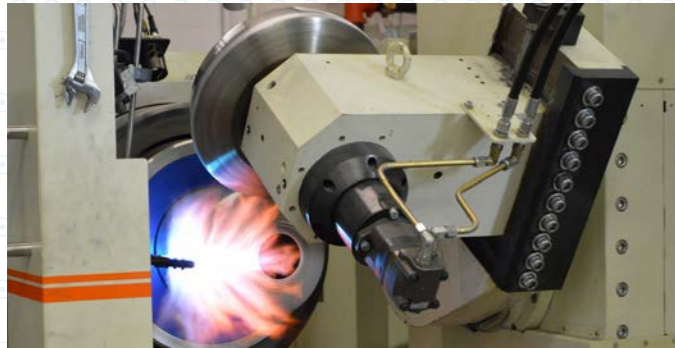
Type III - Metal Lined
Type IV - Polymer Lined



High-Performance COPVs High-Pressure Type III and IV

Advanced Design & Manufacturing

Steelhead Composites is a world-class expert in the design and manufacturing of standard and custom pressure vessels for many applications.



State-of-the-art equipment & vertically integrated:

- Forming
- Machining
- Winding
- Finishing
- Coating
- Inspection



Proprietary, epoxy-impregnated high-performance materials and advanced manufacturing methods



Steelhead Composites pressure vessel design and manufacturing experts offer decades of experience

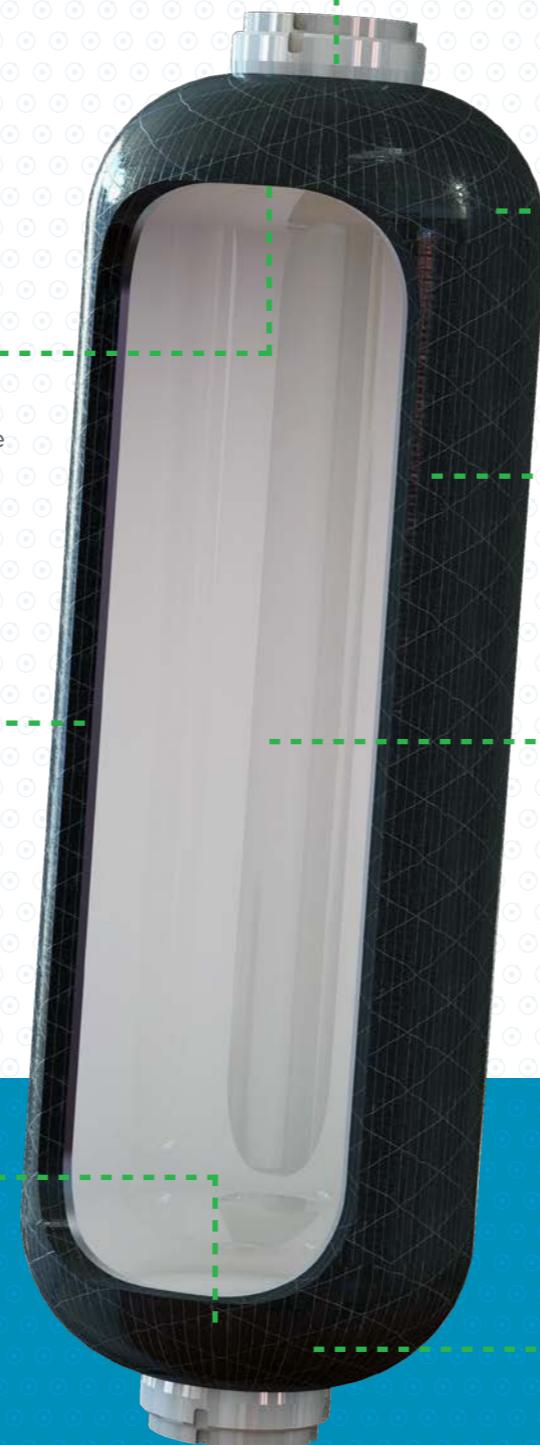
Patented "Steelhead" large-port enables variable fittings and in-tank regulators

Designed for:

- Enhanced safety
- Reduced mass
- Lengthened cycle life

Reliable leak-before-burst performance

Proprietary dome designs & wrapping patterns for enhanced performance



Custom epoxy-impregnated composite material for high-pressure, long-wear capabilities

Several glass-fiber wraps available for superior durability and corrosion resistance

Available vessel types:



Type III
Metallic
Liner

Type IV
Polymeric
Liner

Designed for exceptional durability with proven drop and impact resistance

Certifications, Testing, & Quality

Our superior design, testing, quality systems, and third-party certifications ensure repeatable manufacturing of high-quality, reliable pressure vessels.



Manufacturing certifications to:

- ISO 9001-2015
- AS 9100 Rev D
- ISO 11119-2:2012
- CE Module B
- CE Module D
- DNVG-OS-E101 Drilling



Product certifications to:

- ISO
- CE
- DNV
- ABS
- DOT UN/ISO
- ASME



Fully digital manufacturing & quality systems ensure repeatable, reliable performance

Off-The-Shelf Configurations

Fully certified and DOT approved for hydrogen storage

350 BAR

COPV Type	Outside Diameter (mm)	Length (mm)	Vessel Mass (kg)	Water Volume (L)	Hydrogen Capacity (kg)
III	435	1016	70	90	2.07
III	435	1422	100	133	3.0
III	435	2110	135	205	4.85
III	435	2616	165	270	6.2

Manufacturing Capabilities Range

Custom development required

350 BAR

III	125
III	280
III	330
III	425
IV	170
IV	340
IV	490

Minimum Size			
Length (mm)	Vessel Mass (kg)	Water Volume (L)	Hydrogen Capacity (kg)
450	3	4	0.1
760	17	28	0.6
850	23	40	0.9
880	49	80	1.8
735	8	9.5	0.2
830	23	43	1.0
920	53	112	2.6

Maximum Size			
Length (mm)	Vessel Mass (kg)	Water Volume (L)	Hydrogen Capacity (kg)
2,500	14	22	0.5
2,600	58	125	2.9
2,600	75	165	3.8
2,600	132	270	6.2
1,750	17	26	0.6
2,100	65	132	3.0
2,100	110	290	6.7

550 BAR

III	129
III	170
III	300
III	432
IV	170
IV	340
IV	505

574	3	19	0.44
955	4	38	1.2
1,316	17	57	1.8
2,071	49	95	2.9
735	9.3	9	0.3
830	29	45	1.4
920	81	112	3.5

2,500	14	22	0.7
2,500	22	40	0.9
2,600	58	125	4.0
2,600	132	270	8.6
1,750	21	26	0.8
2,100	70	130	4.0
2,100	150	300	9.3

700 BAR

III	133
III	177
III	312
III	356
III	455
IV	170
IV	410

908.8	3	19	0.7
990.6	4	38	1.5
1,092.9	17	57	2.2
1,690	23	76	3.0
2,071	49	95	3.7
735	10	9	0.4
860	50	63	2.4

2,500	14	22	0.9
2,500	22	40	1.56
2,600	58	125	4.9
2,600	75	165	6.4
2,600	132	270	10.5
1,750	24	26	1.0
2,100	118	180	7.0

Current Applications



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