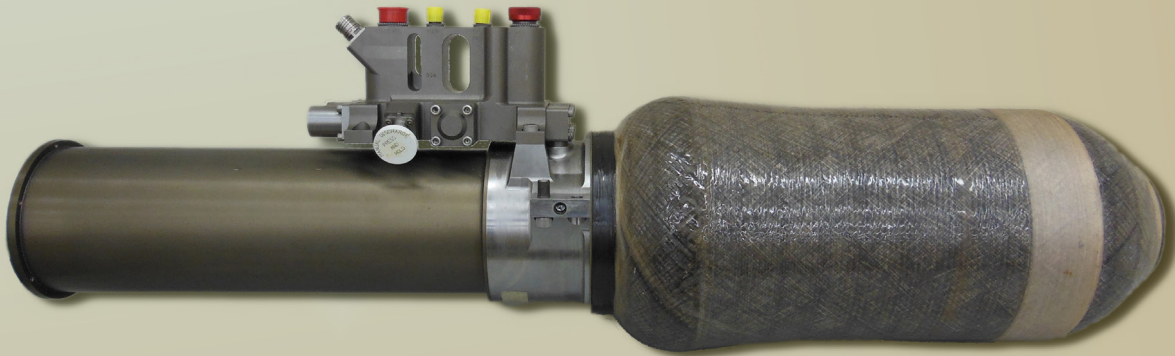


# Hydraulic Accumulators

Positive Displacement

Valcor Aerospace



## DESCRIPTION

Valcor's positive displacement hydraulic accumulators are self contained sources of hydraulic power. They store nitrogen gas and hydraulic oil under pressure (nominally 3000 PSI).

The expansion of the pressurized gas serves to expel the oil from the unit upon demand. The accumulator contains its own reservoir to receive expelled oil from the high pressure side (referred to as: self displacing) after it has performed its work in the system.

Valcor's innovative accumulator design features optimized fiber wrapping and a "sleeve within the liner" configuration. Valcor's wrapping technology can reduce weight up to 40% from that of traditional hoop wraps. Valcor's combined analysis and in-house wrapping technology are utilized on designs that demand optimization of weight, envelope, and performance. The sleeve feature allows the piston to ride on desirable materials that are different than the preferred liner material.

## APPLICATION

These units are used in engine start systems to provide the high pressure oil supply required to drive the hydraulic motor of the auxiliary power unit (APU). They are also used as a backup to the main hydraulic system in the event of failure, to provide emergency power for functions such as braking and landing gear extension. Primary applications are on aircraft, including helicopters, where minimum weight is of paramount importance.

## FEATURES

- Composite material for high strength and low weight
- Dual seals for positive gas/liquid separation
- Self-lubricating for extended life cycle
- Diagnostic instrumentation can be provided
- Envelope flexibility to suit installation
- Integrated control valve module



**Brief Listing of Valcor's Qualified Aerospace Accumulators**

Valcor Part No.	Program	Approx. Vessel Envelope, L x D in.	Operating Pressure psig	High press oil volume, cu. in.	Fluid Temperature °F	Over-wrap Material	Self-Displace
898253-1-W	Military Rotorcraft	30.0 x 6.92	3000 to 3500	140	-50 to 275	Kevlar®	Yes
896711-W	Military Fixed Wing Aircraft	60.7 x 5.67	3000	350	-65 to 160	Fiberglass	Yes
898745-W	Proprietary	35.0 x 6.81	3000 to 3600	200	-40 to 220	Kevlar®	Yes
884097-W	EmergPwr Cart	35.4 x 7.81	3000	660	-65 to 275	Kevlar®	No
899211-W	Military Fixed Wing Aircraft	26.3 x 6.81	3000 to 3600	140	-40 to 275	Kevlar®	Yes
899346-W	Military Fixed Wing Aircraft	28.0 x 4.28	3000	79	-65 to 275	Kevlar®	Yes
895907-W	Military Fixed Wing Aircraft	28.3 x 4.80	3000	206	-40 to 275	Kevlar®	No
895800-W	Military Fixed Wing Aircraft	16.2 x 5.00	3000	77	-65 to 275	Fiberglass	No
894114-W	Military Fixed Wing Aircraft	61.0 x 5.44	3000	350	-65 to 160	Fiberglass	Yes
893904-W	Military Fixed Wing Aircraft	20.4 x 2.81	3000	38	-65 to 275	Fiberglass	No
898227-W	Military Fixed Wing Aircraft	26.3 x 6.4	3000 to 3600	140	-40 to 275	Kevlar®	Yes
898254-1-W	Military Rotorcraft	30 x 6.92	3000 to 3600	140	-50 to 275	Kevlar®	Yes
898225-W	Military Rotorcraft	26.3 x 6.4	3000 to 3600	140	-40 to 275	Kevlar®	Yes
V9100-14-W	Proprietary	39 x 8.19	3300	575	-20 to 170	Kevlar®	No
V9100-62-1-W	Military Rotorcraft	07.20 x 19.78	3000	131.8	-65 to 275	Carbon	No
V9100-63-W	Military Rotorcraft	05.00 x 12.80	3000	6.1	-58 to 158	Carbon	No
884119-05-W	Military Fixed Wing Aircraft	07.00 x 23.68	3000	142	-40 to 275	Carbon	No
884119-05-1-W	Military Fixed Wing Aircraft	07.00 x 23.68	3000	142	-40 to 275	Carbon	No
884120-06-W	Military Fixed Wing Aircraft	03.8 x 14.5	3000	30	-40 to 275	Kevlar®	No
884120-06-1-W	Military Fixed Wing Aircraft	03.8 x 14.5	3000	30	-40 to 275	Kevlar®	No
V9100-77-W	Military Rotorcraft	42 x 9.90	4000 to 4200	346	-65 to 275	Carbon	Yes