



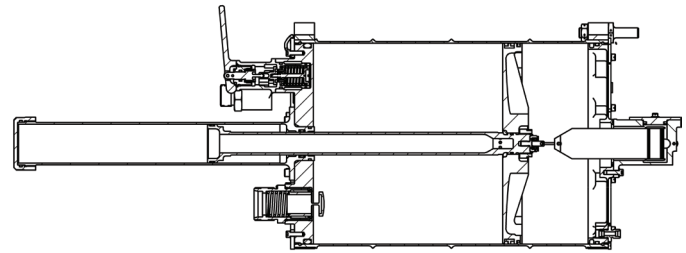
# Hydraulic Reservoirs

For over 60 years, aircraft manufacturers have selected Arkwin to design and manufacture hydraulic bootstrap reservoirs. Arkwin's expert design and world-class quality provide a reliable supply of fluid to hydraulic systems under all design operating conditions. As the preeminent designer of bootstrap reservoirs, Arkwin has provided creative technical solutions incorporating relief valve components, thermal sensors, filters, heat exchangers, and fluid level indicators for a broad range of aerospace and defense applications to address hydraulic pressurization requirements.

Arkwin's hydraulic reservoirs are installed on many of today's civil and military aircraft.

## Platforms

A-10	E-Jets E2
B-2	F-35
B-52	HA-420
CH-47	H-60
Citation X	S-76

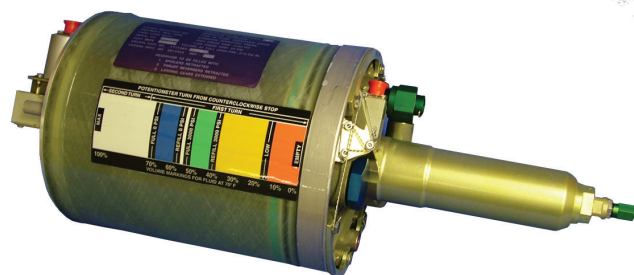


## Operational Characteristics

- Generates aircraft return pressure preventing hydraulic pump cavitation
- Provides additional system pressure volume when unequal area actuators extend, improving performance
- Provides a storage container for changes in aircraft hydraulic system volume due to extremes of fluid temperature
- Contained fluid volume systems permit aircraft roll without losing reservoir fluid

## Design Characteristics

- Fixed and extendable bootstrap cylinder construction
- Swept volumes from 30 to 5,000 cubic inches
- Operating pressures up to 5,000 psig
- Diameters ranging from 4.5" to 14.5"
- Visual and remote fluid level indication
- Aluminum and composite cylinder construction



Hydraulics Leader for  
Aerospace and Defense

## Selected Reservoirs

Part Number	Volume	System Pressure (PSI) High/Low	Diameter (Nominal)	Stroke	Dry Weight (LB)	Fluid Indication (1)	Integral Features (2)
1711043	86	3200 67	6.10"	3.29"	21.0	V1 R4	F3, F4, F7, F8, F9
1711123	360	3000 43	8.225"	6.738"	17.8	V3, R2	F3, F4, F5, F7, F8
1711084	395	3000 50	8.23"	7.4"	13.5	V3, R2, R4	F3
1711162	500	3000 76	9.976"	6.274"	23.6	V2, R2	F3, F5
1711115	640	4100 86	8.975"	9.935"	25.8	R1	F1, F2, F4, F5
1711018	690	3350 66	10.98"	7.5"	21.5	V1 R1	F1, F9, F6
1711160	1000	3000 76	9.976"	12.517"	27.1	V2, R2	F3, F5
1711161	1300	3000 76	9.976"	16.261"	29.0	V2, R2	F3, F5

## Key Features

### (1) Fluid Quantity Indication

- V1: Visual indication by calibrated marking on moving cylinder
- V2: Visual indication by calibrated tape connected to internal piston
- V3: Visual indication by internal piston monitored through translucent cylinder
- R1: Remote indication via LVDT
- R2: Remote indication via electrical potentiometer
- R3: Remote indication via mechanical cable
- R4: Remote indication via low fluid level discrete switch

### (2) Integral Features

- F1: Low pressure relief valve
- F2: Low pressure bleed valve
- F3: Combined low pressure bleed/relief valve
- F4: High pressure relief valve
- F5: Thermal sensing/switching
- F6: Integral heat exchanger
- F7: High/low pressure filter(s)
- F8: Filter condition indicator
- F9: System switching valves – solenoid operated



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