



RV BATTERIES

FLOODED -vs- AGM -vs- LITHIUM

A COUPLE OF NOTES

- All numbers based on 12-volt battery bank/system
- We're using Amp-Hours for comparative purposes, but the correct measure for power is Watt-Hours
- Using general standards/estimates for Lithium
- Lithium Iron Phosphate (LiFePO_4)
- We are **NOT** trained battery professionals, and all info is based on our own research & experience

BATTERY TYPE COMPARISON

	FLOODED	AGM	LITHIUM
AMP-HOURS	440 Ah	440 Ah	500 Ah
MAX D.O.D.	50%	50%	80%
USEABLE Ah	220 Ah	220 Ah	400 Ah
LIFESPAN (cycles)	500	1,000	3,000
LIFETIME Ah	110,000 Ah	220,000 Ah	1,200,000 Ah
EST. PRICE	4 x \$150 = \$600	4 x \$325 = \$1,300	\$6,000
COST PER 100Ah	\$0.55 / 100Ah	\$0.59 / 100Ah	\$0.50 / 100Ah

BATTERY BENEFITS COMPARISON

FLOODED	AGM	LITHIUM
Lowest cost of entry	Maintenance free	RAPID charging
Works great for many people	No outgassing	Reduced genset time
Weighs less than AGM	Can be installed indoors	Larger capacity
Mostly temperature-proof	Fewer replacements	Maintenance free
	Fewer sulphation issues	LOOOOONG life
	Less temperature sensitive	Lowest lifetime cost
		Lightest weight
Outgassing		Full charge never needed!
Routine maintenance required	Heaviest weight	No Peukert's Law
Must fully charge for max life	Cost more for modest gains	Freezing = No charging
Peukert's Law	Peukert's Law	Highest upfront costs

PEUKERT'S LAW

Peukert's law expresses the change in capacity of lead-acid batteries at different rates of discharge.

As the rate of discharge increases, a battery's available capacity decreases.

BATTERY RATINGS

- Amp-hour ratings for lead-acid batteries are based on a steady 20-hour load.
- $100\text{Ah} \div 20\text{h} = 5\text{A}$ load
- Apply a higher load & you won't get 100 Ah



THANK YOU!

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