How lithium-ion batteries measure up

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB14 Lithium-ion Aircraft Battery	13 amp-hour	10 lbs.	26.4 VDC	8 years (average)	On-condition
Lead-acid Battery	13.6 amp-hour	29.5 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	15 amp-hour	36.8 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB17 Lithium-ion Aircraft Battery	17 amp-hour	16 lbs.	26.4 VDC	8 years (average)	2 years
Lead-acid Battery	17 amp-hour	43 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	17 amp-hour	38.5 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB20 Lithium-ion Aircraft Battery	20 amp-hour	19.5 lbs.	26.4 VDC	8 years (average)	On-condition
Lead-acid Battery	17 amp-hour	43 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	17 amp-hour	38.5 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB28-12V Lithium-ion Aircraft Battery	26 amp-hour	10 lbs.	13.2 VDC	8 years (average)	On-condition
Lead-acid Battery	24 amp-hour	23.5 lbs.	12 VDC	2 – 4 years	Annual

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB30 Lithium-ion Aircraft Battery	30 amp-hour	27.7 lbs.	26.4 VDC	8 years (average)	On-condition
Lead-acid Battery	28 amp-hour	62 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	27 amp-hour	54.3 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB40 Lithium-ion Aircraft Battery	40 amp-hour	36.6 lbs.	26.4 VDC	8 years (average)	On-condition
Lead-acid Battery	42 amp-hour	86 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	44 amp-hour	80 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB44 Lithium-ion Aircraft Battery	46 amp-hour	51.7 lbs.	26.4 VDC	8 years (average)	2 years
Lead-acid Battery	42 amp-hour	86 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	44 amp-hour	80 lbs.	24 VDC	5 – 10 years	200 – 400 hours

Battery Technology	Capacity (1C rate)	Weight	Voltage Output	Useful Life	Maintenance
TB60 Lithium-ion Aircraft Battery	60 amp-hour	52.9 lbs.	26.4 VDC	8 years (average)	On-condition
Lead-acid Battery	53 amp-hour	98 lbs.	24 VDC	2 – 4 years	Annual
Nickel-cadmium Battery	53 amp-hour	105 lbs.	25.2 VDC	5 – 10 years	200 – 400 hours

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START FASTER
START SMARTER

Certified Lithium-ion Aircraft Batteries

PRODUCT COMPARISON CHART

	TB14	TB17	TB20	TB28-12V	TB30	TB40	TB44	TB60
CAPACITY	13 amp-hour nominal at 23°C/73°F	17 amp-hour nominal at 23°C/73°F	20 amp-hour nominal at 23°C/73°F	26 amp-hour nominal at 23°C/73°F	30 amp-hour nominal at 23°C/73°F	40 amp-hour nominal at 23°C/73°F	46 amp-hour nominal at 23°C/73°F	60 amp-hour nominal at 23°C/73°F
WEIGHT	10 lbs. (4.54 kg)	16 lbs. (7.26 kg)	19.5 lbs. (8.85 kg)	10 lbs. (4.54 kg)	27.7 lbs. (12.56 kg)	36.6 lbs. (16.60 kg)	51.7 lbs. (23.45 kg)	52.9 lbs. (23.99 kg)
CHARGE VOLTAGE	28.8 VDC nominal	28 VDC nominal	28 VDC nominal	14.4 VDC nominal	28 VDC nominal	28 VDC nominal	28 VDC nominal	28 VDC nominal
OUTPUT VOLTAGE	26.4 VDC nominal	26.4 VDC nominal	26.4 VDC nominal	13.2 VDC nominal	26.4 VDC nominal	26.4 VDC nominal	26.4 VDC nominal	26.4 VDC nominal
OUTPUT CURRENT	100A continuous, 850A max	500A continuous, 840A max	525A continuous, 960A max	200A continuous, 850A max	575A continuous, 1440A max	525A continuous, 1500A max	750A continuous, 1500A max	425A continuous, 1500A max
RECHARGE TIME	35 minutes to fully recharge when battery is fully discharged	30 minutes to fully recharge when battery is fully discharged	Configurable Charge Current Limiting: 15 minutes to fully recharge when configured for max charge current	50 minutes to fully recharge when battery is fully discharged	Configurable Charge Current Limiting: 15 minutes to fully recharge when configured for max charge current	Configurable Charge Current Limiting: 15 minutes to fully recharge when configured for max charge current	15 minutes to fully recharge when battery is fully discharged	Configurable Charge Current Limiting: 15 minutes to fully recharge when configured for max charge current
DIMENSIONS	6.3" L x 5.6" W x 4.9" H	7.2" L x 7.4" W x 6.0" H	9.1" L x 8.6" W x 8.8" H	6.3" L x 5.6" W x 4.9" H	12.5" L x 8.6" W x 8.8" H	9.1" L x 14.7" W x 8.8" H	10.9" L x 10.5" W x 10.1" H	12.5" L x 14.7" W x 8.8" H
PROTECTION	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting	Overcharge, over-discharge, over-current, short circuit, over-temperature and under-temperature	Overcharge, over-discharge, over-current, short circuit, over-temperature, under-temperature and charge current limiting
LITHIUM-ION CHEMISTRY	Iron Phosphate	NanoPhosphate®	NanoPhosphate®	Iron Phosphate	NanoPhosphate®	NanoPhosphate®	NanoPhosphate®	NanoPhosphate®
USEFUL LIFE	8 years (average)	8 years (average)	8 years (average)	8 years (average)	8 years (average)	8 years (average)	8 years (average)	8 years (average)
COMMUNICATION	RS-232, Analog, Discrete	Discrete, RTD (Battery status to the cockpit)	Built-in Test (BIT) Indicator ARINC 429, Analog, Discrete, RTD	RS-232, Analog, Discrete	Built-in Test (BIT) Indicator ARINC 429, Analog, Discrete, RTD	Built-in Test (BIT) Indicator ARINC 429, Analog, Discrete, RTD	Serial, Discrete, RTD (ARINC 429 data to the cockpit)	Built-in Test (BIT) Indicator ARINC 429, Analog, Discrete, RTD
MAINTENANCE	On-Condition: Service indicated via Discrete output and RS-232	Two-year intervals	On-Condition: Service indicated via Discrete output, LED indication and ARINC 429	On-Condition: Service indicated via Discrete output and RS-232	On-Condition: Service indicated via Discrete output, LED indication and ARINC 429	On-Condition: Service indicated via Discrete output, LED indication and ARINC 429	Two-year intervals	On-Condition: Service indicated via Discrete output, LED indication and ARINC 429
OPERATING TEMPERATURE	-20°C to 70°C (-4°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-20°C to 70°C (-4°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
CONFIGURATION	2P8S 2 parallel x 8 in series	7P8S 7 parallel x 8 in series	8P8S 4 parallel x 8 in series x 2	4P4S 4 parallel x 4 in series	12P8S 4 parallel x 8 in series x 3	16P8S 4 parallel x 8 in series x 4	19P8S 1 parallel x 8 in series x 19	24P8S 4 parallel x 8 in series x 6
CASE	Anodized aluminum, blue	Anodized aluminum, blue	Anodized aluminum, blue	Anodized aluminum, blue	Anodized aluminum, blue	Anodized aluminum, blue	Powder-coated steel, blue	Anodized aluminum, blue
CONNECTION	Terminals, D-sub for communications	Terminals (6430017-1, -2), MS3509 Quick Disconnect (6430017-3, -4) Mil Circular for communications	MS3509 Quick Disconnect, Mil Circular for communications	Terminals, D-sub for communications	MS3509 Quick Disconnect, Mil Circular for communications	MS3509 Quick Disconnect, Mil Circular for communications	MS3509 Quick Disconnect, Mil Circular for communications	MS3509 Quick Disconnect, Mil Circular for communications
VENT KIT	Available	Available	Available	Available	Available	Available	Available	Available
CERTIFICATION	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA	FAA TSO-C179a ETSO-C179a RTCA DO-311 RTCA DO-160G UNDOT/IATA	FAA TSO-C179b (Class A-4B) RTCA DO-311A RTCA DO-160G RTCA DO-178C DAL A UNDOT/IATA
WARRANTY	Two-years (limited)	Two-years (limited)	Two-years (limited)	Two-years (limited)	Two-years (limited)	Two-years (limited)	Two-years (limited)	Two-years (limited)

Why buy Lithium-ion batteries?

START LIGHTER

Cut aircraft battery weight by more than 60% and increase your useful load.

START FASTER

Protect your engine and extend component life.

START SMARTER

Get real-time state-of-charge and state-of-health information on demand.