

Battery Guide: Cruise 101

Torqeedo Cruise motors are powered by external batteries. Battery selection will effect motor runtime and performance.

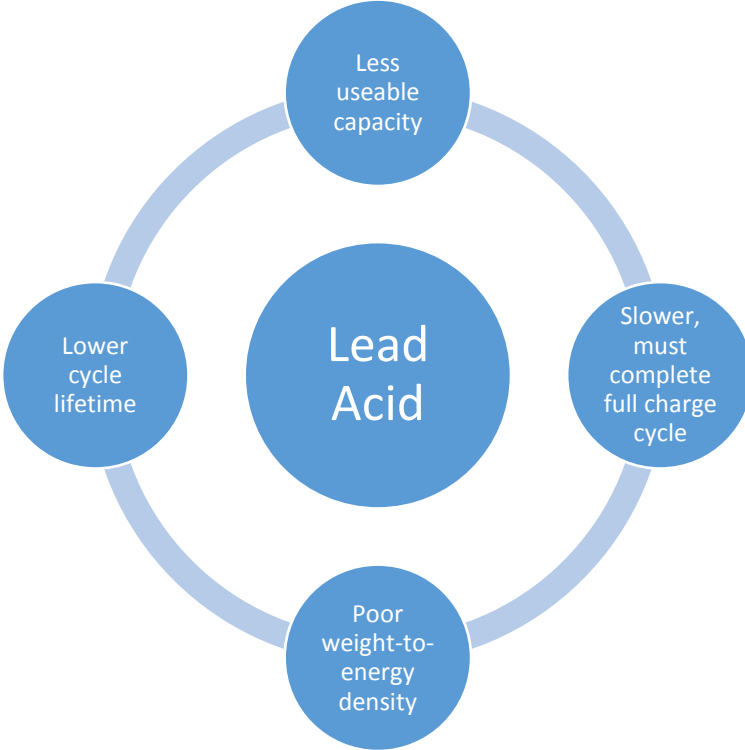
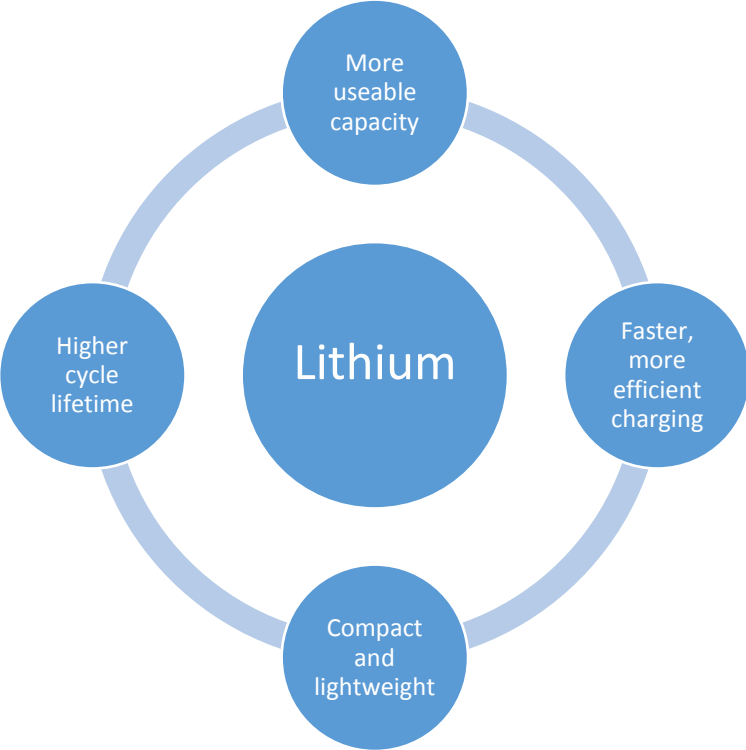
Torqeedo's own Power 26-104 lithium battery OR high quality lead acid may be used.

When choosing batteries keep in mind:

- Voltage
 - Cruise 2.0 is a 24V system
 - Cruise 4.0 is a 48V system
 - Cruise 10.0 is a 48V system
- Amp Draw of Motor
 - Cruise 2.0 & 4.0 draws 80+ amps at full throttle
 - Cruise 10.0 draws 200+ amps at full throttle

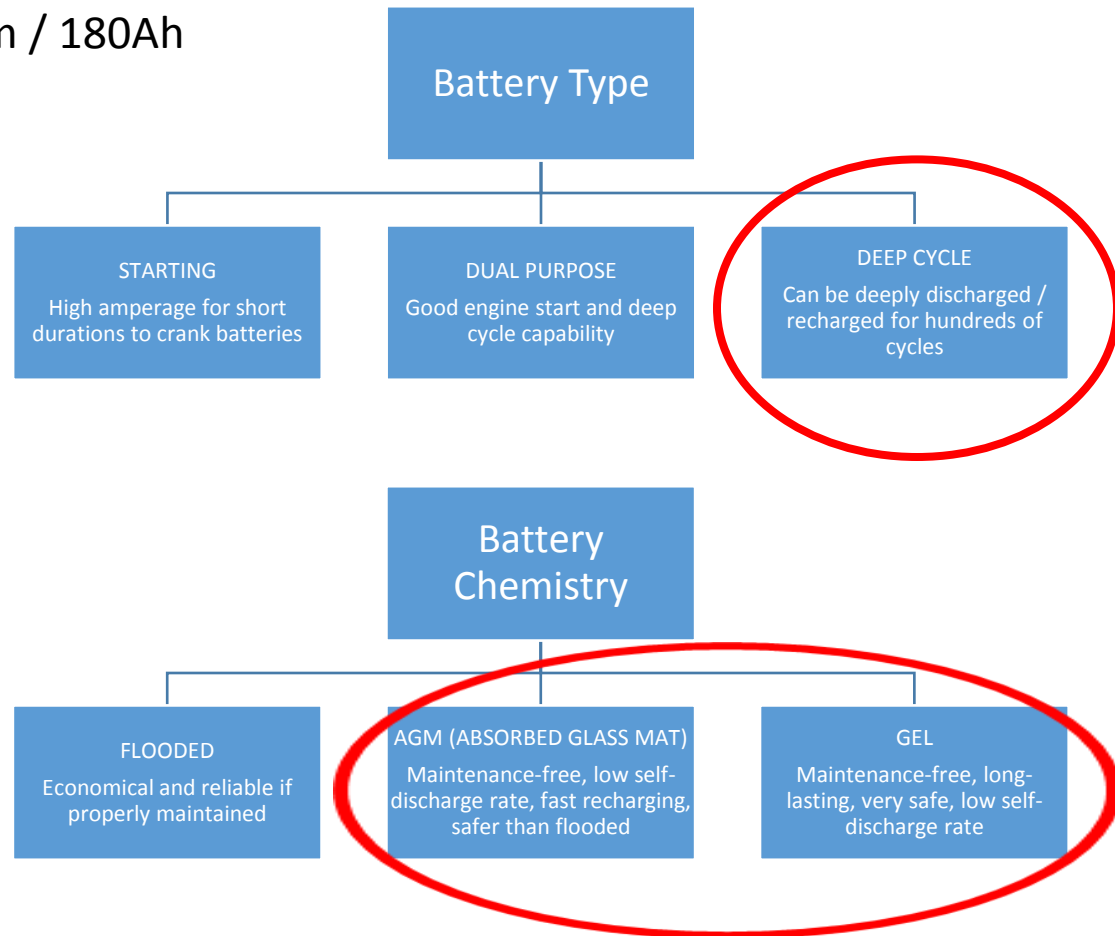


Battery Guide: Lead Acid vs. Lithium



Battery Guide: Selecting Lead Acid

1. Choose battery group (Group 31 or better)
2. Choose battery type (Deep Cycle)
3. Choose battery chemistry (AGM or Gel)
4. Choose capacity (100Ah minimum / 180Ah ideal)



Battery Guide: Why Lithium?

Example – Cruise 2.0 which uses 24V system

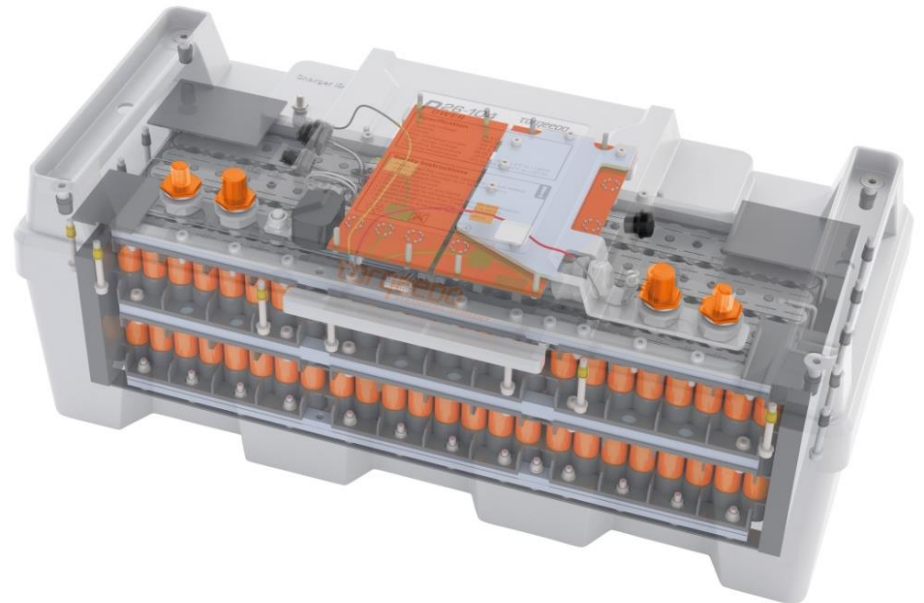
	Lithium (Torqeedo Power 26-104)	Quality Lead Acid (Deka 4D 12vAGM)
Voltage	24V – 1 battery	12V – Need 2 batteries
Intelligent Battery Management System (BMS)	Yes: short circuit and overcharge protection, cell balancing	No
Cycle Life (approx.)	1200 full cycles	400
Weight	53 lbs	262 lbs (131 lbs/each)
Safety	High	High
Waterproofing	Yes	No
Warranty	2 years comprehensive	18 months pro-rated
Charging	Faster, more efficient, partial charges OK, no memory effect	Slower, less efficient, must complete full charge cycle
Cost	\$2,599: Should last 8-10 yrs	\$920: Could need replacing every 2-3 yrs (\$2,760 total over 9 yrs)

Battery Guide: Lithium Safety

Lithium Batteries are safe and reliable if they are:

- **Manufactured by a top-tier cell fabrication plant**
 - We only use LiNMC 'Cylindrical Safety Cells' from Japan, sourced from the most reputable manufacturers.
- **Are properly packaged in a true marine case**
 - IP67 waterproof and structurally robust
- **Have an effective BMS (Battery Management System)**
 - Preventing over charging, over discharging, and other electrical conditions
- **Conservatively charged and discharged**
 - Less heat generated
- **Include proper over-current protection**
- **Communicates via Torqeedo motor display:**
 - Actual % remaining
 - Remaining range
 - Remaining runtime

Torqeedo has shipped more marine-grade lithium batteries than any other manufacturer



Battery Guide: Power Requirement Summary*

Note: Motor requires a dedicated battery bank which must be separate from the house load

Cruise 2.0	Cruise 4.0	Cruise 10.0
<ul style="list-style-type: none">• 24V required• Choose (1) Torqeedo Power 26-104 lithium battery pack OR (2) 12V high quality/deep cycle AGM or gel batteries.• If AGM or gel, suggested minimum capacity is 100Ah, recommended is 180Ah	<ul style="list-style-type: none">• 48V required• Choose (2) Torqeedo Power 26-104 lithium battery packs OR (4) 12V high quality/deep cycle AGM or gel batteries• If AGM or gel, suggested minimum capacity is 100Ah, recommended is 180Ah	<ul style="list-style-type: none">• 48V required• Choose (4) Torqeedo Power 26-104 lithium battery packs• AGM or gel batteries have not been tested but if used must be rated to handle high Amp discharge required (200 amp) by this motor• Torqeedo Power 26-104 is highly recommended

**These recommendations reflect the battery power necessary to run the motor – more battery capacity may be added to increase overall runtime and range. Consider speeds desired, size of boat and the body of water.*