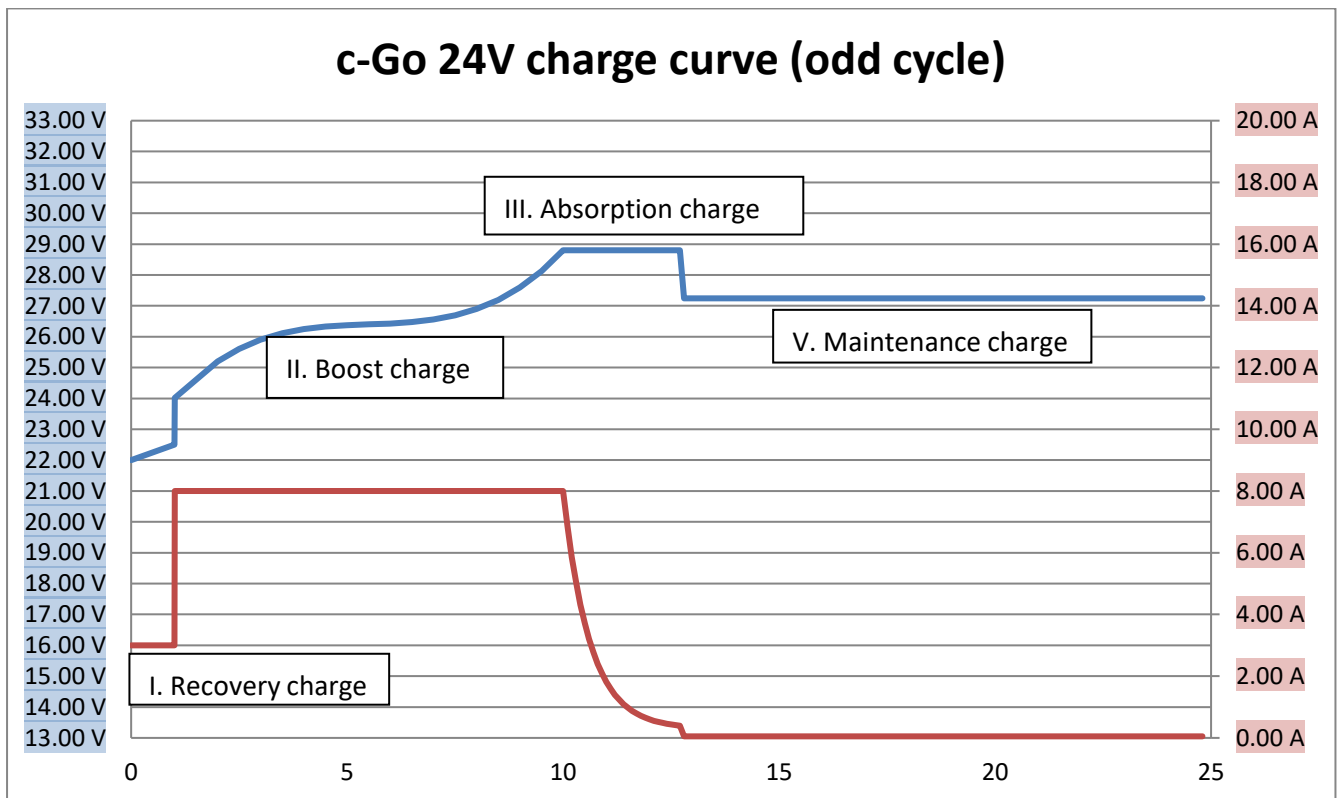


IVRA c-Go 24V (general) charge curve

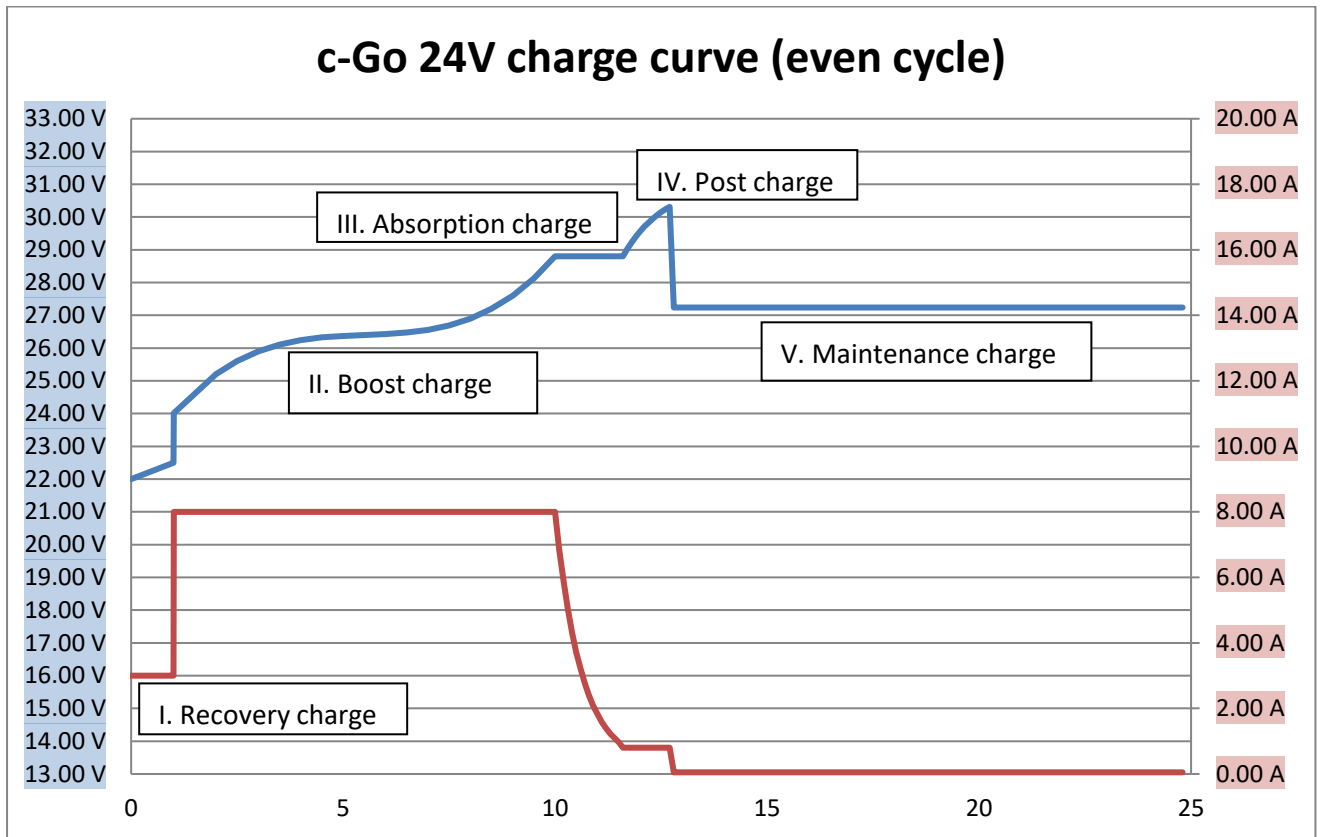
The 24V IVRA c-Go chargers charge curve consists of the following charge phases:

- I. Recovery charge: (only in case the start battery voltage is lower than 22.8 V): 2.3A/3A/4.5A (c-Go 6/8/12), for 1 hour (fixed time)
- II. Boost charge: 6A/8A/12A (c-Go 6/8/12) until 28.0V
- III. Absorption charge: current decreases and voltage increases to 28.8V
- IV. Only even cycles: post charge: 0.6A/0.8A/1.0A (c-Go 6/8/12) for 1..3 hours (dependant on boost charge phase)
- V. Maintenance charge: 27.2V until disconnection or power off

For the odd cycles an IU curve is performed.



For the even cycles an IUI curve is performed.



In combination with low post charge current, this very limits any possible water loss, due to possibly insufficient (hydrogen-oxygen) recombination at low temperatures.

Testing this charge curve shows, that battery capacity after the IU curve may decrease up to 1%. However after the IUI curve the battery capacity is completely restored.

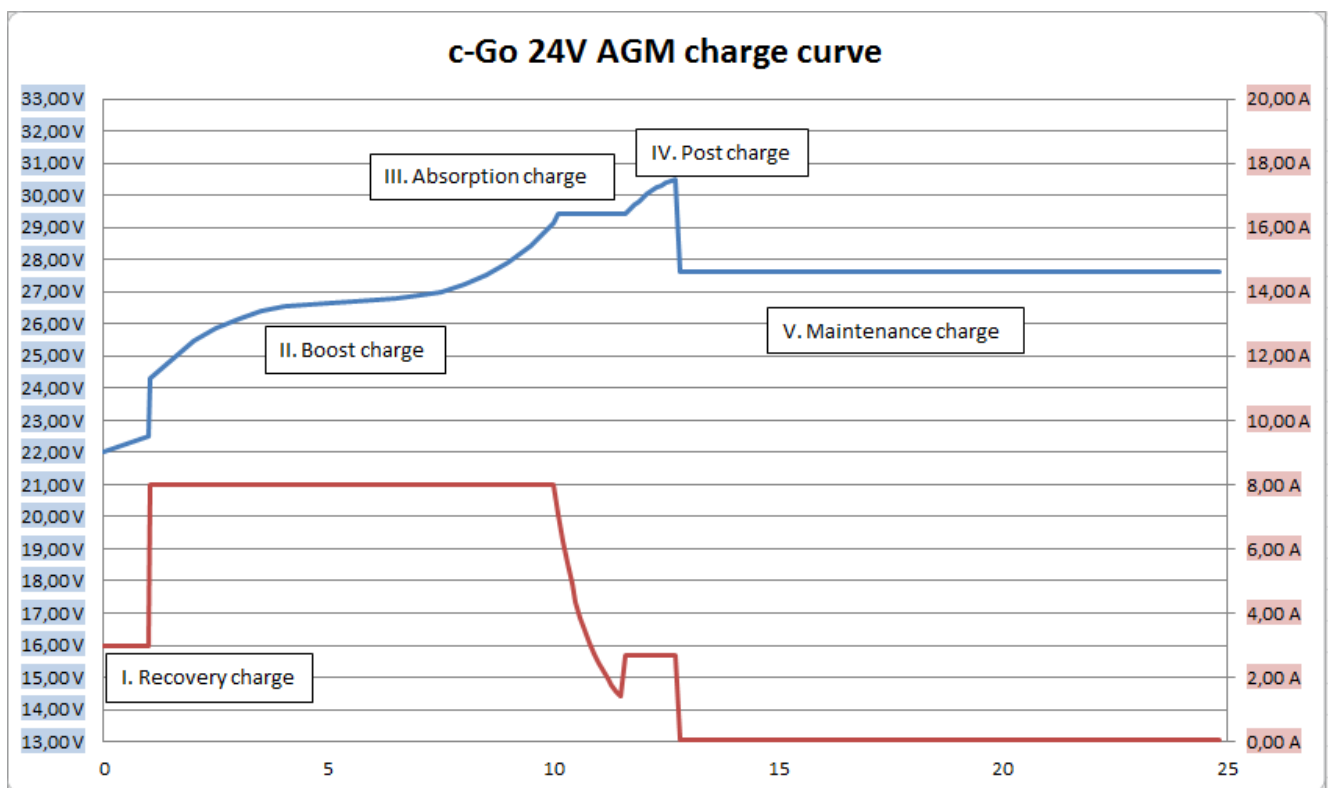
The boost charge is only up to 28.0V. In case of battery imbalance (due to different temperature profiles), this prevents gassing of the battery with the highest voltage. However in order to fully charge the battery, the absorption voltage is 28.8V at low current.

This charge curve prevents both capacity loss and water loss.

IVRA c-Go 24V AGM charge curve

The 24V IVRA c-Go chargers charge curve for AGM batteries consists of the following charge phases:

- I. Recovery charge: (only in case the start battery voltage is lower than 22.8 V): 2.3A/3A/4.5A (c-Go 6/8/12), for 1 hour (fixed time)
- II. Boost charge: 6A/8A/12A (c-Go 6/8/12) until 28.6V
- III. Absorption charge: current decreases to 1.0A/1.3A/2.0A (c-Go 6/8/12) and voltage increases to 29.4V
- IV. Post charge: 2.0A/2.7A/4.0A (c-Go 6/8/12) for 10 minutes ... 2 hours (dependant on boost charge phase)
- V. Maintenance charge: 27.6V until disconnection or power off



IVRA c-Go 24V Lithium ion charge curve (29.2V and 28.8V)

There are two Lithium ion charge curves: LiFePO4-29.2 and LiFePO4-28.8. They only differ in absorption voltage.

The 24V IVRA c-Go chargers charge curve **for Lithium ion batteries** consists of the following charge phases:

- I. Recovery charge: (only in case the start battery voltage is lower than 22.8 V): 2.3A/3A/4.5A (c-Go 6/8/12), for 1 hour (fixed time)
- II. Boost charge: 6A/8A/12A (c-Go 6/8/12) until 29.0V / 28.6V (LiFePO4-29.2 / LiFePO4-28.8)
- III. Absorption charge: current decreases to 0.35A/0.47A/0.71A (c-Go 6/8/12) and voltage increases to 29.2V / 28.8V (LiFePO4-29.2 / LiFePO4-28.8)
- IV. Maintenance charge: 27.4V until disconnection or power off

