

This document provides guidance on the power required to run the SmartBox+ system

SmartBox is a registered trademark of AMVAC Chemical Corporation

General Guidance:

The ability of the tractor to supply adequate power for the SmartBox+ system is dependent upon three main factors; the amperage rating of the alternator, the load placed on the system by other components drawing power and the presence of an external alternator on the planter.

Each tractor/planter system is unique; therefore, it is difficult to provide definitive guidance as to which systems will and won't function correctly. However, the following general statements provide a general guide:

- A tractor/planter system with a full electric drive 24 row planter, and a large lighting system may experience issues if the tractor alternator is small (i.e., 120 amps) and there is no external alternator.
- A tractor/planter system with a 200 Amp (or greater) alternator should not experience any issues running the system up to 24 rows
 - An exception would be if the system is also powering a large electric liquid pump or an air compressor (for example the Clean Sweep row cleaner product from Precision Planting).
- A tractor/planter system with a 200 Amp alternator and an external alternator powering the planter is extremely unlikely to experience issues running the system up to 36 rows
- For a SmartBox+ system of 32 rows or greater, it is recommended that a careful assessment of the power supply be carried out before the system is purchased

Tractor power source assessment:

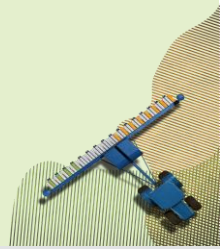
To assess the effectiveness of the tractor power supply, it is recommended to run the tractor in the following conditions:

- Powering all electric components to be used during planting, i.e., electric planter drives, electric pumps etc.
- With the lighting system fully functional and powered on
- At the intended operating engine RPM and system temperature

Ensure the system voltage at the battery is 13.2 volts or above

- In this state, if the system is providing 13.2 volts or more at the tractor battery, it is likely that a SmartBox+ system up to 24 rows will run successfully

SmartBox[®] + Power Requirements



This document provides guidance on the power required to run the SmartBox+ system

SmartBox is a registered trademark of AMVAC Chemical Corporation

Power Consumption:

The granular meter consumes most of the energy in the SmartBox+ system. The total amount of power consumed will closely match the total consumed by the granular meters,

- Power consumed by one granular meter:
 - Approx. 0.6 amps
- Power consumed by 24 granular meters:
 - Approx. 15 amps

Granular meter voltage limits

The Granular Meters operate within the following voltage ranges.

Ideal voltage:

- 13-14 volts: The meters will function as expected.

Marginal voltage:

- 10-11 volts: The meters will communicate, but motor function may be erratic.

Shut down:

- Less than 9 volts. The meters will stop communicating and power down.

Confirm the voltage for each meter in the Meter Diagnostics page, which can be accessed through the software, via 'Settings/Diagnostics/Meter diagnostics.

Generally, the voltage for each meter should not drop more than 2 volts between the stationary and running states.

- A voltage drop 2 volts or larger may indicate an issue with the power harnessing or configuration. **It may be necessary to add an additional power injection point to the harness.** (Refer to Harnessing Installation document for more details.)

