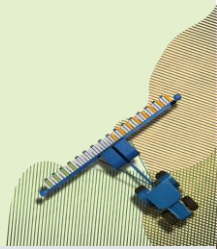




# Introduction to SmartBox<sup>®</sup> +



This document introduces the SmartBox+ system. For more complete details, please visit: [SIMPAS.com/resources](http://SIMPAS.com/resources)

*SmartBox is a registered trademark of AMVAC Chemical Corporation*

## System Description:

SmartBox+ is an application system used to deliver a portfolio of SmartBox-brand products to the seed furrow while planting. SmartBox+ is a closed deliver system which eliminates worker exposure that's normally associated with opening and pouring product from bags into an open-topped, planter-mounted insecticide hopper.

The system uses an industry standard ISOBUS communication protocol to connect to displays that support ISOBUS Universal Terminal. This means that a range of displays can be used to control the system, including John Deere 4640, Case Pro 1200, AgLeader InCommand, and Trimble GFX.

## Components:

### 1 Base Unit

- The Base Unit is installed permanently onto the planter. When filled, it will contain approximately 15 pounds of product.
- The meter is attached to the bottom of the base unit

### 2 SmartBox Product Transfer Container

- The SmartBox container attaches to the top of the Base Unit
- The SmartBox container holds approximately 50 pounds of product

### 3 ISO VT display

- The ISO VT (virtual terminal) display is used to control the system

### 4 ECU (Electronic Control Unit)

- The ECU is the central computer for the system. It sends the User Interface to the display, stores all calibration values and settings, connects and controls the meters and performs all necessary calculations to apply product at the correct rate

### 5 Granular Application Meter

- The patented inclined-auger granular meter is responsible for dispensing product. It contains an electric motor capable of accurate RPM control to ensure accurate application of product.
- When installed, the meter will be located beneath the Base Unit.

### 6 Cables/Harnessing

A set of harnesses provides the power and communication backbone of the system.

- Communication harnessing starts with the ISO connector at the front of the planter. From there it connects to the ECU and ends with a daisy-chain connection to each meter.
- A parallel set of power harnessing provides power to each individual meter.



## Theory of operation:

As a planter moves through the field, SmartBox+ utilizes planting speed, in combination with user-supplied row width, target application rate, and meter calibration values to calculate the required meter motor RPM to turn each auger at the correct speed to dispense the intended application rate per acre. Individual meter motor RPM adjusts automatically with changes in planting speed to ensure uniform application on each row across the entire planter.