



**Velcon**<sup>™</sup>

A Kanawha Scales & Systems Company



**CROSS**<sup>®</sup>

precision measurement

## MODEL S-5

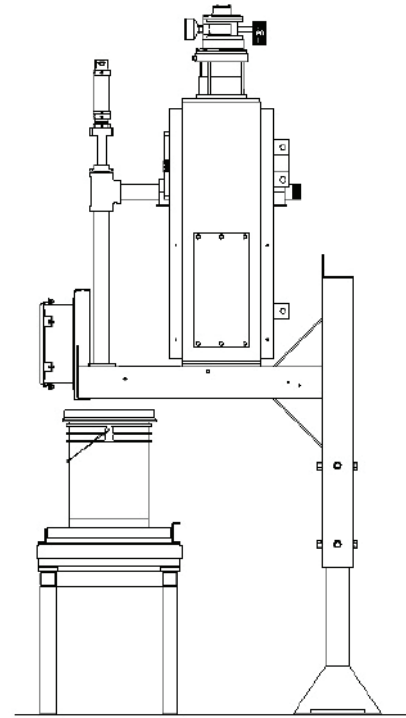
The Velcon Model S-5 is designed to provide accurate, subsurface, liquid filling of 5-gallon pails.

Velcon subsurface fillers provide a unique programmable product level tracking system to minimize foaming, reduce drips and maintain a clean lance.

The model S-5 is made up of a robust 304 stainless steel or powder coated carbon steel structural construction and 316 stainless steel wetted parts. It incorporates an Allen Bradley PLC and HMI based KSS5069 control system. It has built in safety features to guarantee a safe, clean and accurate filling.

### Standard Features

- General purpose Non-Hazardous area electrical classification
- KSS5069 Controller Hardware
  - Allen Bradley CompactLogix PLC with Ethernet IP
  - Allen Bradley PanelView-7 Graphical or 15" STouch Screen interface with Ethernet IP
  - 24V DC controls
- Software
  - User friendly menu driven system
  - Recipe programming and saving of all fill set points
  - Slow-Fast-Slow fill mode programming
  - Automatic Preact calculation
  - Resume capability to continue filling aborted fill cycles
  - No Drum-No fill feature prevents product spillage
  - Flow rate monitoring
  - Cycle time monitoring
  - Net weight Over/Under fill monitoring
  - System Alarm display plus historian
  - Weight indicator control, Zero, Tare, Gross/Net
  - See KSS5069 controller manual for full standard features
- Air motor and ball screw driven SUB-SURFACE FILL RAISE BY WEIGHT SYSTEM. This system will fill in subsurface mode keeping the lance at programmable position. Filling using this method eliminates foaming and keeps the lance clean.
- Two ball valve system for Slow-Fast-Slow fill modes
- Hand operated lever for Fill Start/Stop operation



\*Conveyor Optional

### Standard Construction

- 304 stainless steel structural construction or powder coated carbon steel
- 316 stainless steel wetted parts (lance and pipe).
- 304 stainless steel control NEMA-4 enclosures
- Two-piece 316 stainless steel ball valves
- Foot valve at end of lance for minimizing drips
- Gravity weighed stainless steel drip cup
- Fume collection hood with sight glass and 2" hose connection
- Teflon seals and seats
- Sealed bearings and cam followers
- Carbon steel ball screw drive system
- Carbon steel low profile scale case
  - Raised platform
  - Sealed load cells
  - 1 part in 5,000 resolution (100 Lb X 0.02 LB)
  - 100 LB capacity

## Available Options

1. **Electrical Area Classification Options**
  - Class-I Division-I area package
  - Class-I Division-II area package
  - Class-I 15" touch screen
2. **Controller Options**
  - Upgrade to larger PanelView-Plus 600 Color
3. **Environmental Area Options**
  - Corrosive area package
4. **Scale Base Options**
  - Stainless steel scale base
  - High precision scale base
5. **Lance Options**
  - Sanitary
  - Corrosive
  - Quick disconnect
6. **Structural Options**
  - Dual lance
  - Hinged wiper ring housing
7. **Pneumatic Drip-pan**
8. **Purge Through Lance Rod**
9. **Manual Container Grounding and Monitoring**
10. **Automatic Container Grounding and Monitoring**
11. **Overfill Detection**
12. **Weighed Container Seal Fume Collector**
13. **Accessories**
  - Bung tooling
  - Work platform
  - Scale mount
  - Line voltage regulator
  - Step-down transformer
  - Serial printer
  - Spare parts
14. **Conveyor**
  - Extensive conveyor product line available to complete your system.

## Sequence of Operation

- Operator programs KSS5069 for fill presets in program mode and switches to run mode.
- System is ready for a fill cycle and displays "Ready To Fill."
- Operator places a container on the scale and pulls down the Start Fill lever.
- Controller checks for presence of container on scale and automatically tares the container weight. If container is not detected (this is accomplished by checking the weight on the scale) the cycle is aborted automatically (Start Lever is automatically kicked up) and an error message is displayed on the PanelView screen.
- The lance is lowered to the bottom of the container monitoring for lance misalignment.
- System opens the foot valve and ball valves.
- System starts the fill cycle in slow fill mode until the slow fill target weight is met.
- System switches to fast fill mode until the final slow fill target weight is met.
- System switches to slow fill mode until target weight is met.
- The lance will raise by weight tracking the product level during the entire fill cycle.
- System closes the foot valve and ball valve.
- System starts raising the lance to the top position.
- System delays for settling delay time to give product time to settle down.
- System recalculates Preact value.
- System kicks the Start lever up.
- System is ready to fill next container.