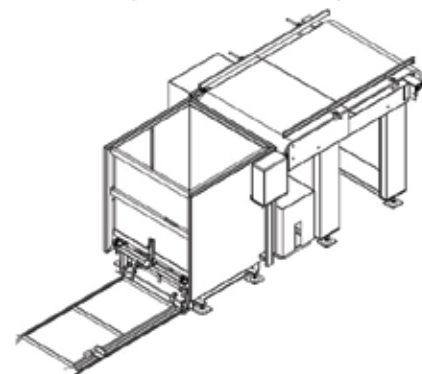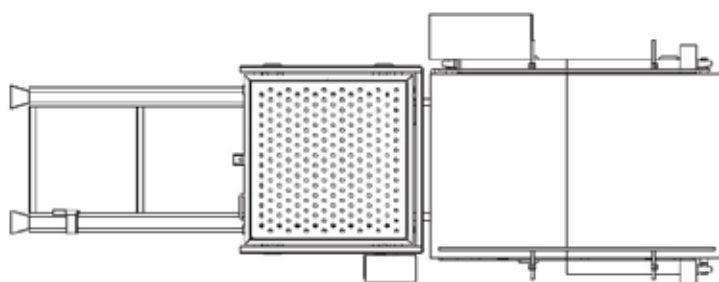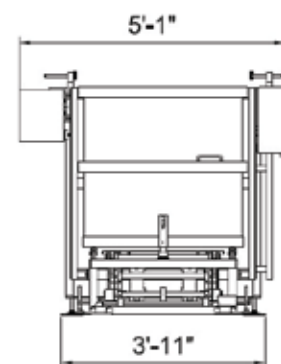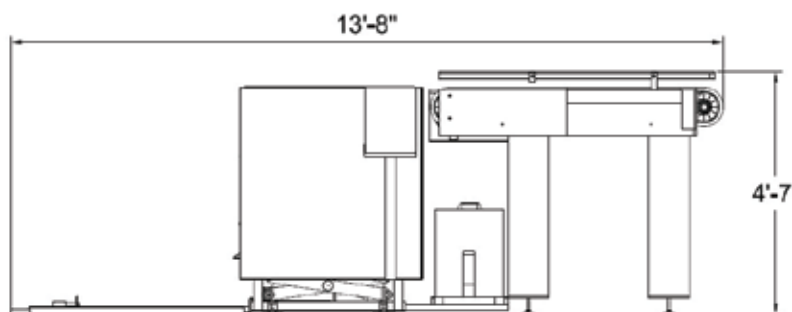**S STOCK™**

H&S

HANDLING &
STERILIZING

STOCK L-SERIES LOADER/UNLOADER

L1 OVERVIEW

STOCK'S Level 1 Loader/Unloader, provides a floor level surface mounted hydraulic scissor jack connected to a frame to raise and lower the elevation of the basket bottom. This operator-controlled movement sets the top of the bottom plate at an ergonomic level allowing the operator to load or unload each layer of containers. A powered conveyor is provided to assist loading but is not designed to automatically form the container matrix. L1 versions are available for loading or unloading, but they are each a unique and individual piece of equipment (I.E. The Loader cannot be utilized to Unload and vice versa).

L1 OPERATOR SEQUENCE (Note: Unloading is roughly the inverse of loading):

1. Operator transports empty basket with trolley to loader
2. Operator locks trolley into position at the loader
3. Operator releases basket from trolley and pushes basket into position at the loader
4. Operator positions hydraulic scissor jack, setting basket bottom plate to correct level (height)
5. Operator starts load conveyor
6. Operator pushes containers onto layer pad
7. Operator increments hydraulic scissor jack to next level (height)
8. Operator places layer pad on top of containers
9. Repeat steps 4 to 8 until basket is full
10. Operator stops load conveyor
11. Operator removes full basket from loader onto trolley
12. Operator unlocks trolley and transports full basket to retort
13. Repeat process beginning with step 1

L2 OVERVIEW

With additional functionality beyond the L1 system, STOCK'S Level 2 Loader/Unloader System, automatically forms the container matrix utilizing a pattern former set to the radius of the container and pattern formers can be changed to handle a variety of containers. Although this application does have some automated mechanical movements, the operator will need to provide sequencing through a pushbutton type interface. L2 versions are available for loading or unloading, but they are each a unique and individual piece of equipment (I.E. The Loader cannot be utilized to Unload and vice versa).

L2 OPERATOR SEQUENCE (Note: Unloading is roughly the inverse of loading):

1. Operator transports empty basket with trolley to loader
2. Operator locks trolley into position at the loader
3. Operator releases basket from trolley and pushes basket into position at the loader
4. Operator positions hydraulic scissor jack, setting basket bottom plate to correct level (height)
5. Operator starts load conveyor
6. [A] Load conveyor feeds containers against pattern former to create matrix fitting the basket profile
7. Operator initiates (pushbutton) sweep arm to push the matrix on to the layer pad
8. [A] Hydraulic scissor jack increments to the next level (height)
9. Operator places layer pad on top of containers
10. Repeat steps 6 to 9 until basket is full
11. Operator stops load conveyor
12. Operator removes full basket from loader onto trolley
13. Operator unlocks trolley and transports full basket to retort
14. Repeat process beginning with step 1

[A] Indicates Automated Function
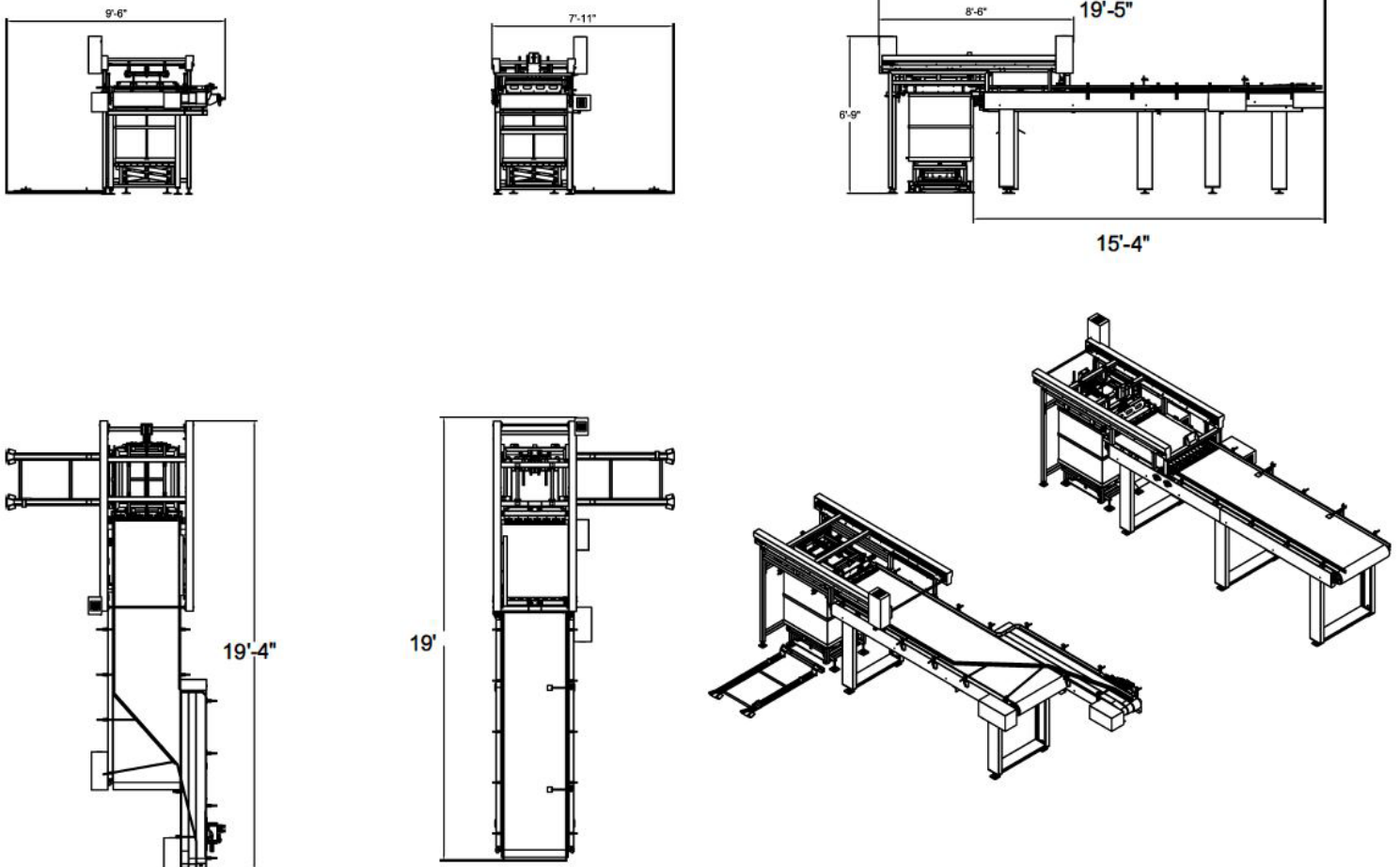
L3 OVERVIEW

Continuing incremental functionality from the L1 and L2 systems, STOCK' Level 3 Loader/Unloader System, adds automatic layer pad placement. L3 versions are available for loading or unloading, but they are each a unique and individual piece of equipment (I.E. The Loader cannot be utilized to Unload and vice versa).

L3 OPERATOR SEQUENCE (Note: Unloading is roughly the inverse of loading):

1. Operator transports empty basket with trolley to loader
2. Operator locks trolley into position at the loader
3. Operator releases basket from trolley and pushes basket into position at the loader
4. Operator starts load conveyor
5. [A] Hydraulic scissor jack positions basket bottom plate to correct level (height)
6. [A] Load conveyor feeds containers against pattern former to create matrix fitting the basket profile
7. [A] Sweep arm pushes matrix on to the layer pad
8. [A] Hydraulic scissor jack increments to the next level (height)
9. [A] Layer pad is placed on top of containers
10. Repeat steps 6 to 9 until basket is full
11. Operator removes full basket from loader onto trolley
12. Operator unlocks trolley and transports full basket to retort
13. Repeat process beginning with step 1

[A] Indicates Automated Function
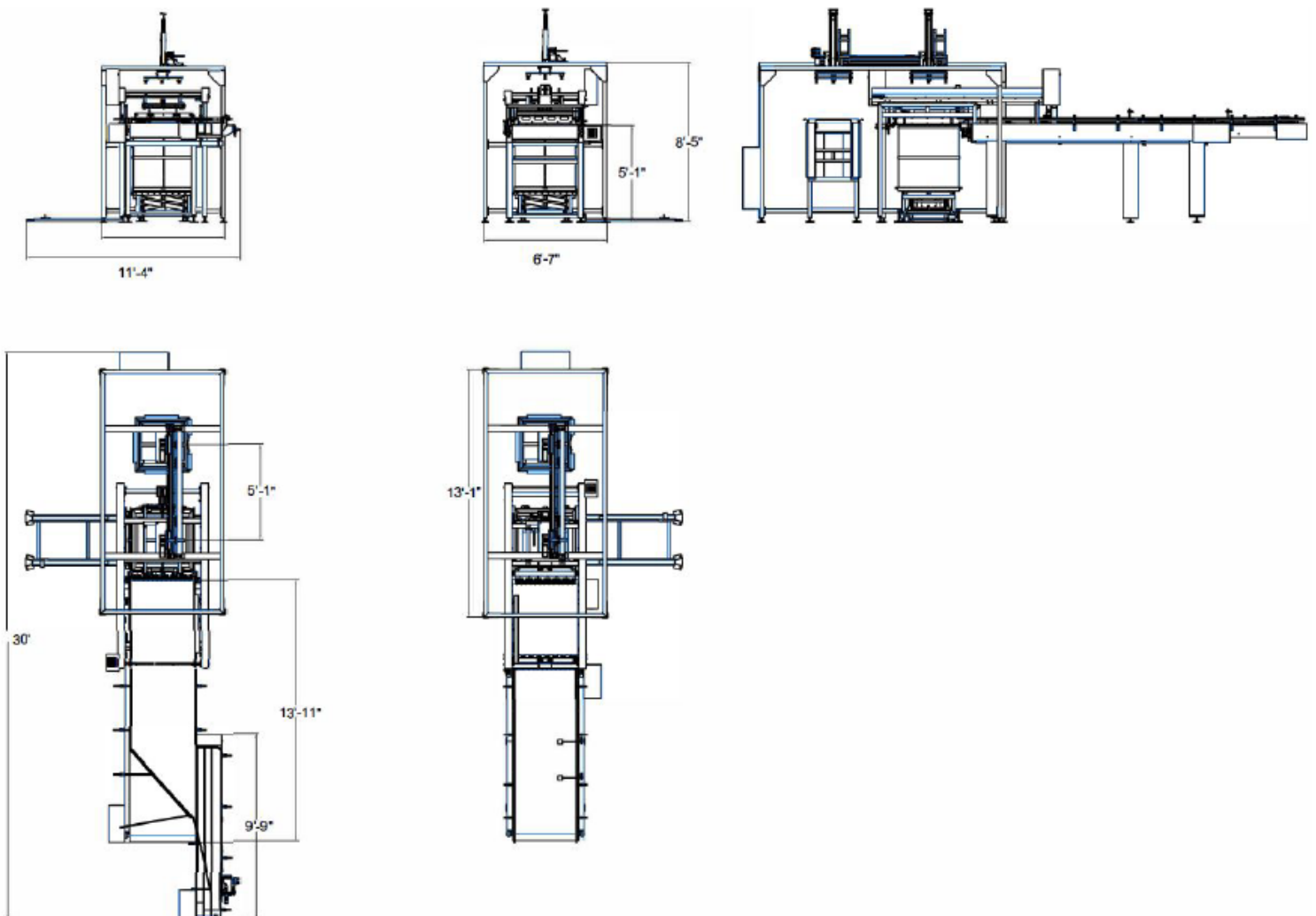
L4 OVERVIEW

With more features and capabilities, STOCK'S Level 4 Loader/Unloader System, expands upon the L1, L2, and L3 systems too further eliminate repetitive manual tasks. By connecting the loader and unloader modules with a shared platform and conveyance to transport baskets and layer pads, the L4 system is designed to be a complete loader/unloader system managed by a single operator. As an added system upgrade, a Shuttle (X,Y) can be provided to eliminate the labor-intensive task of transporting, loading, and unloading baskets into and out of the retort(s) providing another level of automation.

L4 OPERATOR SEQUENCE (Note: Unloading is roughly the inverse of loading):

1. Operator positions empty basket onto trolley
2. Operator locks trolley into position at buffer conveyor
3. Operator provides minimal assistance to transfer basket(s) onto buffer conveyor until full
4. Operator starts load conveyor
5. [A] Buffer conveyor transports baskets to loader
6. [A] Hydraulic scissor jack positions basket bottom plate to correct level (height)
7. [A] Load conveyor feeds containers against pattern former to create matrix fitting the basket profile
8. [A] Sweep arm pushes matrix on to the layer pad
9. [A] Hydraulic scissor jack increments to the next level (height)
10. [A] Layer pad is placed on top of containers (layer pads are automatically conveyed from unloader to loader)
11. Repeat steps 6 to 10 until basket is full
12. [A] Full basket is transferred from loader onto buffer conveyor
13. Operator provides minimal assistance to transfer basket(s) from buffer conveyor onto trolley
14. Repeat steps 5 to 13 until all baskets are full

[A] Indicates Automated Function
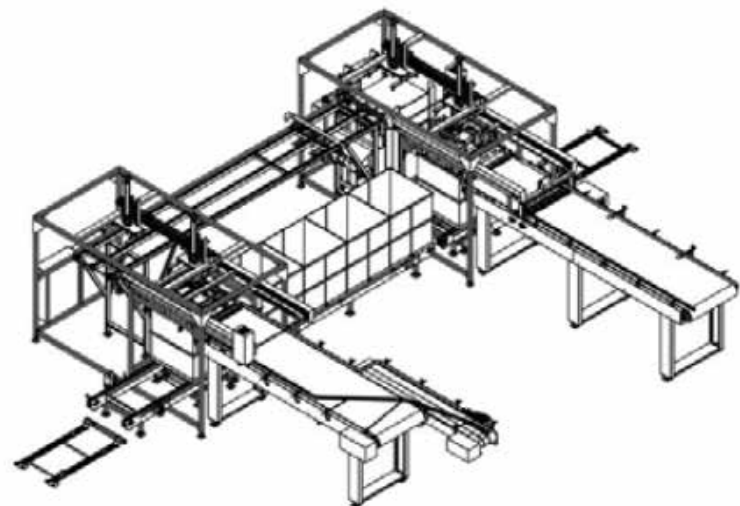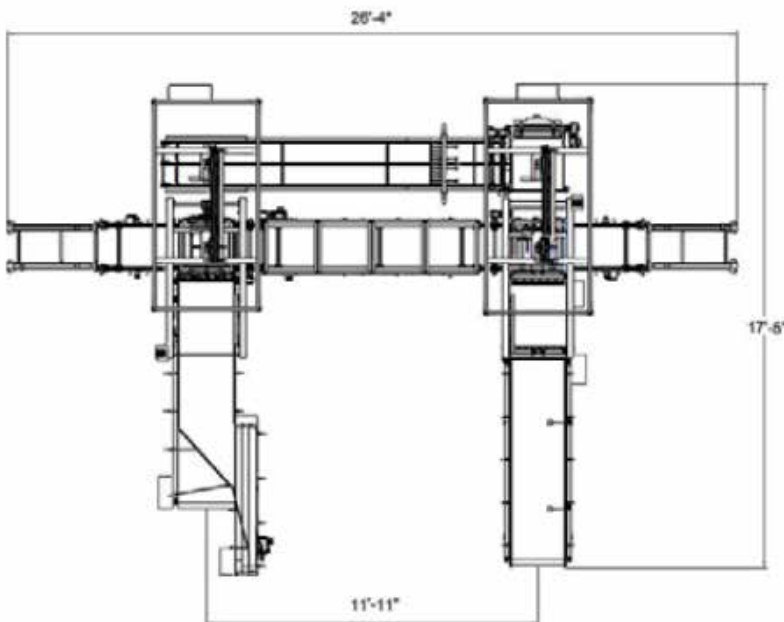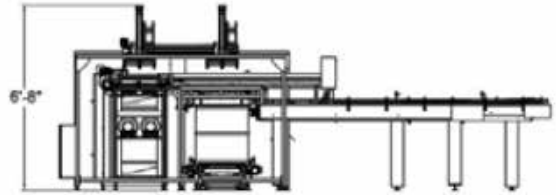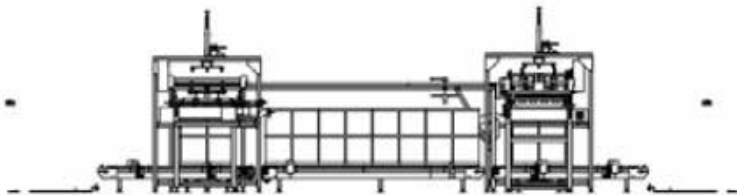
STOCK L-SERIES LOADER/UNLOADER
MODULAR COMPARISON

FUNCTION	L1	L2	L3	L4
Manual Full / Empty Basket Insertion	X	X	X	X
Automatic Full / Empty Basket Insertion			Optional*	Optional*
Manual Scissor Jack Positioning	X			
Automatic Scissor Jack Positioning		X	X	X
Manual Conveyor Operation	X			
Manual Conveyor Start with Pattern Forming		X		
Automatic Conveyor Start with Pattern Forming			X	X
Manual Container Positioning / Loading (Sweep)	X			
Manually Initiated Automatic Container Positioning/Loading (Sweep)		X		
Automatic Container Positioning / Loading (Sweep)			X	X
Manual Layer Pad Placement	X	X		
Automatic Layer Pad Placement			X	X
Manual Layer Pad Transfer	X	X	X	
Automatic Layer Pad Transfer (Unloader to Loader)				X
Manual Full / Empty Basket Removal	X	X	X	X
Automatic Full / Empty Basket Removal			Optional*	Optional*
Automatic Basket Transfer (Unloader to Loader)			Optional*	X

*OPTION available when upgrading to ABRS