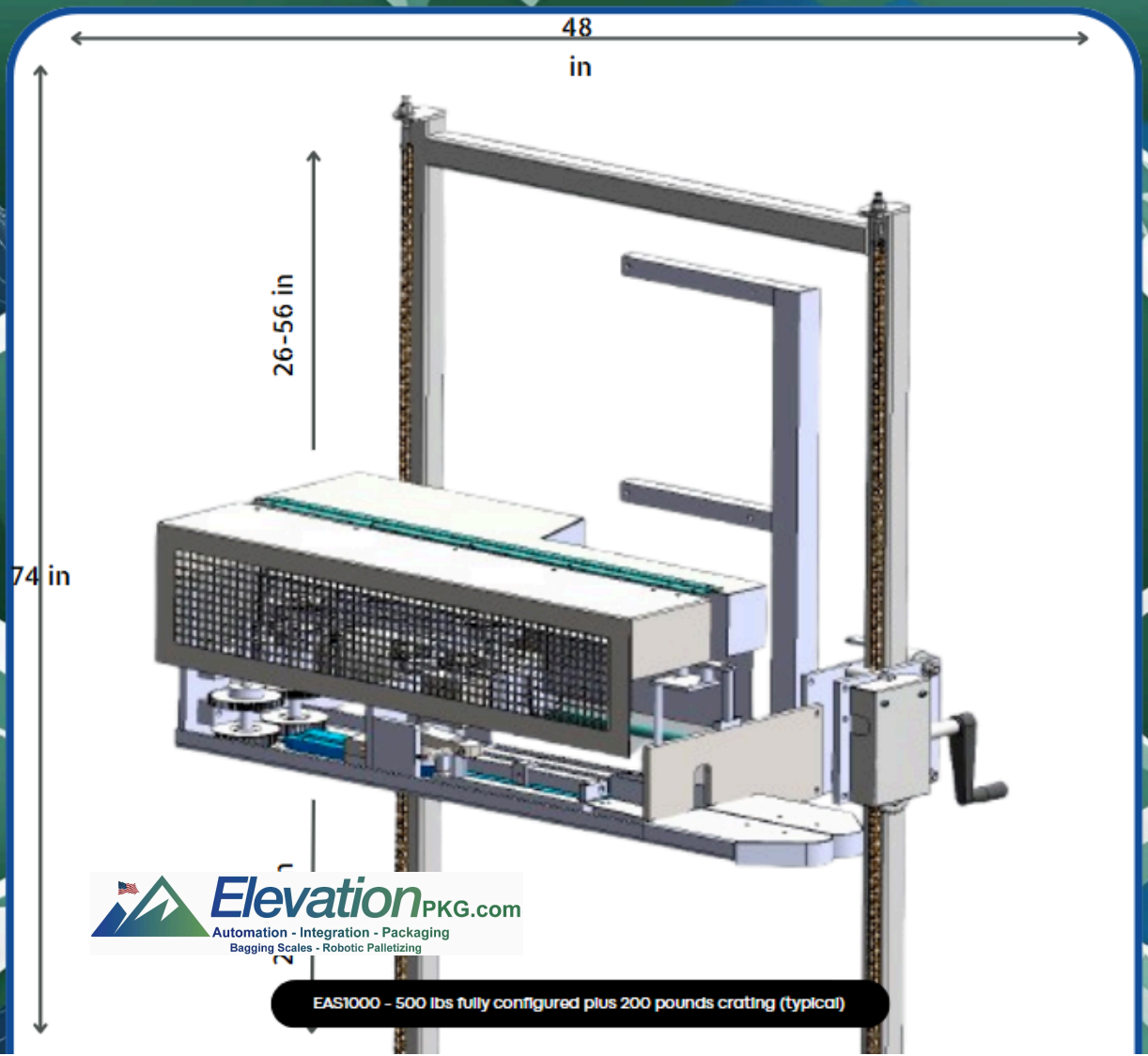
OPERATIONS AND OWNERS MANUAL
EAS1000.VER1.3-01/2025

Elevation
Packaging & Equipment

HOT AIR SEALER

EAS 1000



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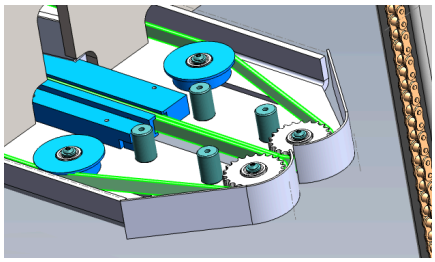
Component manuals are available by each manufacturer:
Motor: http://www.baldor.com
Gearbox: http://www.grovegear.com or Products - Vortex Speed Reducers (vortexreducer.com)
Watlow 935 http://www.watlow.com
Tempco TEC-220 http://www.tempco.com
Delta DTB http://factorymation.com

FOR TECHNICAL QUESTIONS OR PARTS CONTACT
info@elevationpkg.com
support@elevationpkg.com
(402) 999-0827

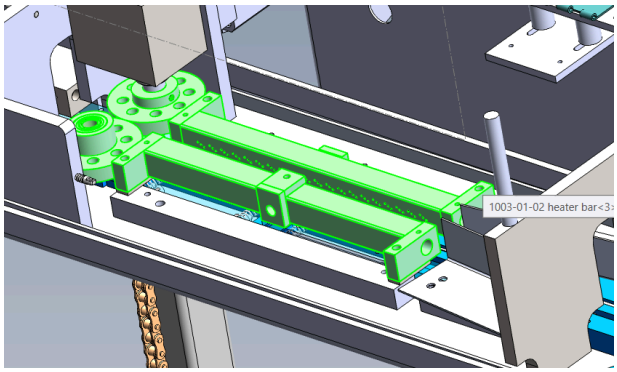
1. MACHINE OVERVIEW

The EAS-1000 Hot Air Sealer is designed for manual or automatic production lines to seal a tube style bag. Bag sizes may range from 2.5 mil to 9 mil thickness.

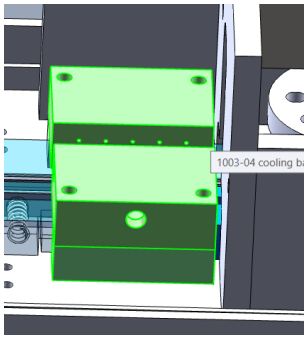
Bags are fed into the infeed of the machine and carried through the entire machine via paired carrier belts.



The bag top travels between two forced air heat manifolds followed by compression rollers, giving an approximate seal of ¼ inch at the top of the bag.

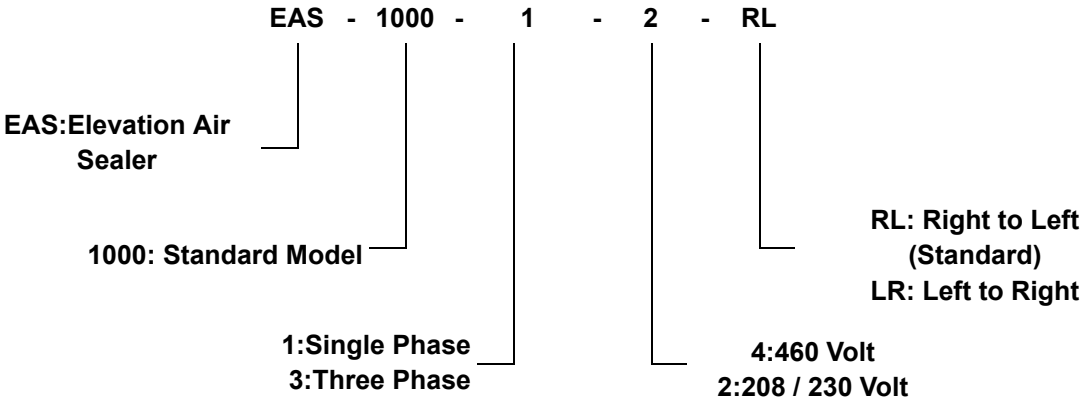


The bag top then travels between 2 forced air cooling bars which help solidify the seal before exiting the machine.

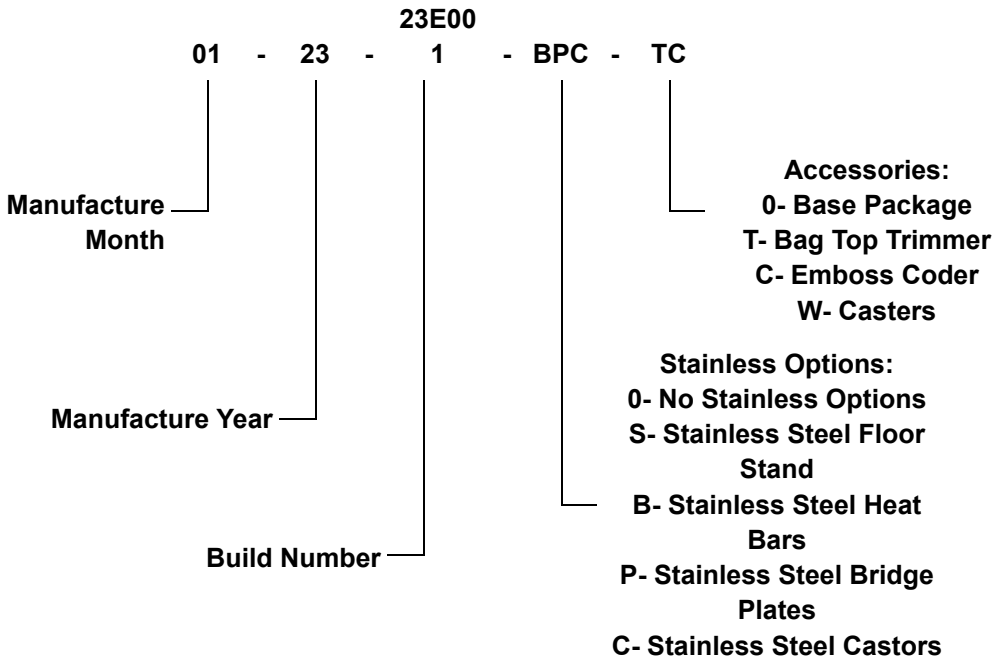


1. MACHINE OVERVIEW (cont)

Model Number



Serial Numbers



DANGER!

DO NOT ATTEMPT ANY MAINTENANCE OR REPAIRS WHILE MACHINE IS RUNNING OR PLUGGED IN!! THIS COULD CAUSE SERIOUS INJURY OR DAMAGE TO MACHINE!!
ONLY QUALIFIED PERSONNEL SHOULD PERFORM ELECTRICAL REPAIRS

BE CAREFUL OF INTAKE BELT SECTION - KEEP FINGERS CLEAR OF CARRIER BELTS AND MOVING PARTS WHILE FEEDING BAGS
WARNING LABELS ARE PROVIDED AND SHOULD BE REPLACED WHEN WORN

HEATING BARS CAN REACH 500 DEGREES DURING NORMAL OPERATION AND HIGHER DURING FAULT. BEFORE CONSIDERING A HOT AIR SEALER, EXPLOSIVE ENVIRONMENTS REQUIRE DOCUMENTED ADDITIONAL SAFETY COLLABORATION AND ENGINEERING OUTSIDE OF THE NORMAL SCOPE OF ELEVATION PACKAGING. EXTERIOR SURFACES CAN BECOME HOT - TEST SURFACE BEFORE TOUCHING - DO NOT SET ANYTHING ON TOP OF THE SEALER THAT WILL BLOCK AIR MOVEMENT - DO NOT OPERATE MACHINE WITHOUT COMPRESSED AIR

TO PREVENT TIPPING THE UNIT
AVOID ROLLING OVER UNEVEN SURFACES OR SURFACES WITH A GRADE - UNIT SHOULD BE UNPACKED AT IT'S POINT OF USE AND OPERATED ON A FLAT SURFACE - WHEN USING CASTERS - ENSURE MACHINE IS ADJUSTED TO ITS LOWEST POSITION

!! DANGER - READ BEFORE SERVICING OR OPERATING !! Only personnel trained to identify hazards and proceed safely should attempt to service the equipment. Failure to follow these guidelines could result in personal injury, damage to equipment or death. Servicing, lifting, or troubleshooting this equipment may subject the user to hazards such as but not limited to the following.

- Electrical hazards, shock / arc flash
- Tipping hazards
- Pinch points / mechanical hazards
- Burns from hot surfaces
- Sharp edges

2.INSTALLATION AND STARTUP

- ★ *Read the entire manual FULLY and CAREFULLY before setting up equipment*
- ★ *Know your sealer. Know the materials your sealer is manufactured with. Know your application and any product safety requirements you may have in your shipping and bagging process. Full machine build info can be obtained through elevation packaging including alloys, lubricating fluids and coatings.*
- ★ *Custom Specialty finishes, alloys and lubricants can be provided when configured at time of purchase or upgraded through quoting.*
- ★ *It is the responsibility of the end user to perform a risk assessment for product safety and / or regulatory compliance with USDA, FDA, ROHS, REACH etc and no such component options are provided or sourced unless expressly specified in the sales order PO and production checklist of the machine. Un-certified components should be considered NOT safe for direct food contact until such time a qualified end user performs the appropriate risk assessment to deem them safe. Materials used in construction need to be evaluated by the end user for the application being used.*
- ★ *Two identical models may be built for completely different applications. When purchasing used equipment, the end user should consider the purchase history of the machine and the environment to which it may have been subjected.*

1. Once the machine arrives, un-skid the machine and check for any damage. If any damage has occurred, contact the freight carrier at once.
2. Place the machine crate in the operating area and unpack
3. Adjust the height of the machine to the desired level.
4. Remove any protective film from surfaces
5. Install the front handle that was shipped with the unit if it was shipped in the electrical compartment
6. Connect air to the supplied quick disconnect - The unit should be supplied with up to 10 SCFM of clean, dry air.
    a. Typical operations is between 6-7 SCFM of air
    b. Excess air condensation can cause issues with temperature control or damage the product in the bags.
7. Compressed air quality requirements will depend on the end user and any additional restrictions of the product being packaged in the bags. Consult the process design requirements of your facility.
8. Ensure the transformer (if equipped) is tapped for the supply voltage of the facility.

Wire the machine into the correct electrical service and make sure the machine is connected to the building ground.

Failure to ground the machine will increase the risk of shock.

3. ELECTRICAL CONTROLS

Have any personnel who may be operating the machine learn the electrical controls. See below for control layout.

10 turn potentiometer precisely controls carrier belt speed to a fixed setpoint. The operator must adjust to match the conveyor speed unless conveyor synchronization was sold with the unit.

Main power switch - starts the entire sealer

Heat control switch - enables or disables the heat

Tempco TEC-220 - Temp Controller

To change the setpoint, press the ↻ button to view, then the up and down arrows to change. Press both up and down arrows at the same time to return to the actual temperature screen. Refer to the appropriate Tempco manual for troubleshooting.

Delta DTB - Temp Controller or Secondary Temp Control

Temp controller - To change the setpoint, press up or down arrows then SET to retain the new setpoint.

The alarm setpoint(for units without secondary temp controller) should be left set below 595. If the alarm is adjusted above this setting, equipment damage or malfunction could occur. This controller is responsible for all control of the heat in the unit, both front and rear heat bars.

Secondary Temp controller - Some units are equipped with a secondary temperature controller. In all instances, this controller should be left set below 600 with alarm set at 595. If the controller is adjusted above these settings, equipment damage or malfunction could occur.

Heat malfunction Light and Reset button
!! Manual reset required !!

If the alarm light is lit, it means an alarm occurred in the primary or secondary temperature controllers. Press the button for manual reset- a cause of the alarm should be determined prior to returning the unit to service. See Tempco and / or Delta Manuals

If, pressing the alarm reset does not reset the alarm, an alarm is still present in the temperature controller that caused the alarm.

Emergency Stop

switch located on the side of the electrical box - This switch will shut down all operations except the incoming air pressure (even if equipped with optional air pressure safety)

INVERTEK VFD

Press the Octagon to scroll through

- Frequency
- Motor Speed
- AMPS
- FPM (display will read c)
- Output Power

The drive will display any faults that occur
Refer to the appropriate Invertek manual for troubleshooting

FPM (feet per minute) Speed Display

- Models may vary based on availability
- See meter brand operators manual for troubleshooting
- Calibration voltages and speeds are in the production checklist that was shipped with the unit

Optional Low Air Pressure safety-

The control will shut off the heat while still ejecting the bag from the machine.

An optional buzzer is available to alert the operator of a trip.

4. OPERATION

1. To start the machine, make sure air is hooked up and flowing. Regulator PSI should be approximately 10-30 PSI. Failure to do this will cause heat elements to fail prematurely. Use the power switch to start the drive. Use the heat switch to start heating the manifold. Many different pressure and temperature combinations can produce a seal, however some guidelines provide a means of finding the best seal and conserving energy.
    a. Start with the air pressure as documented in the production checklist shipped with the machine.
    b. Increasing pressure is only recommended if raising the average heat bar temp (up to 100 degrees above the melting point) does not produce a good seal.
    c. Decreasing the pressure below the production checklist setpoint may not provide enough cooling bar air volume for cooling prior to the bag exiting the machine.
2. Using the 10 turn speed potentiometer, adjust the speed of the conveyor and sealer so that they match exactly. Not doing so may cause a poor seal. It is recommended that a tachometer is purchased to measure conveyor speed.
3. Turn the heat on and set the temperature controller to proper setting (see below). The unit is ready to seal once the output L.E.D. on the heat controller goes out and begins to pulse at the steady setpoint temperature. The first cycle will overshoot and then settle into stable control after a few minutes.
4. Run several sample bags to find the correct sealing temperature -

OPERATION (cont)

5. **Find the lowest possible setting.**
    a. Setting the temperature higher than necessary will corrode the heat bars faster and waste energy.
    b. For units shipped after 12/1/2024 skip to step 5d.
    c. For units shipped prior to December 2024 - An infrared thermometer is recommended for finding the lowest possible melting point for the application.
        i. The average temperature of the heat bar can be significantly hotter than the measured temperature at the controller. The higher the input air pressure, the greater the temperature difference across the face of the bar will be. This difference can be 250 degrees or more at the ends than the middle, depending on the air pressure and the construction of the heat bars over the years.
        ii. Using an infrared thermometer, measure three points on the air holes of the heat bar (bag entering, middle and bag leaving). Average those three and set the setpoint on the controller so that this average corresponds to the values in the procedure below.
    d. See table 1 (Page 14) for recommended starting temperature setpoints at a given speed based on the most common 5 mil bag.
    e. If bag samples were provided for testing at Elevation Packaging, start with the values in the production checklist.

OPERATION (cont)

f. If the bag seals well at this setpoint and can not be pulled apart, decrease the temperature until it DOES NOT SEAL.
   i. Increase in 5 degree increments until a consistent seal is attained or until the average temperature is 100F above the melting point of the bag. If you have reached 120F above the melting point of the bag, more air volume is likely needed.
   ii. Increase the Air pressure at 1 PSI increments up to 5 psi above the shipping setpoint until the desired seal is attained.
      1. Each PSI increment will require time to stabilize temperature
      2. Once the final air pressure is determined, an autotune is required on the primary controller for best temperature control at that pressure. See controller manual to autotune.
   iii. If the pressure setpoint has raised 5 psi above the pressure it was shipped and the desired seal cannot be attained, the bag application will likely require greater than 120 degrees above the melting point of the bag.
   iv. Bags thicker than 6 mils will likely require a compression spring gap adjustment to create more compression and a deeper penetration into the weld.
g. ***NOTE*** To save material, one bag can be used multiple times for testing. Cut the bag below the seal line after each test and then re-run multiple times.

Temperature above melting point in degrees F.	Feet per minute
40-50	40 AND BELOW
60-70	50
90-100	60
110-120	70
150-160	80 (air pressure increase likely needed)
155-165	90 (air pressure increase likely needed)

TABLE 1 (RECOMMENDED STARTING POINT FOR BAG TESTING)
Based on a 5 mil bag

6. Review the settings for your plant conditions

a. Now that you have found the lowest possible setting, you can raise the temperature somewhat to ensure that plant temperature swings do not severely affect the bag seal.

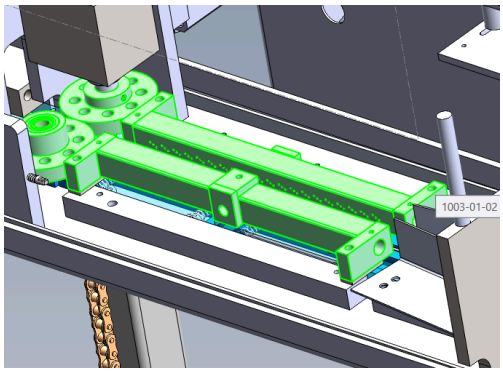
b. Hotter is not always better, and usually NOT as aesthetic, but a balance can be found between better seal quality and the need to change setpoints often if your plant is not conditioned.

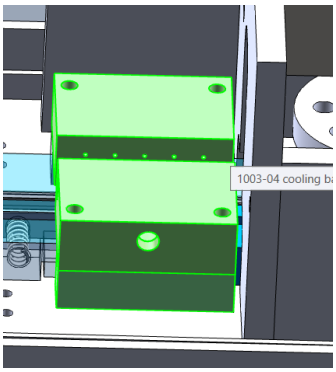
c. Once satisfied with the seal quality, run a full bag with product through the sealer to ensure product contamination does not affect the seal.

5. HEAT AND COOL MANIFOLDS

** DANGER**

HEAT MANIFOLDS WILL BECOME VERY HOT!
DO NOT TOUCH! SERIOUS BURNS COULD OCCUR!





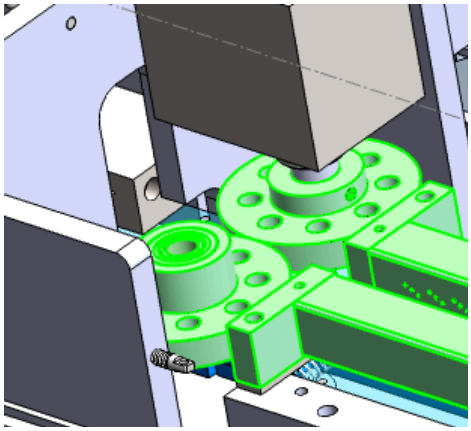
1. Heat bars are available as a standard single air input (legacy models) or triple air input. Triple air input heat bars create lower bar surface temperatures and more even temperature distribution across the face of the bar. They perform better with thicker bags and are less likely to damage the product in the event of a heating component control failure. **Upgrades are available for legacy products.**
2. Custom units are available with multiple heat bars which can seal bags in multiple heights consecutively above and below a bag handle. Multiple seal heat bar units generally require additional customer specifications for seal height and spacing.

5. HEAT AND COOL MANIFOLDS (cont)

3. All heat bar surface temperatures can run hotter than the temperature indicator on the controller. In environments where the product could be damaged or ignited by high temperatures, the secondary temperature controller should be adjusted to compensate for the actual heat bar surface temperature at a given pressure set point, not the temperature indicated on the controller. If the pressure setpoint is changed, the surface temperatures of the heat bar should be checked for the correct limit set point. Higher air pressures lead to higher differences
    a. Both air pressure and heat bar design contribute to temperature discrepancies along the length of the heat bar
    b. Single input heat bars typically have between 50 - 200 degrees surface temperature difference across the face of the heat bar, depending on the input pressure
    c. Triple input heat bars typically have between 10 and 100 degrees difference across the face of the heat bar, depending on the input pressure.
4. Heat bar material should be selected based on the sealing application and environment.
    a. Higher sealing temperatures or corrosive environments will result in carbon steel heat bars corroding faster
        i. Requiring more frequent cleaning
        ii. Producing uneven temperatures after corrosion and cleaning opens the holes of the heat bar too much.
    b. Stainless heat bars are available both pre-sale or as an upgrade but are significantly more expensive.
    c. Carbon steel heat bars can be painted with 1200F grill paint as long as the limit controller is set to prevent higher temperatures.
        i. Air holes should be cleaned after repainting.

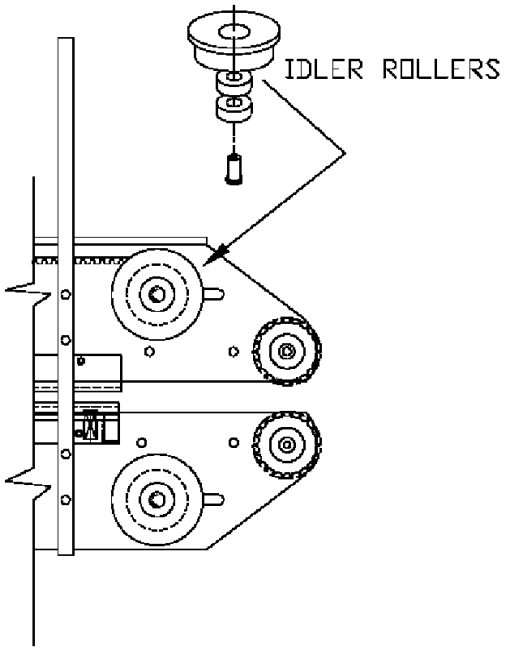
6. COMPRESSION ROLLERS

1. The rear or stationary roller (see drawing 1003-00) is set at the factory by running a straight piece of sheet metal between the compression rollers to ensure that the rear roller is exactly in the center of the machine. This should not need adjustment at start-up.
2. The front spring loaded hinged roller applies pressure via a compression spring. The bag is compressed between the two rollers leading to a positive seal. Note: Both rollers must be running level. The spring gap is set and documented at the factory.



7. CARRIER BELTS

1. Two continuous ½” wide carrier belts are used to carry the
2. bag through the entire machine.
3. Tension is set at the factory and should require no adjustment at start up. Periodic tightening may be necessary.
4. Changing tension of belts
    - Disconnect power to the machine. Unplug or Lock out equipment.
    - Remove the in-feed guards.
    - Increase belt tension by sliding the idler rollers on the outside edges of both deck plates.
    - Loosen the button head cap screw holding the idler roller in place and either slide towards the in-feed to increase tension on or slide towards the discharge section to decrease tension



8.GENERAL CONCEPTS OF EVALUATING OPERATION

- There are several principles to consider when operating to get a consistent seal-
  - The higher the temperature above the melting point, the more capacity the machine has to seal the bag, while also producing the most potential for melt through and discoloration. Sealing temperatures should be set at their lowest point for the cleanest look but may need to be slightly higher for a more consistent seal. Operate at the lowest temperature possible for your application for energy savings and seals with clean aesthetics.
  - Bag material changes require testing and setpoint changes.
  - Radiant heat of heaters and surrounding metal affects operation. A cold machine or recent setpoint changes will require stabilization of temperature at current operating setpoint to get consistent results.
  - Speeding up or slowing down the carrier belts will change the heat transfer by exposing the plastic to the heat for longer periods of time. Slower conveyors are generally able to produce the best seals, while the machine is still capable of good seals at speeds of up to 90 FPM on some materials.
  - A cold compression roller will work differently than a compression roller that has run for a long period of time.
  - The adjustment spring on the compression roller also will affect the bag weld significantly. The gap of the adjustment spring was set at the factory and documented in the production checklist
  - Thicker bags require potentially slower speeds, more air volume, and higher temperature air.
  - Product changes may require testing. Every contaminant has a different effect on the seal.

9. TROUBLESHOOTING

1. Poor seals:

A. **Check the temperature controller heat setpoint.** Overheating will cause melt through. Too little heat will not melt the bag enough to seal

B. **Check the compression rollers for alignment and pressure.** Misaligned rollers will provide a thinner seal due to reduced contact area of the compression rollers. Bad bearings may cause misaligned compression rollers. Spring pressure is set at the factory and measured in the start up report. Check the compression spring displacement against the start up report.

C. **Check the speed of the conveyor and the speed of the sealer**. Mismatched speeds can be seen observing the bag and watching the top and bottom of the bag. The faster (top / bottom) will slightly lead the slower component. Mismatched speeds can cause the seal to tear as well as cause an uneven seal path across the top of the bag.

D. **Check air pressure against testing start up report** - if no report was given, contact Elevation packaging with good starting values for the bag specifications you have - air pressure ranges from 10-30 psi and drastically affects the bag seal and heat bar performance - air pressure should be minimized for energy efficiency. Air pressure should be increased only if a good seal cannot be attained by first raising temperature or slowing conveyor speed - for example:

- @ 30FPM a 4 mil bag may seal well at 10 PSI, so 15 PSI is just a waste of electricity
- @ 50FPM, 10PSI may not produce enough volume of heat to seal consistently through varying levels of bag material or product contamination and air pressure may need to increase

TROUBLESHOOTING (Continued)

2. **Unit will not maintain selected heat setpoint**
    A. **Faulty thermocouple** - The thermocouple can be checked against standard type J thermocouple millivolt reference tables found on the internet.
    B. **SSR Issue**-
        a. Verify that when the pulse controller is sending a pulsed 5vdc signal to the SSR, the contacts are closing.
        b. Check for voltage drops over the SSR line contacts when engaged, voltage drops indicate a resistance issue in the solid state components.
    C. **Heat elements burnt out** - Verify voltage is present at the heat element and measure the current of the heat element. If there is proper voltage present and no current at the heat element, the heat element is faulty.
    D. **Controller issue** - The Watlow 935 and Tempco 220, and Delta DTB user manuals contain fault codes and troubleshooting information specific to the controller. All manuals are available online and a copy of the controller was shipped with the unit.

TROUBLESHOOTING (Continued)

3. Temperature difference between primary and secondary controllers.

A. The primary controller controls the temperature for both heat bars. In the the event there is a temperature discrepancy between the two that is greater than 50 degrees F, check the following:

a. Air volume difference due to blockage / debris / corrosion

i. Check for air leaks in branch piping leading to uneven air flow between heat bars.

ii. Check the heat bar air openings. They are 1/16” diameter holes and should be cleaned with a broach type tip cleaner. If cleaning the heat bar with a 1/16 drill bit, extreme caution is needed as it may enlarge the holes which will cause permanent temperature discrepancies between the heat bars.

iii. The air regulator has a 5 micron filter. Piping blockage is unlikely. Piping generally does not need to be checked unless

1. Both the heat elements are verified operational
2. The heat bar openings have been verified as clear and at the correct diameter.

B. One Heat element with no current.

a. Loose connection in the rear junction box - This will be evident in a heated wire nut and can be verified with an amp meter across each heat element branch wire with the heat on continually and not pulsing.

b. Bad heat element (usually 0 amps)

10. LUBRICATION

1. The Gear box reducer oil level should be periodically checked. See reducer manual @ http://www.grovegear.com or the product catatlog @ Resources - Vortex Speed Reducers
   1.1. Grove Gearbox - When using standard PAG Synthetic oil, oil changes are not needed unless repairs are being made. If your unit shipped with non-standard oil, or a non standard gear box, oil changes may be necessary. Consult the gearbox manual.
   1.2. Vortex gearbox - gearbox should be lubricated every 2500 hours - all units are shipped with Shell Morlina 460 gear oil or equivalent
2. Gears, sprockets and chains should have a light coat of grease smeared on the contact points. Dry or heavily soiled components will require cleaning and regreasing. Customers may specify the grease for the equipment at the time of purchase and if so will be documented in the production checklist.

MAINTENANCE

Motor

All motors selected are maintenance free motors unless specified by the customer.

Bearings

The only greasable bearings in the unit are the drive gear bearings.
Some customers plug the grease zerks and run to failure on this rpm of bearing. Bearings should be greased by runtime evaluation based on each bearing. Bearing manufacturers publish recommended grease intervals for each bearing size based on duty cycle and RPM.

Gears

Gears are coated with a light grease at the factory. They should be inspected and re-coated as necessary. Dirt and debris should be removed from gears.

Compression Rollers

Inspect the knurling on the compression rollers and replace when the knurling wears out.

Heat Bar

The heat bar should be inspected at the beginning and end of every shift. Air holes should be checked for free air passage. Do not alter the heat bar hole sizes. Extreme caution should be used if cleaning with a precision drill bit - It is recommended that an undersized drill bit be used to clean or a torch tip cleaner or broach. If the holes are enlarged,hot spots may occur and a new heat bar is recommended. If the heat bar air openings are cleaned, a service temperature test should be conducted to compare the heat bar surface temperature to the displays on the primary and secondary controllers. The production checklist (shipped with the unit) contains the expected values.

Moisture Collector

If the incoming air is properly set up, the moisture collector should not require emptying. Inspect periodically throughout each shift to ensure the drying system is operating properly.

General Cleaning

The entire machine should be inspected and wiped down at the end of each shift. Buildup of debris or blockage of air openings can cause operational issues and also increase the risk of fire.

Guarding

There is extremely low clearance between the pulley system and the guards to facilitate a minimal amount of freeboard in the machine. The guard gap to the pulleys should be checked if the machine is moved frequently from line to line or if it is crated and shipped.

Air Pressure Switch (if equipped)

Periodically verify that the air pressure switch opens at 2psi and removes power from the rear secondary controller. The pressure switch should make in the vicinity of 10PSI - for operating parameters between 5-10 PSI, you will need to turn past 10 PSI to engage the switch and then turn back down to the desired operating set point.

Corrosion Checks

All lift components should be inspected regularly to ensure that product changes or environmental contaminants are not producing rust that would weaken the lift components and create a safety issue

Belts

Drive and carrier belts should be checked for signs of wear and replaced when worn.

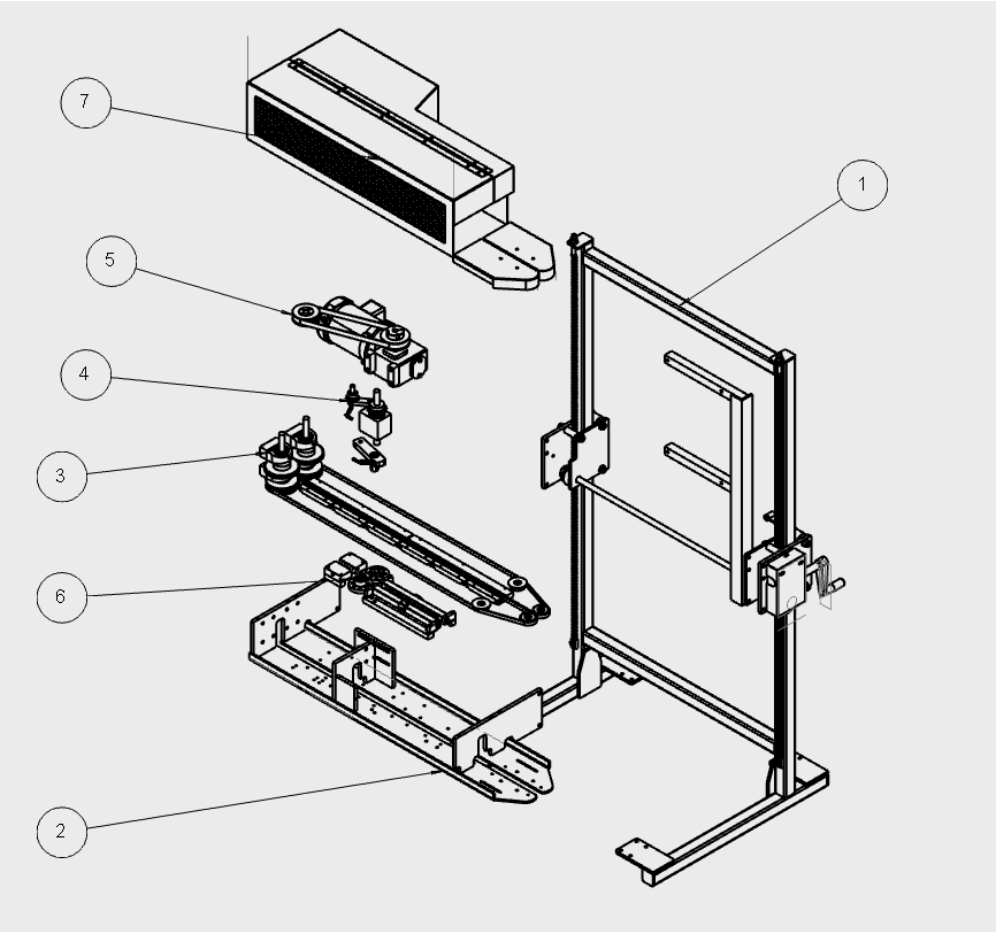
10. RECOMMENDED SPARE PARTS

PART	DESCRIPTION	QUANTITY
1003-14	Heat Element .500 x 12.00	2
1003-15	Thermocouple	1
1003-16	Solid State Relay	1
1003-17	Tempco Heat controller	1
1002-01	Carrier Belt pair	1
900-056	Drive Belt	1

11.ASSEMBLY DRAWINGS LIST

Please provide a serial number with all parts requests

1.	2022-00	ASSY FLOOR STAND
2.	2022-01	ASSY FRAME
3.	2022-02	ASSY CARRIER BELTS
4.	2022-03	ASSY COMPRESSION DRIVE
5.	2022-04	ASSY HOT AIR DRIVE
6.	2022-05	ASSY STANDARD SINGLE SEAL
7.	2022-07	ASSY GUARDS HOT AIR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1
5
4
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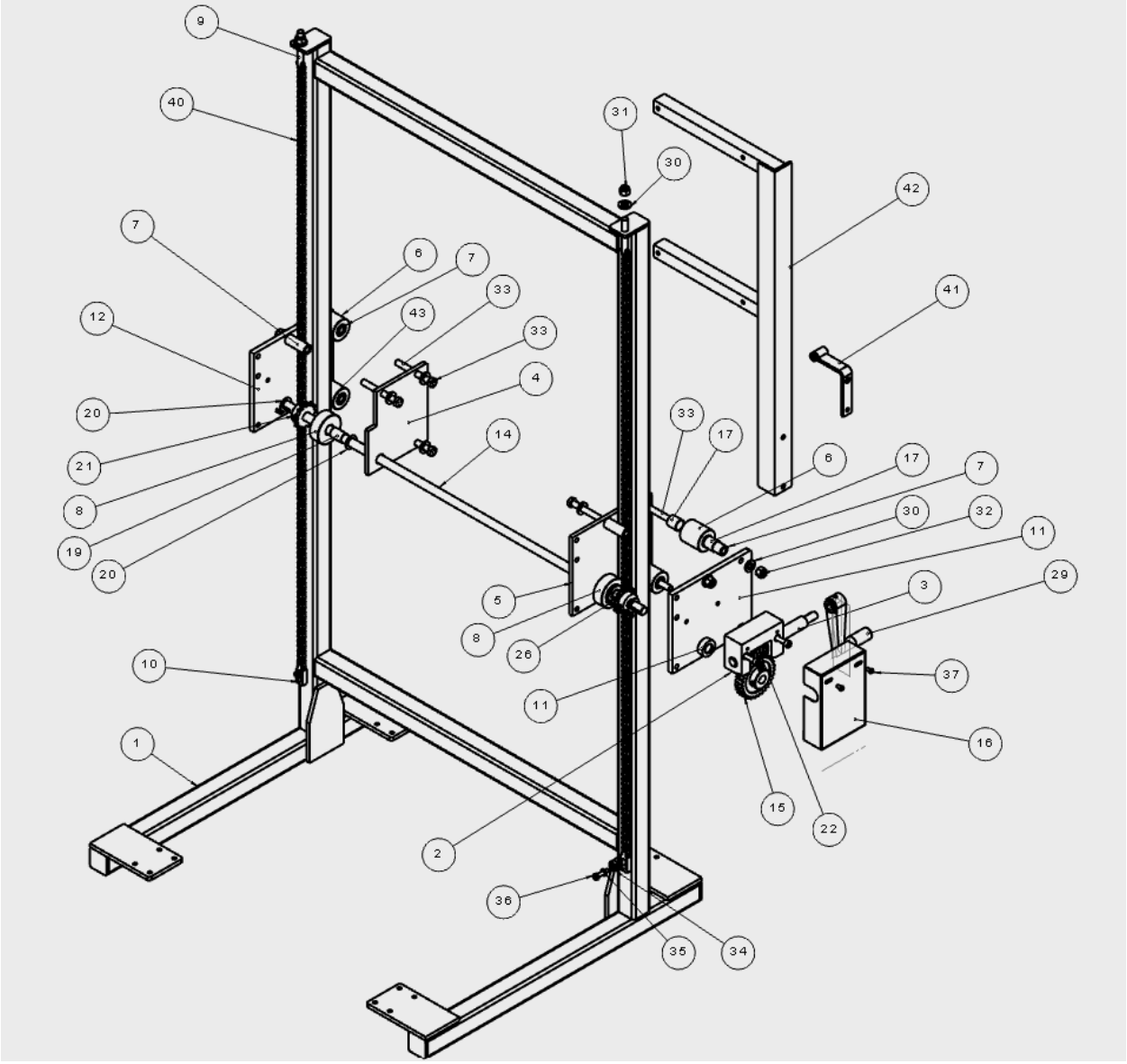
2

2022-00	ASSY FLOOR STAND

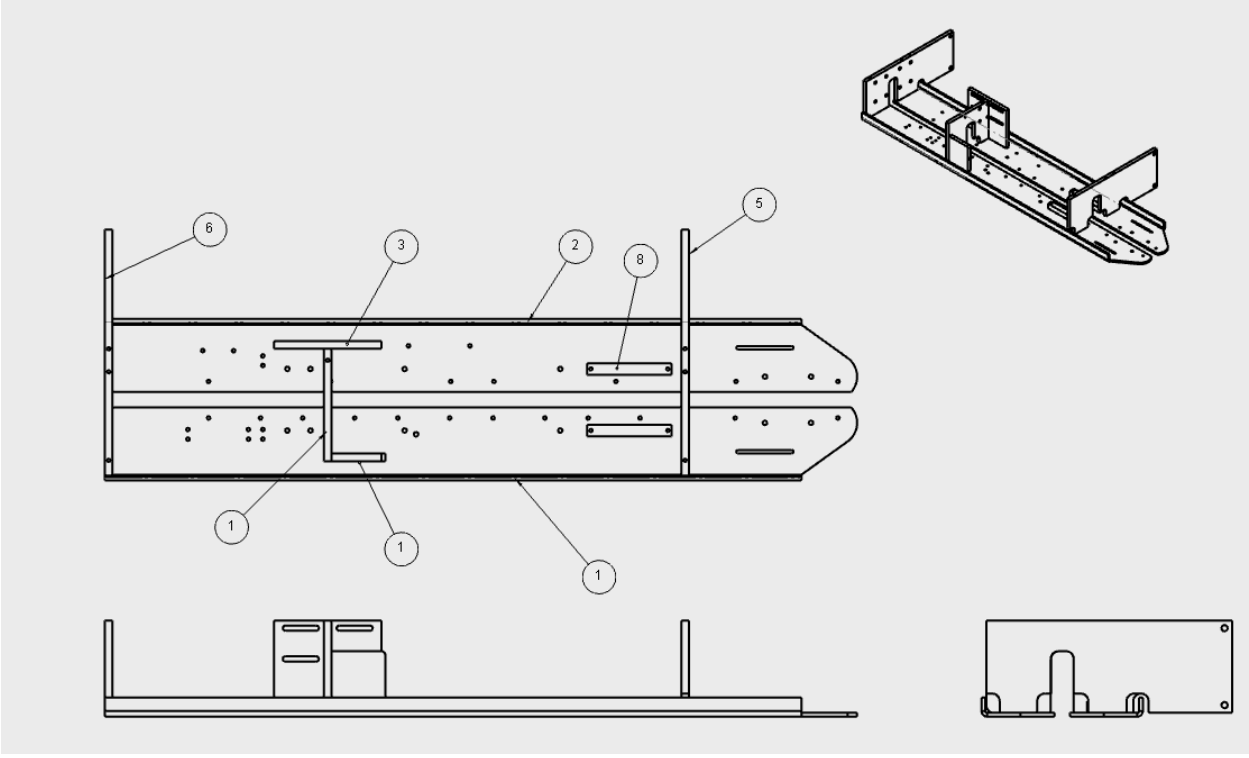
ITEM	PART NUMBER	DESCRIPTION	QTY
1	106-110	WELDMENT FLOOR STAND	1
2	106-01	WORM PLATE	1
3	106-02	CRANKSHAFT	1
4	106-03	PLATE INSIDE	1
5	1006-04	SIDE PLATE	1
6	106-06	ROLLER	2
7	106-05	AXEL ROLLER	6
8	106-07	ROLLER CHAIN	2
9	106-08	ADJUSTER CHAIN	2
10	106-09	HANGER CHAIN	2
11	106-11	WELDMENT CRANK PLATE	1
12	106-12	WELDMENT IDLER PLATE	1
13	106-13	SPACER WORM	1
14	106-200	SHAFT CROSS 1H1C	1
15	900-010	REWORK WORM GEAR	1
16	106-14	COVER WORM GEAR	1
17	900-146	BRG SLEEVE .88 X 1.00 X 1.00	8
18	900-148	BRG SLEEVE .75 X .88 X 1.00	3
19	900-149	BRG SLEEVE .75 X .88 X 1.25	2
20	900-206	BRG THRUST .06 X .75 X 1.25	7
21	900-037	SPROCKET 40B14 .75 BORE	2
22	900-208	WORM	1
23	900-147	BRG SLEEVE 1.00 X 1.12 X 1.50	1
24	900-047	LINK CONNECTOR #40	4
25	900-104	PIN SPRING 0.19 X 1.25	1
26	900-130	KEY .188 SQ X .75 ROUNDED ENDS	2
27	900-140	KEY .19 SQ X 1.00	2
28	900-141	KEY .19 SQ X 1.50	1
29	204-100	REWORK CRANK HANDLE	1
30	900-063	WASHER FLAT SAE 1/2	14
31	900-129	NUT HEX FLEX TOP LOCKING	2
32	900-134	NUT HEX LOCK NYLON 1/2-13	6
33	900-069	SCR HEX HD 1/2-13 X 4.0	6
34	900-061	WASHER FLAT SAE 5/16	2
35	900-083	WASHER LOCK 5/16 SST	2
36	900-111	SCR HEX HD 5/16-18 X 1.25	2
37	900-124	SCR BUTTON HD 1/4-20 X .50 SST	2
38	900-064	SCR SOC HD 3/8-16 X 2.0	2
39	900-103	SCR SET 5/16-18 X .38 SST	2
40	900-009	CHAIN #40 ROLLER X 60.5 LG	2
41	1000100	WELDMENT AIR REG MOUNT	1
42	10001412	ELECT BOX MOUNT	1
43	106-206	ROLLER LOWER	2

2022-00	ASSY FLOOR STAND (cont)



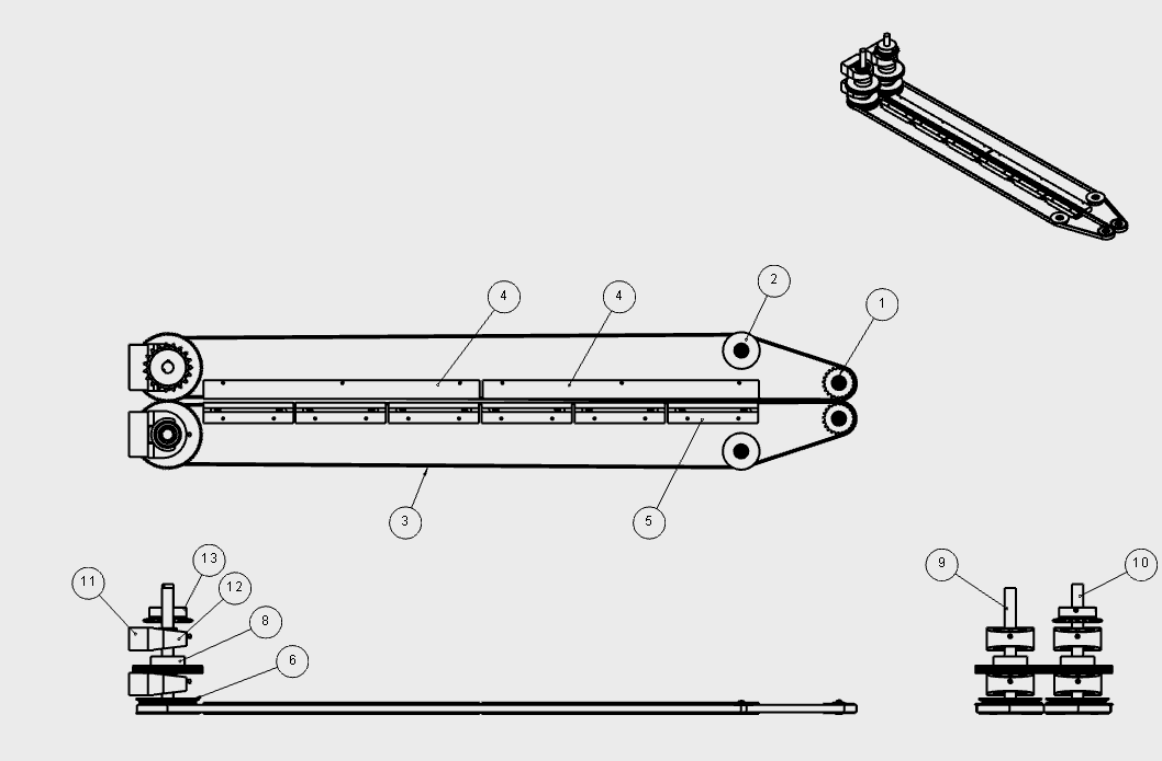
2022-01	ASSY FRAME

ITEM	PART NUMBER	DESCRIPTION	QTY
1	2019-01	FRONT DECKPLATE	1
2	2019-02	REAR DECKPLATE	1
3	1004-7	REDUCER PLATE	1
4	2019-04	CENTER BRIDGE	1
5	2019-05	BRIDGE INFEED	1
6	2019-03	BRIDGE DISCHARGE	1
7	1004-10	BRACE	1
8	2019-09	SPACE INFEED GUIDE	2
9	2019-10	INFEED GUIDES	2



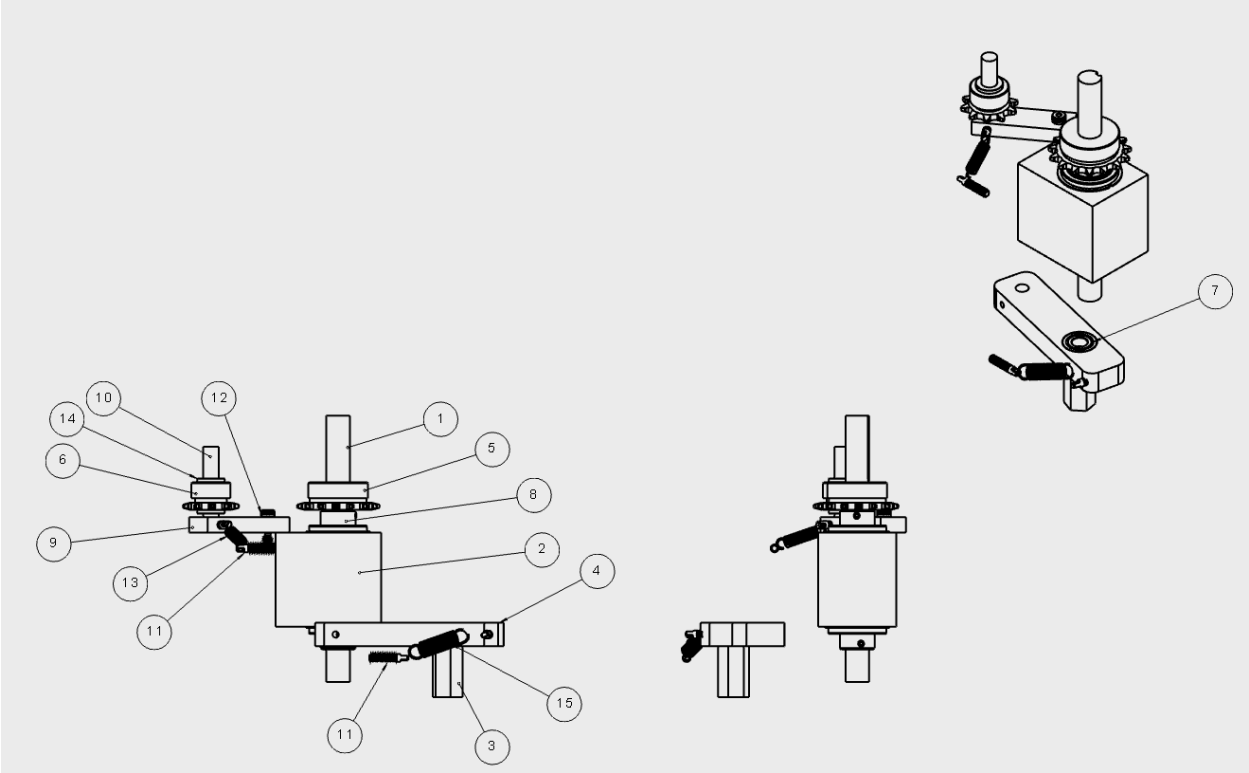
2022-02	ASSY CARRIER BELTS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	1002-100	ASSY NOSE ROLLER	2
2	1002-101	ASSY IDLER ROLLER	2
3	1002-01	CARRIER BELT 8MGT-2520-12 BELT	2
4	102-01	PRESSURE BAR STATIONARY	2
5	1002-102	ASSY PRESSURE BAR	6
6	900-189	PULLEY	2
7	900-041	TAPER LOCK BUSH 1210 .75B	2
8	1005-17	DRIVE GEAR S1672	2
9	1005-02	SHAFT SHORT DRIVE	1
10	1005-01	SHAFT LONG DRIVE	1
11	1000009	BEARING SPACER	4
12	900-053	COMPACT BASE MOUNTING BEARING	4
13	900-210	41B19 SPROCKET .75 BORE	1



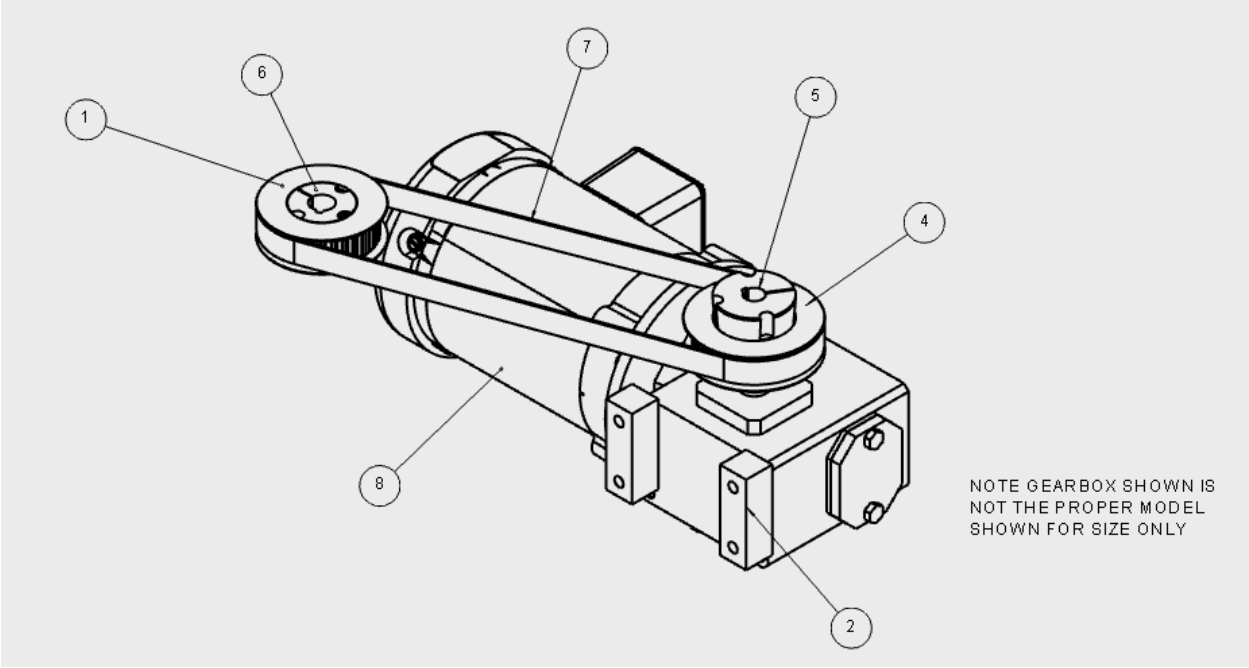
2022-03	ASSY COMPRESSION DRIVE

ITEM	PART NUMBER	DESCRIPTION	QTY
1	1003-10	COMPRESSION SHAFT	1
2	1003-09	STATIONARY BLOCK	1
3	1003-08	PIVOT ARM MOUNT	1
4	1003-07	PIVOT ARM	1
5	900-005	ROLLER CHAIN SPRKT 41B15	1
6	900-006	ROLLER CHAIN SPRKT 41B10	1
7	900-026	BRG ROLLER 1616RS	2
8	900-055	BRG BALL ER12	2
9	1005-12	IDLER BRACKET	1
10	1005-13	IDLER STUD	1
11	900-137	EXT SPRING STUD	4
12	900-072	BOLT SHOULDER 5/16 X .50	1
13	900-054	EXT SPRING LE-058D-06S	1
14	900-049	BRG FLANGED SLEEVE .50 ID X .688 OD X .5 LG .88 X .06 FLANGE	2
15	900-166	EXT SPRING LE-049E-04S	1



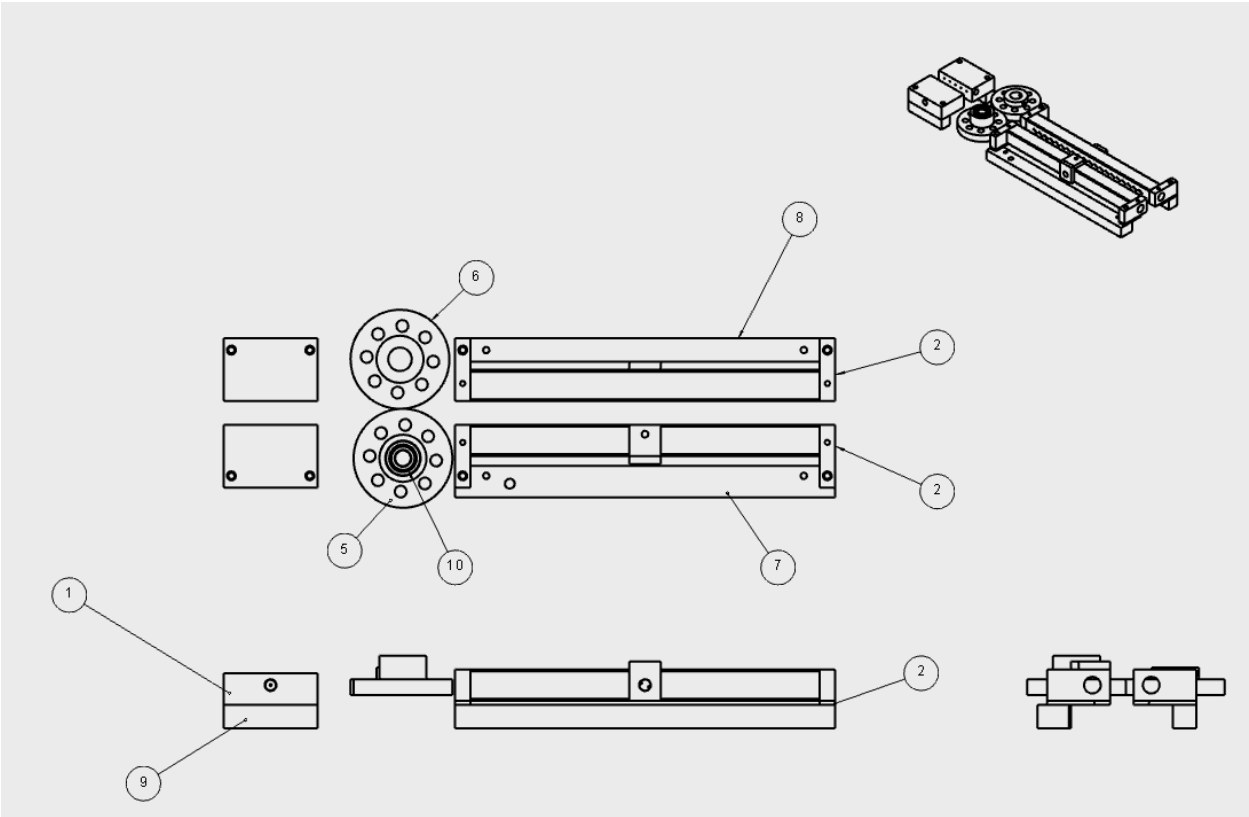
2022-04	ASSY HOT AIR DRIVE

ITEM	PART NUMBER	DESCRIPTION	QTY
1	900-186	32 TOOTH PULLEY	1
2	2019-06	SPACER GEARBOX	2
3	900-190	REDUCER	1
4	900-187	34 TOOTH PULLEY	1
5	900-196	TAPER LOCK BUSH 1610 .625 B	1
6	900-195	TAPER LOCK BUSH 1210 .75 B	1
7	900-056	TIMING BELT	1
8	900-207	MOTOR 1/2HP 208/230 1720 RPM	1



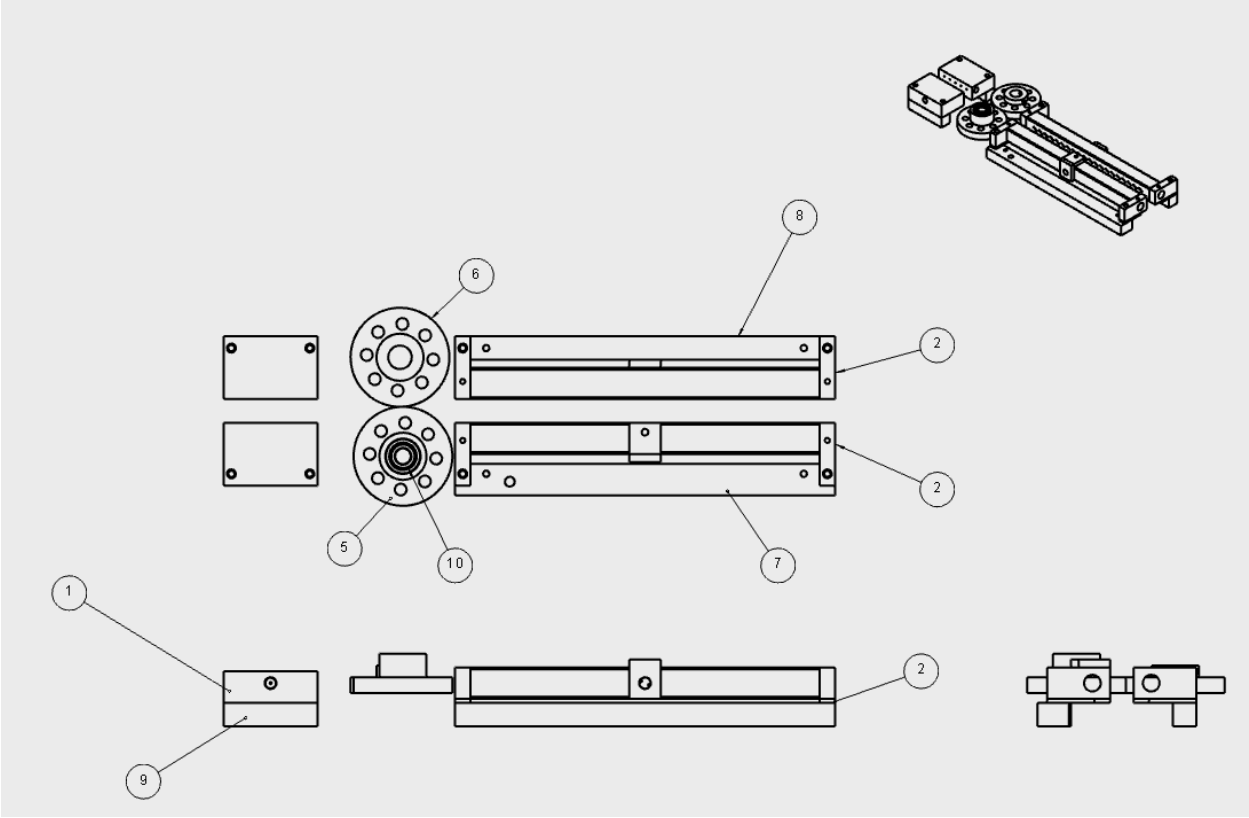
2022-05	ASSY STANDARD SINGLE SEAL

ITEM	PART NUMBER	DESCRIPTION	QTY
1	1003-04	COOLING BAR	2
2	1003-03	HEAT BAR SPACER	4
	1003-02	WELDMENT HEAT BAR SINGLE INPUT REAR (pre 12/2024)	1
	1003-01	WELDMENT HEAT BAR SINGLE INPUT FRONT (pre 12/2024)	1
	1003-201	WELDMENT HEAT BAR TRIPLE INPUT FRONT / REAR	2
5	1003-05	COMPRESSION ROLLER IDLER .5	1
6	1003-06	COMPRESSION ROLLER DRIVEN .5	1
7	2019-07	SPACER HEAT BAR	1
8	2019-08	SPACER HEAT BAR	1
9	2019-12	SPACER COOLING BAR	2
10	900-026	BRG BALL 1616RS .5 BORE	2



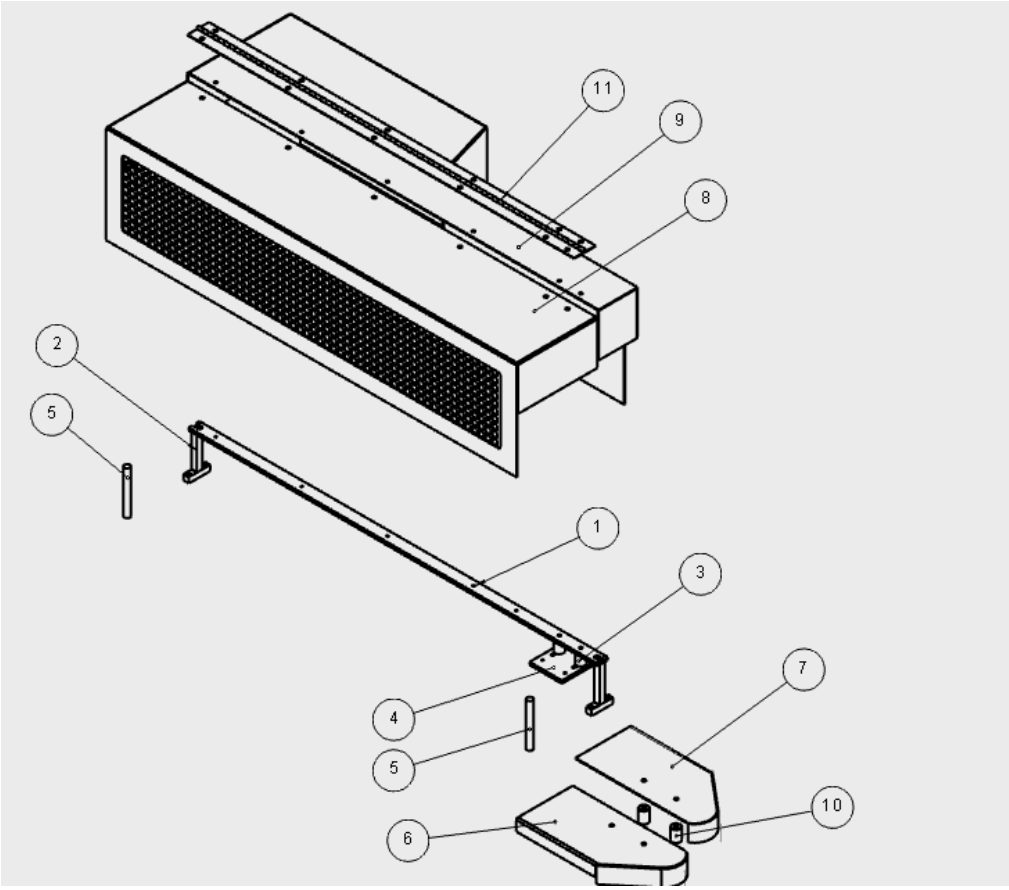
2022-05	ASSY OPTIONAL DOUBLE SEAL

ITEM	PART NUMBER	DESCRIPTION	QTY
1	1003-04	COOLING BAR	2
2	1003-03	HEAT BAR SPACER	4
3	1003-102	WELDMENT HEAT BAR (DS)	1
4	1003-101	WELDMENT HEAT BAR (DS)	1
5	1003-105	COMPRESSION ROLLER IDLER .5 (DS)	1
6	1003-106	COMPRESSION ROLLER DRIVEN .5 (DS)	1
7	2019-07	SPACER HEAT BAR	1
8	2019-08	SPACER HEAT BAR	1
9	2019-12	SPACER COOLING BAR	2
10	900-026	BRG BALL 1616RS .5 BORE	2



2022-07	ASSY GUARDS HOT AIR

ITEM	PART NUMBER	DESCRIPTION	QTY
1	1007-06	GUARD SUPPORT BAR	1
2	1007-05	WELDMENT GUARD SUPPORT	2
3	1000108	SPACER SAFETY SWITCH	2
4	1000107	SWITCH MOUNT	1
5	1000177	GUARD STAND OFF	2
6	2019-13	INFEED GUARD	1
7	2019-14	INFEED GUARD	1
8	2019-15	FRONT COVER	1
9	2019-16	REAR COVER	1
10	107-103	SPACER INFEED COVER	4
11	2019-120	HINGE FRONT COVER	1



ELECTRICAL

Component Part Numbers

All electrical parts requests REQUIRE a serial number of the machine to ensure the correct part

PART NUMBER	DESCRIPTION
900-167	SOLID STATE RELAY 208/230 VOLT MACHINE
900-177	SOLID STATE RELAY 480 VOLT MACHINE
900-178	FUSE BLOCK
900-179	1 1/4 X 1 5/8 WIRE DUCT
900-180	WIRE DUCT CAP
900-181	TERMINAL STRIP #22A 8 AWG
900-182	TERMINAL STRIP #22A 14 AWG
	Heat controller - Contact Elevation with Serial number of sealer
As listed in enclosure	Fuse - 480V MACHINE
As listed in enclosure	Fuse - 230V MACHINE
	Transformer - contact elevation with serial number of sealer
900-172	START / STOP SWITCH
900-173	HEAT SWITCH
900-174	DOOR SAFETY SWITCH
900-175	SPEED POTENTIOMETER
900-176	SPEED POTENTIOMETER KNOB
900-160	HEAT ELEMENT
900-211	THERMOCOUPLE