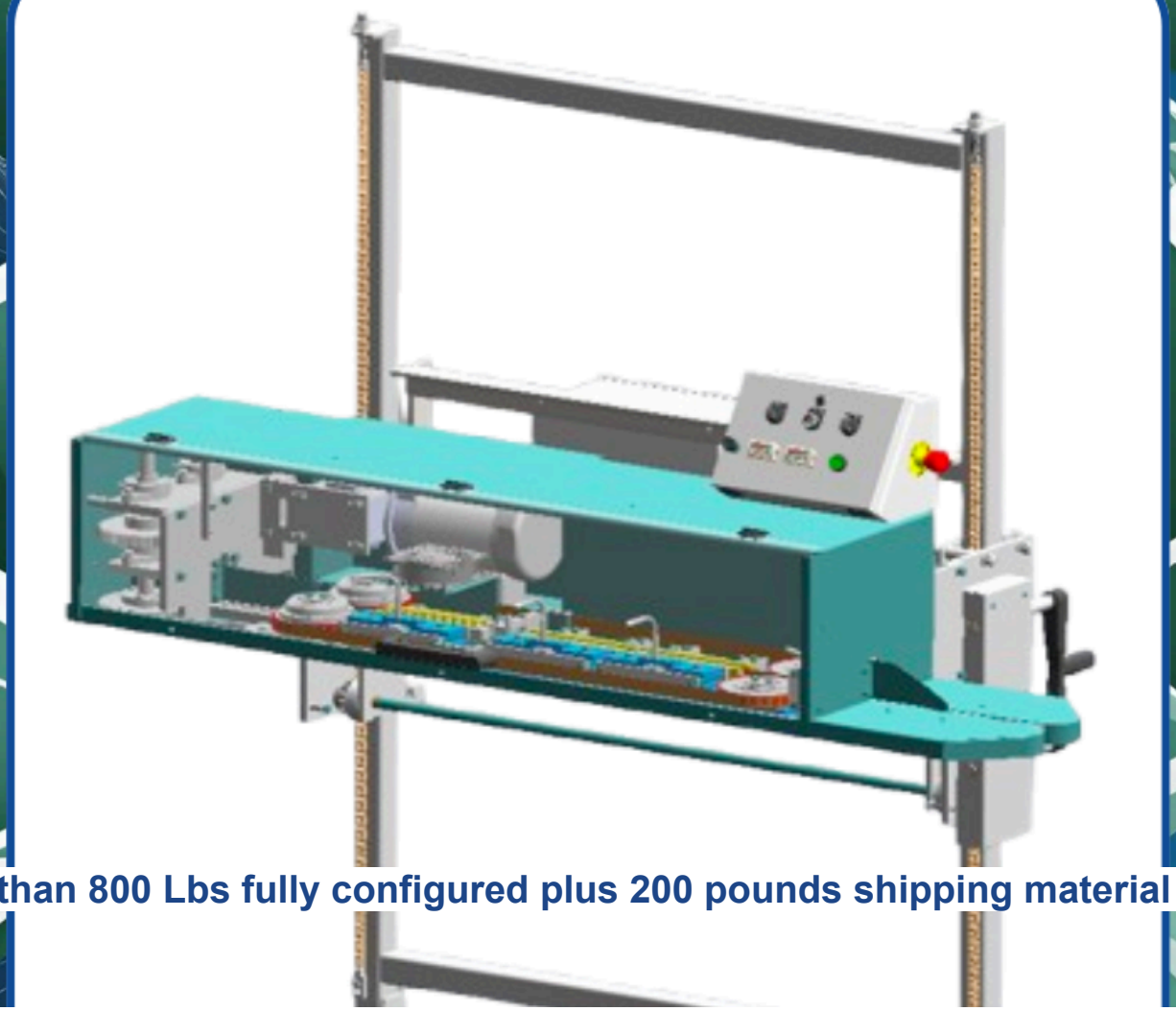
OPERATIONS AND OWNERS MANUAL
EBSx001.VER1.2-6/2024

Elevation
Packaging & Equipment

CONTINOUOUS BAND SEALER - UP TO THREE HEAT ZONES

EBS 1001
SHOWN-EBS 2001
EBS 3001



Less than 800 Lbs fully configured plus 200 pounds shipping material *(typical)*

TABLE OF CONTENTS

FOR SPARE PARTS OR TECHNICAL QUESTIONS PLEASE CALL:
402-999-0827

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

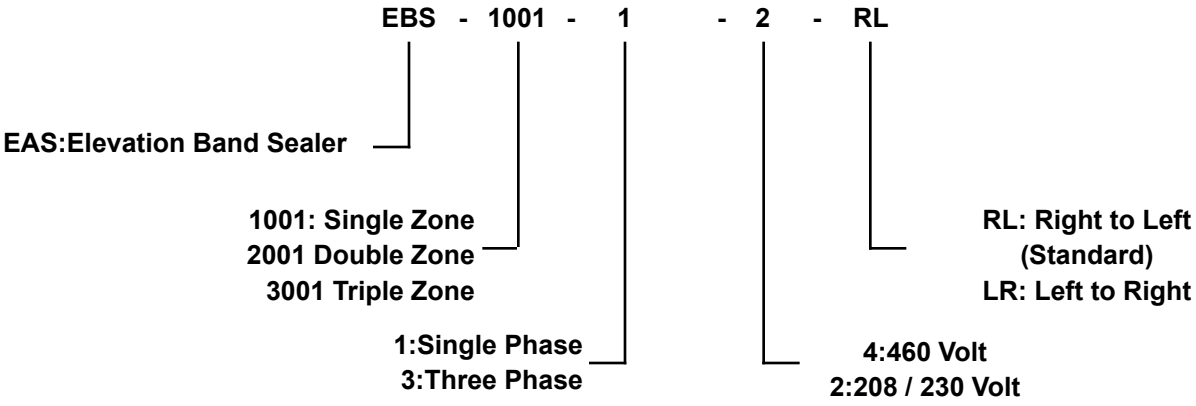
HEATING BARS CAN REACH 500 DEGREES. EXTERIOR SURFACES CAN BECOME HOT - TEST SURFACE BEFORE TOUCHING - DO NOT SET ANYTHING ON TOP OF THE SEALER THAT WILL BLOCK AIR MOVEMENT - DO NOT OPERATE MACHINE WITHOUT COOLING BAR FAN OPERATIONAL

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

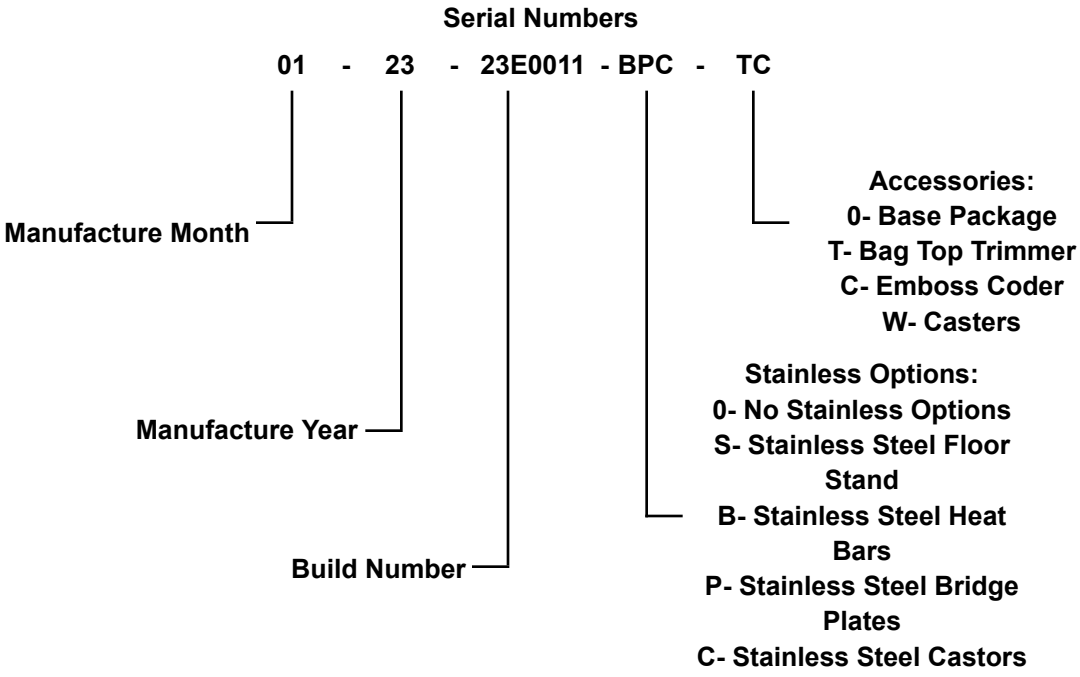
!! DANGER - READ BEFORE SERVICING OR OPERATING !! Only personnel trained to identify hazards and proceed safely should attempt to service the equipment. Failure to follow these guidelines could result in personal injury, damage to equipment or death. Servicing, lifting, or troubleshooting this equipment 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 heat bars
- Sharp edges

Model Number



Serial Numbers



INSTALLING THE MACHINE INTO PRODUCTION

★ *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 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. Read the manual carefully and place the machine into the production area
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
6. 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 !!

GENERAL OPERATION

The EBS-1001 / 2001 / 3001 sealer series is a band sealer designed for manual and automatic production runs for sealing a variety of heat sealable materials. The basic operation of the machine is that bags are fed into the in-feed of the machine and carried through the entire machine via a pair of carrier belts. The top portion of the bag is carried through pairs of heat sealing bands which will give your bag a ¼" seal line near the top of the bag. The weld begins in the heat bar section due to the close tolerance gap in between the heat bars. The bag top is then carried through a compression roller to finish the weld and a pair of cooling bars which cool the seal to solidify the sealed bag.

The machines sit above a separate conveyor (sold separately) that can be speed matched at the factory or adapted in the field. The sealers are compact for their capability and will fit into many line applications.

	EBS1001	EBS2001	EBS3001
Unpacked Width	61	70	78
Unpacked Height	74	74	74
Carrier Belt Height above Floor	26-56 inches	26-56 inches	26-56 inches

ELECTRICAL CONTROLS

Have any personnel who may be operating the machine learn the electrical controls. See figure # 1 for control layout.

10 turn potentiometer precisely controls carrier belt speed to a fixed setpoint. The operator must adjust to match the conveyor speed.

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 or Watlow manual for troubleshooting.

ELECTRICAL CONTROLS (cont)

Delta DTB - Temp Controller or Secondary Temp Control

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

The alarm setpoint(for units without secondary temp controller) should be left set at 595. If the alarm is adjusted from this setting, equipment damage or malfunction could occur.

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

Heat malfunction Light and Reset button
<u>!! Manual reset required !!</u>

If the alarm light is lit - 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 cooling fan

INVERTEK VFD

Press the Octagon to scroll through

- Frequency
- Motor Speed
- AMPS
- FPM (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

COMPONENT OVERVIEW

HEATING AND COOLING BARS

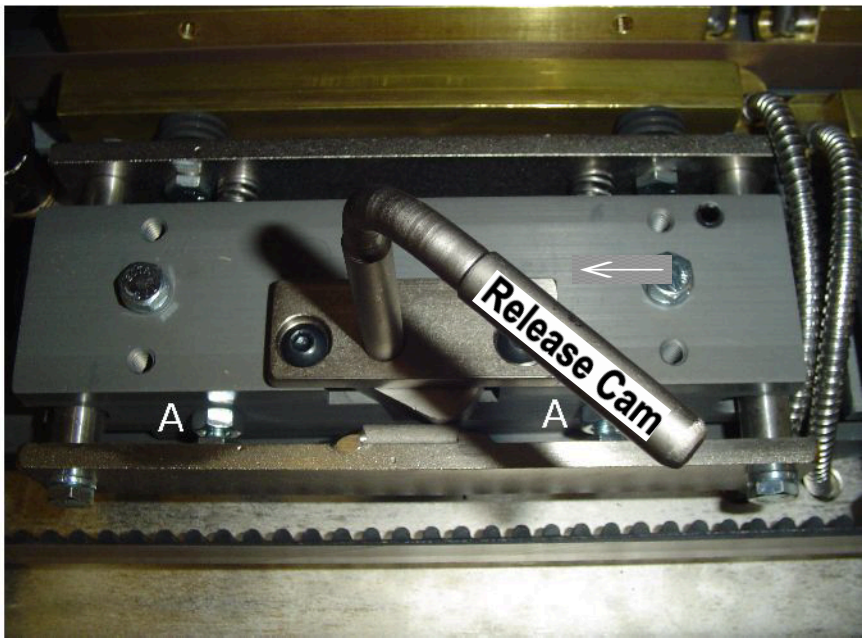


FIGURE 1

The rear or stationary set of heating and cooling bars are set perpendicular to the deck plates at the factory and rarely need to be adjusted. The only adjustments available are made by 2 allen set screws on each rear heat bar mount. Call the factory if you believe these need to be adjusted.

The front set of heat and cool bars are spring loaded to achieve pressure on the bands and bag as it passes between the heat and cool bars. These also control the gap between the front and rear bars. For best performance, the gap must be changed for different bag thicknesses. The machine should arrive pre-adjusted for your bag if samples were sent to the factory. See figure # 1 for details on how to adjust. You may be able to achieve a good seal on multiple thicknesses without adjusting, but that will vary based on material and construction. Testing multiple thicknesses of bags is the responsibility of the customer. Testing can be done upon request at the time of machine completion and finished seals will be sent back to the customer with the finished machine. Different levels of compression springs are available for the machine - contact the factory for information.

HEAT BAR GAP ADJUSTMENT

Adjustments should be made with the sealing bands installed and with the heat bars near operating temperature.

1) Ensure the band release cam is engaged to the operating position.

2) Loosen the nut on the gap adjustment locks (A) - these contain an adjustment screw and a nut secured to the threaded heat bar assy to prevent movement of the gap once set.

3) Use a feeler gauge to measure the gap between the heat bars
   a) When adjusted properly, the teflon bands should slightly grab the feelers gauge, but the gauge should still move with very light force. Applying too much force to move the feelers gauge indicates loaded springs which results in an improper setting.

4) Adjust using the gap adjustment bolt to the needed gap per the bag specs
   a) **Example Adjustment:** 5 mil bag - no gussets
      - Bag thickness (.005 x 2) = .010
      - Gap setting = .010
      - Gap can be reduced to .008 if needed but this will slightly shorten teflon band lifespan -
      - gap settings below .008 may have a tendency to cause bags to drag against the heat and cool bars which will cause poor appearance and potentially poor seals

5) Once finished, lock the setting in place using the gap adjustment lock nut

BAND WHEELS AND SEAL BANDS

Each machine requires two sets of sealing bands which wear periodically. The band wheels must be aligned so that they are parallel with each other. Alignment should be set at the factory and require no adjustment. Use the following steps to correct any issues encountered.

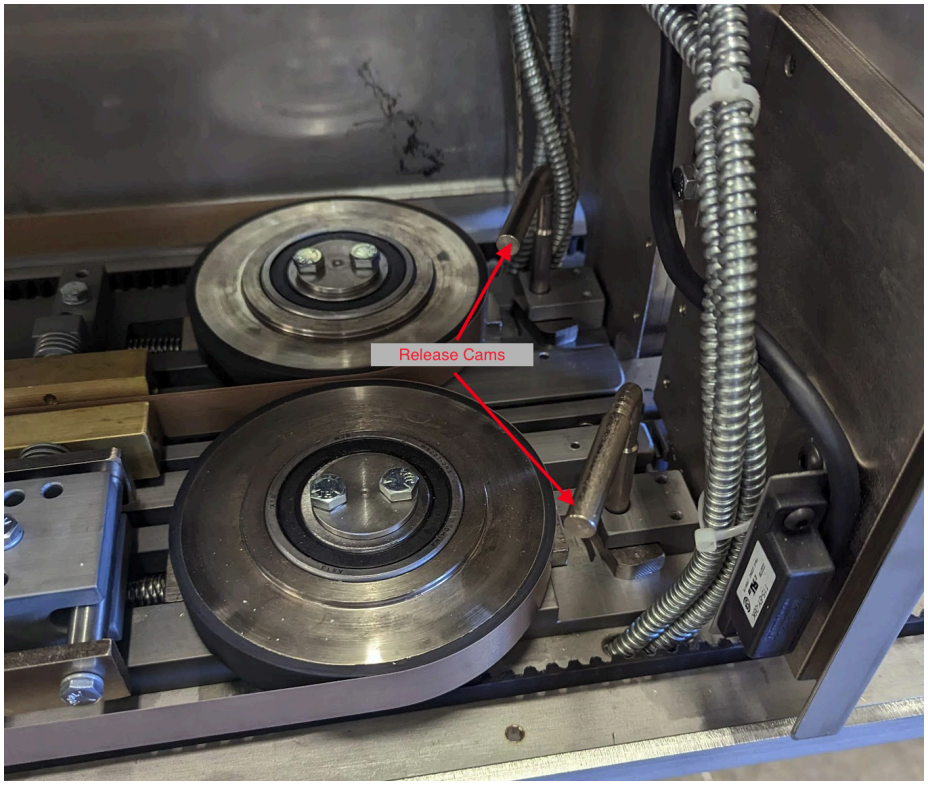


FIGURE 2

NOTE !!
Small adjustments to the band wheels can cause the sealing band to drag on edges of the machine. Run the drive at low speeds when checking the band ride. Stop the machine before dragging occurs or damage to the sealing band will occur. Use the release cams to release tension from the band and re-center the band between adjustments as necessary. See Steps Below

CHANGING THE SEALING BANDS (See Figure 2)

A. Stop the machine, remove power and follow local safety procedures
B. Disconnect the cord to the cooling fan (at the rear corner of the cooling fan)
C. Move the release Cam (FIGURE 2) toward the band wheel to release band tension
D. Move the release cams for the heating and cooling bars (FIGURE 1) toward the release position
E. Change the sealing bands - you will need to release compression wheel tension - you do not need to dis-assemble the compression wheel.
F. Return tension to the band wheel using the release cam
G. Set the drive to a low speed
H. Check that the band rides centered on the band wheels. The bands should not extend above or below the band wheels.
I. If band rides incorrectly - see the following pages for troubleshooting
J. Once the band rides correctly - release the heating and cooling bar release cams (FIGURE 1) to the operating position
K. Verify that the band rides correctly
L. Reinstall the cooling fan cord

Bands wheels rock on a raised hub fulcrum called “Axis A”
The bolts to the left and right of Axis A adjust the resting angle of the band wheel.
SEE FIGURE 3 and FIGURE 4

FIGURE 3

CORRECTING BANDS THAT RIDE UP ON THE BAND WHEEL (Figure 3)

A. Stop the machine and follow local safety procedures
B. Adjust one band wheel at a time starting with the infeed band wheel
C. Check to ensure both bolts are snug but not tight.
D. Loosen the inner bolt B 1/4 turn or less on the band wheel you are adjusting
E. Tighten the outer bolt A ¼ turn or less on the band wheel you are adjusting
F. Start the drive and check how the sealing band is riding on the band wheel - stop the drive and re-center the band on the wheel if dragging occurs
G. Repeat as necessary
H. If the band ride cannot be centered, check the compression wheel and heat bar gaps, as dragging on these components can interfere with band centering, especially on the discharge band wheel.
I. Once finished - Equally tighten both A & B to 7 foot pounds ensuring this adjustment does not alter the band ride.
J. Verify that the band wheel does not rock, rotates smoothly and bands do not ride up or down

FIGURE 4

CORRECTING BANDS THAT RIDE DOWN ON THE BAND WHEEL (Figure 4)

A. Stop the machine and follow local safety procedures
B. Adjust one band wheel at a time starting with the infeed band wheel
C. Check to ensure both A & B bolts are snug but not tight.
D. Loosen the inner bolt A 1/4 turn or less on the band wheel you are adjusting
E. Tighten the outer bolt B 1/4 turn on the band wheel you are adjusting
F. Start the drive and check how the sealing band is riding on the band wheel - stop the drive and re-center the band on the wheel if dragging occurs
G. Repeat as necessary
H. If the band ride cannot be centered, check the compression wheel and heat bar gaps, as dragging on these components can interfere with band centering, especially on the discharge band wheel.
I. Once finished - Equally tighten both A & B to 7 foot pounds ensuring this adjustment does not alter the band ride.
J. Verify there are locknuts present on the band wheel
K. Verify that the band wheel does not rock, rotates smoothly and bands do not ride up or down

6) COMPRESSION WHEELS

The compression wheels ensure the melted plastic layers weld together into a single bonded material.

The gap of the compression wheels should be set slightly smaller than the total gap of the bag material at the smallest area of the bag.

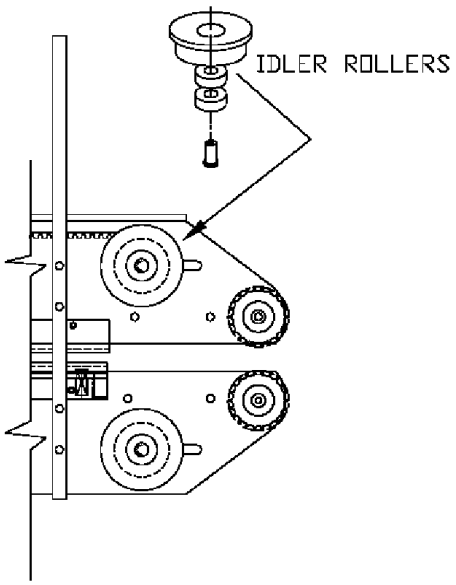
Depending on the material, the thickness of the bag and the number of heat stages, the amount of compression needed will vary.
For bags without gussets It is a good idea to start with .002 compression on the bag
For bags with gussets, the compression should be set to the thinnest layer of the bag -.002 as a starting point.

Adjustments should be made with the bands in place.
Prior to testing a bag, the temperature setting should be verified to ensure the bags are hot enough to weld together. Both temperature and compression are critical to providing a good seal.

- **Example Adjustment:** 5 mil gusseted bag
  - Bag thickness (.005 x 2) = .010
  - Thickness at gusseted area = .020
  - Heat Bar Gap Setting = (.016-.020)
  - Compression wheel Gap setting = .008
  - If the gap setting is too small, it may cause the bags to drag or stretch, correct by increasing the gap setting at .001 increments.
  - If a consistent seal cannot be obtained, contact the factory with your bag specs and setpoint information.
  - bag testing is available at the factory.

CARRIER BELTS

1. Two continuous 1⁄2” 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. Belt tension adjustment
    - 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 base plates.
    - Loosen the button head cap screw holding the idler roller in place and either slide towards the in-feed to increase tension on belts or slide towards the discharge section to decrease tension



5. Removing belt to be changed
    a. Follow local safety procedures for shut down
    b. Loosen the idler rollers shown in the picture above
    c. Remove the front and rear stainless guards.
    d. Remove the screws holding the rear guard to the deck plates
    e. Depending on model, the drive gears at the discharge end may need to be loosened to allow belt removal

DRIVE SYSTEM

Motors may vary per machine - refer to the operations manual of the model that is installed on your equipment.

All motors selected are permanently lubricated maintenance free motors - Harsh environments may require additional considerations.

The drive belt is tightened by loosening the four bolts of the gearbox and moving the whole drive assembly along the slotted mounts.

The gearbox is not user serviceable through Elevation Packaging. If repairs are needed, a new gearbox is available through Elevation.

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.

Heat Bars

The heat bar should be inspected at the beginning and end of every shift for signs of pitting or melted bags. Product damaged heat bar surfaces that are not smooth will shorten the life of the sealing bands.

Sealing Bands

This is a consumable item. Multiple sets of spares should be on hand at all times.

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.

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.

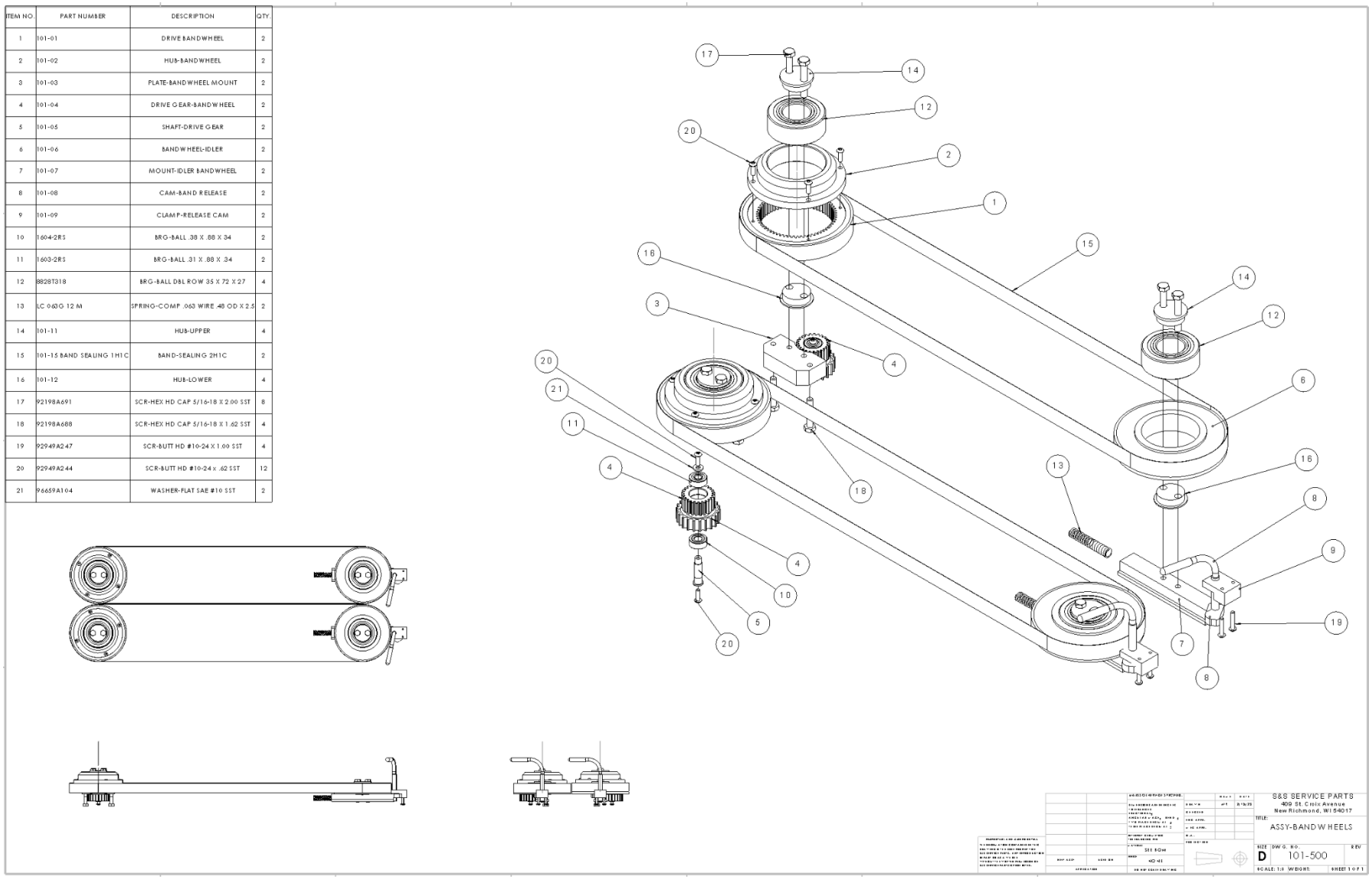
ASSEMBLY DRAWINGS

Please provide a serial number with all parts requests

- 101-00 BANDWHEEL ASSEMBLY
- 102-00 CARRIER BELTS
- 103-00 SEAL ASSEMBLY
- 104-00 FRAME ASSEMBLY
- 105-00 - DRIVE ASSEMBLY
- 107-730 - TYPICAL GUARD PACKAGE

101-500 BANDWHEEL ASSEMBLY (1001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	101-01	DRIVE BANDWHEEL	2
2	101-02	HUB-BANDWHEEL	2
3	101-03	PLATE-BANDWHEEL MOUNT	2
4	101-04	DRIVE GEAR-BANDWHEEL	2
5	101-05	SHAFT-DRIVE GEAR	2
6	101-06	BANDWHEEL-IDLER	2
7	101-07	MOUNT-IDLER BANDWHEEL	2
8	101-08	CAM-BAND RELEASE	2
9	101-09	CLAMP-RELEASE CAM	2
10	1604-2RS	BRG-BALL .38 X .88 X .34	2
11	1603-2RS	BRG-BALL .31 X .88 X .34	2
12	8828T318	BRG-BALL D&L ROW 35 X 72 X 27	4
13	LC 063G 12 M	SPRING-COMP .063 WIRE .48 OD X 2.5	2
14	101-11	HUB-UPPER	4
15	101-15 BAND SEALING 1H1C	BAND-SEALING 2H1C	2
16	101-12	HUB-LOWER	4
17	92198A691	SCR-HEX HD CAP 5/16-18 X 2.00 SST	8
18	92198A688	SCR-HEX HD CAP 5/16-18 X 1.62 SST	4
19	92949A247	SCR-BUTT HD #10-24 X 1.00 SST	4
20	92949A244	SCR-BUTT HD #10-24 x .62 SST	12
21	98659A104	WASHER-FLAT SAE #10 SST	2

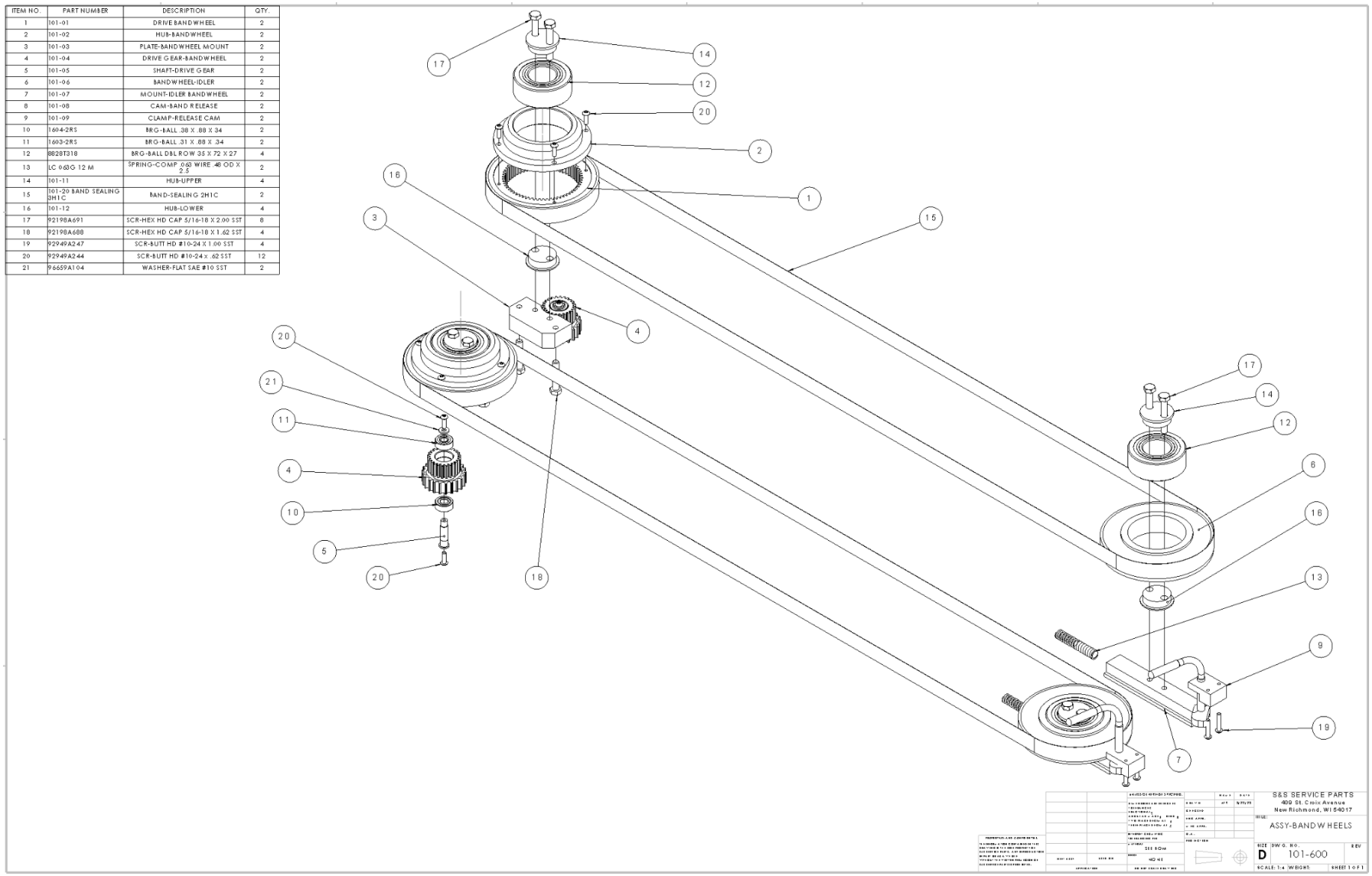


101-00 BANDWHEEL ASSEMBLY (2001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	101-01	DRIVE BANDWHEEL	2
2	101-02	HUB-BANDWHEEL	2
3	101-03	PLATE-BANDWHEEL MOUNT	2
4	101-04	DRIVE GEAR-BANDWHEEL	2
5	101-05	SHAFT-DRIVE GEAR	2
6	101-06	BANDWHEEL-IDLER	2

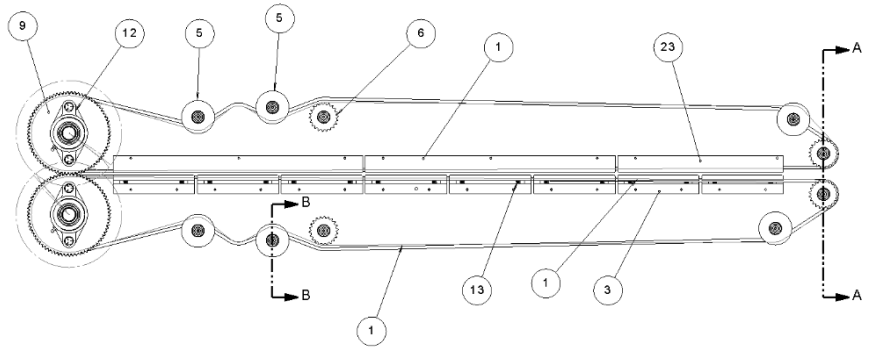
101-600 BANDWHEEL ASSEMBLY (3001)

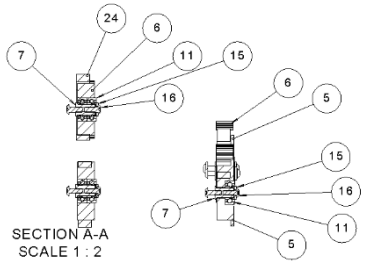
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	101-01	DRIVE BANDWHEEL	2
2	101-02	HUB-BANDWHEEL	2
3	101-03	PLATE-BANDWHEEL MOUNT	2
4	101-04	DRIVE GEAR-BANDWHEEL	2
5	101-05	SHAFT-DRIVE GEAR	2
6	101-06	BANDWHEEL-IDLER	2
7	101-07	MOUNT-IDLER BANDWHEEL	2
8	101-08	CAM-BAND RELEASE	2
9	101-09	CLAMP-RELEASE CAM	2
10	1604-2RS	BRG-BALL .38 X .88 X .34	2
11	1603-2RS	BRG-BALL .31 X .88 X .34	2
12	88287318	BRG-BALL D&L ROW 35 X 72 X 27	4
13	LC 063G 12 M	SPRING-COMP .063 WIRE .48 OD X 2.5	2
14	101-11	HUB-UPPER	4
15	101-20 BAND SEALING 2H1C	BAND-SEALING 2H1C	2
16	101-12	HUB-LOWER	4
17	92198A691	SCR-HEX HD CAP 5/16-18 X 2.00 SST	8
18	92198A688	SCR-HEX HD CAP 5/16-18 X 1.62 SST	4
19	92949A247	SCR-BUTT HD #10-24 X 1.00 SST	4
20	92949A244	SCR-BUTT HD #10-24 X .62 SST	12
21	96659A104	WASHER-FLAT SAE #10 SST	2



102-500 CARRIER BELT ASSEMBLY (1001)

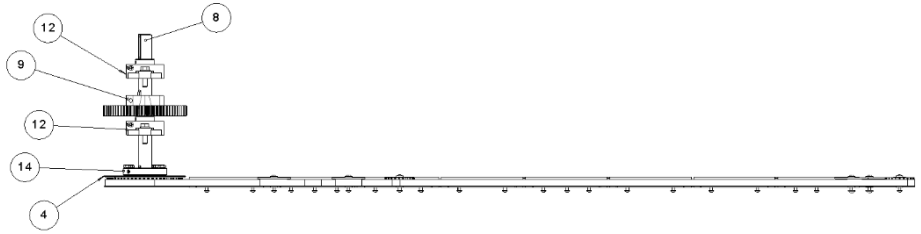
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	102-01	PRESSURE BAR-STATIONARY	2
2	102-02	PRESSURE BAR-SPRING	8
3	102-03	HOLDER-SPRING BAR	7
4	102-04	PULLEY-DRIVER	2
5	102-05	PULLEY-SMOOTH IDLER	6
6	102-06	PULLEY-22T IDLER	4
7	102-07	SHAFT-IDLER PULLEY	10
8	102-08	SHAFT-MAIN DRIVE	2
9	102-09	GEAR-MAIN DRIVE	2
10	102-10	HOLDER-SPRING BAR @ COMP	1
11	1604-2RS	BRG-BALL .38 X .88 X 24	14
12	SFF-16	BRG-2 BOLT FLANGE 1.00	4
13	LC 042E 15 M	SPRING-COMP .042 WIRE .36 OD X 1.75	16
14	SDS-1.00	BUSHING-SDS 1.00	2
15	96659A104	WASHER-FLAT SAE #10 SST	12
16	92949A242	SCR-BUTT HD #10-24 x .50 SST	20
17	92949A244	SCR-BUTT HD #10-24 x .62 SST	23
18	92147A031	WASHER-LOCK 3/8 SST	8
19	92868A626	SCR-HEX HD CAP 3/8-16 x 1.25 SST	8
20	98870A240	KEY-.25 SQ X 1.75	2
21	98870A230	KEY-.25 SQ X 1.50	1
22	98870A215	KEY-.25 SQ X 1.50	2
23	102-501 SHORT PRESSURE BAR STATIONARY	PRESSURE BAR-STATIONARY	1
24	2200-8M-12 TIMING BELT	DR RL BELT-TIMING 3600M12W	2

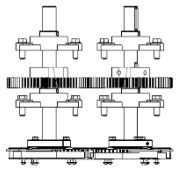




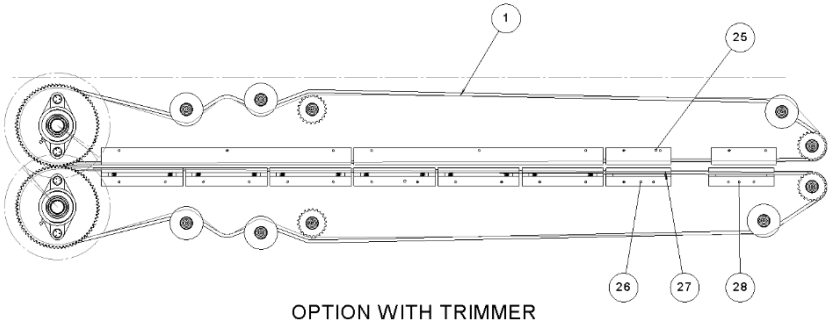
SECTION A-A
SCALE 1 : 2

SECTION B-B
SCALE 1 : 2





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
25	102-502 SHORT TRIM PRESSURE BAR STATIONARY	PRESSURE BAR-STATIONARY	2
26	102-503 SHORT HOLDER SPRING BAR	HOLDER-SPRING BAR	1
27	102-504 SHORT PRESSURE BAR SPRING	PRESSURE BAR-SPRING	2
28	102-505 SHORT HOLDER SPRING BAR	HOLDER-SPRING BAR	1



OPTION WITH TRIMMER

S&S SERVICE PARTS
409 St. Croix Avenue
New Richmond, WI 54017

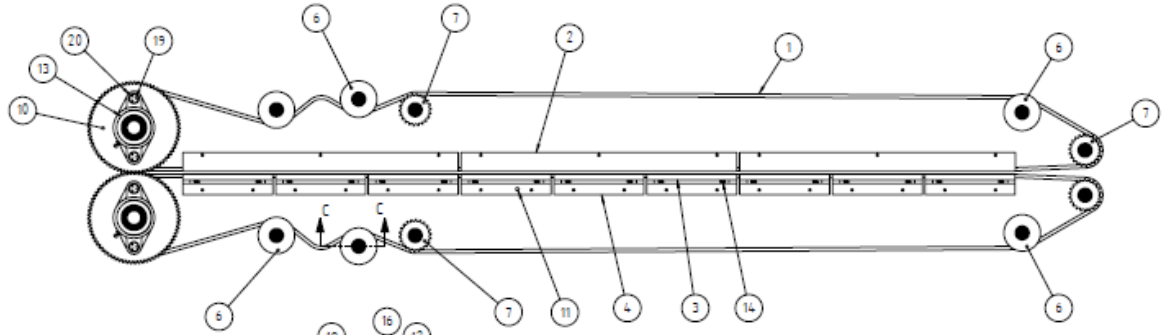
TITLE
ASSY-CARRIER BELTS

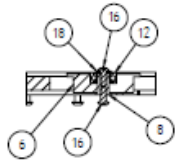
SIZE D DWG. NO. 102-500 REV

SCALE: 1:5 WEIGHT SHEET 1 OF 1

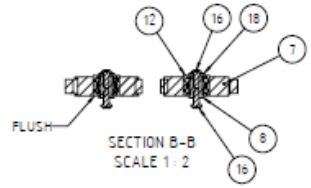
102-00 CARRIER BELT ASSEMBLY(2001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900-032	DR RL BELT-TIMING 36008M12W	2
2	102-01	PRESSURE BAR-STATIONARY	3
3	102-02	PRESSURE BAR-SPRING	9
4	102-03	HOLDER-SPRING BAR	8
5	102-04	PULLEY-DRIVER	2
6	102-05	PULLEY-SMOOTH IDLER	6
7	102-06	PULLEY-22T IDLER	4
8	102-07	SHAFT-IDLER PULLEY	10
9	102-08	SHAFT-MAIN DRIVE	2
10	102-09	GEAR-MAIN DRIVE	2
11	102-10	HOLDER-SPRING BAR @ COMP	1
12	900-017	BRG-BALL .38 X .88 X 34	14
13	900-192	BRG-2 BOLT FLANGE 1.00	4
14	900-162	SPRING-COMP .042 WIRE .36 OD X 1.75	18
15	900-191	BUSHING-SDS 1.00	2
16	900-120	SCR-BUTT HD #10-24 x .50 SST	20
17	900-121	SCR-BUTT HD #10-24 x .62 SST	27
18	900-139	WASHER-FLAT SAE #10 SST	12
19	900-114	SCR-HEX HD CAP 3/8-16 x 1.25 SST	8
20	900-085	WASHER-LOCK 3/8 SST	8
21	900-144	KEY-.25 SQ X 1.75	2
22	900-143	KEY-.25 SQ X 1.50	1
23	900-142	KEY-.25 SQ X 1.50	2



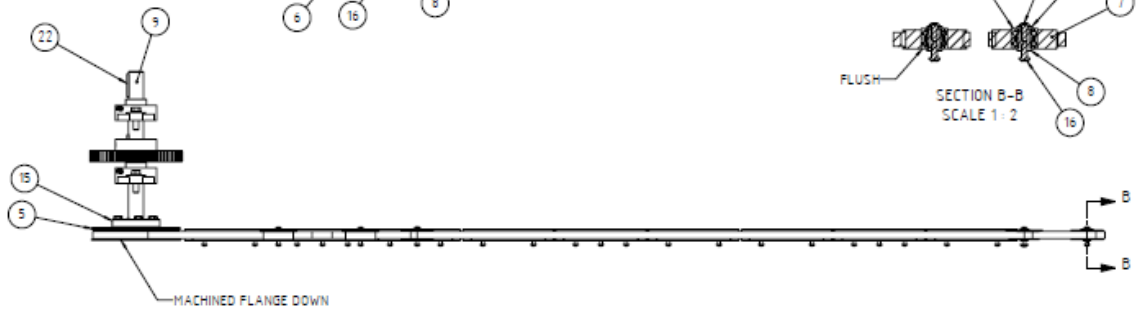


SECTION C-C
SCALE 1 : 2

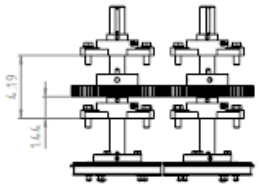


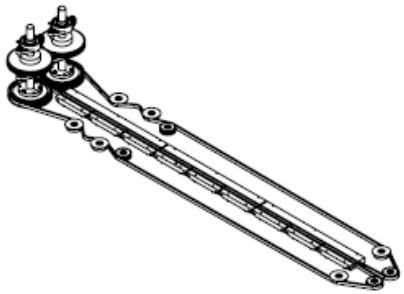
PLUSH

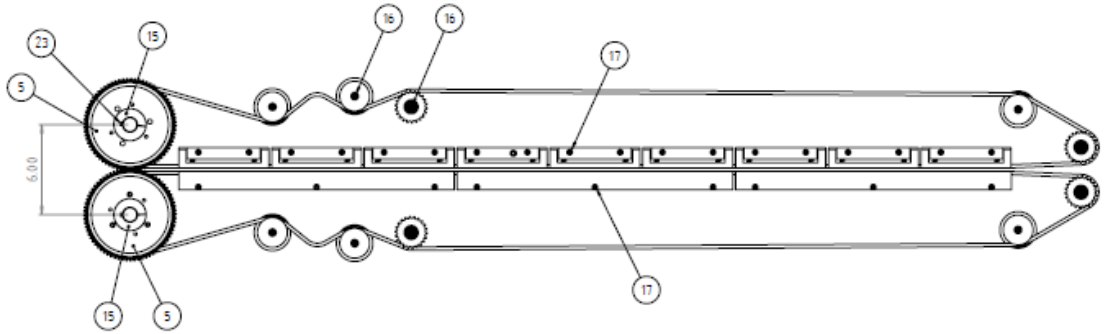
SECTION B-B
SCALE 1 : 2



MACHINED FLANGE DOWN







8	7	6	5	4	3	2	1

S&S SERVICE PARTS
836 HWY 66008
ASHLAND, NE

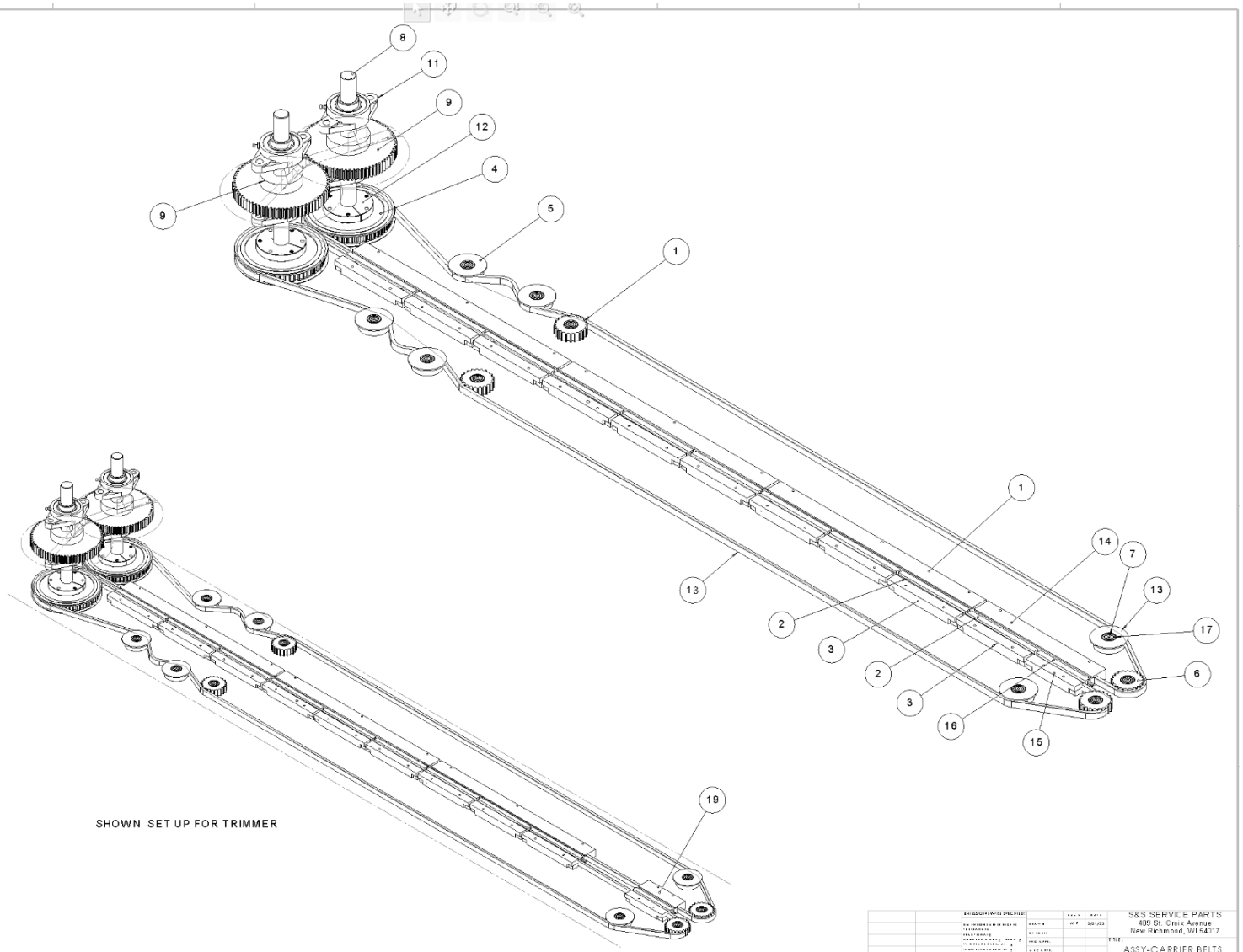
TITLE: ASSY-CARRIER BELTS

SIZE D | DWG. NO. 102-00 | REV

SCALE: 1:4 | WEIGHT: | SHEET 1 OF 1

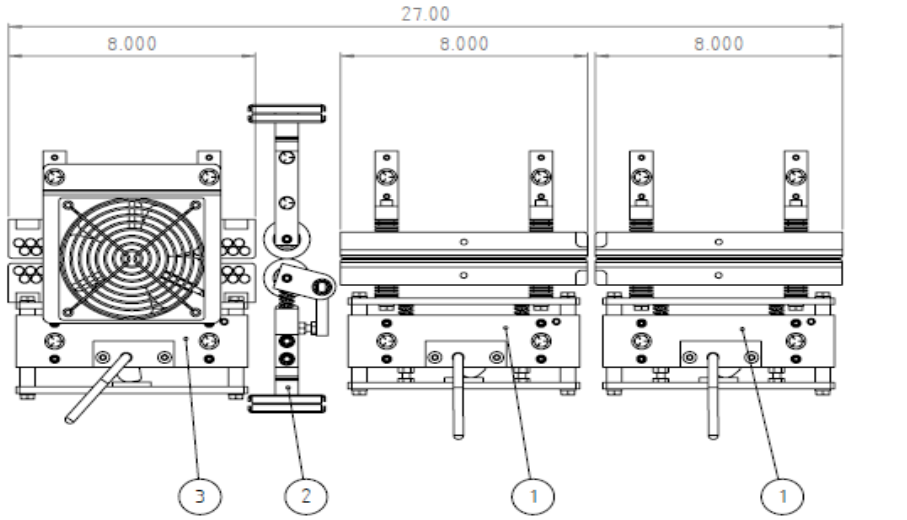
102-600 CARRIER BELTS (3001)

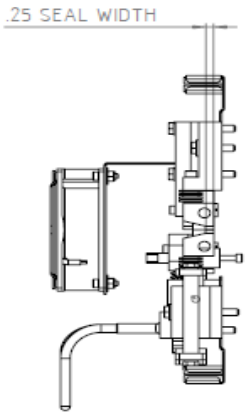
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	102-01	PRESSURE BAR-STATIONARY	3
2	102-02	PRESSURE BAR-SPRING	10
3	102-03	HOLDER-SPRING BAR	9
4	102-04	PULLEY-DRIVER	2
5	102-05	PULLEY-SMOOTH IDLER	6
6	102-06	PULLEY-22T IDLER	4
7	102-07	SHAFT-IDLER PULLEY	10
8	102-08	SHAFT-MAIN DRIVE	2
9	102-09	GEAR-MAIN DRIVE	2
10	102-10	HOLDER-SPRING BAR @ COMP	1
11	SFT-16	BRG-2 BOLT FLANGE 1.00	4
12	SDS-1.00	BUSHING-SDS 1.00	2
13	3900-8M-12 BELT	DR RL BELT-TIMING 3600BM12W	2
14	102-601 SHORT PRESSURE BAR STATIONARY	PRESSURE BAR-STATIONARY	1
15	102-602 HOLDER SPRING BAR	HOLDER-SPRING BAR	1
16	102-603 PRESSURE BAR SPRING	PRESSURE BAR-SPRING	1
17	1604-2RS	BRG-BALL .38 X .88 X 34	10
18	LC 042E 15 M	SPRING-COMP .042 WIRE .36 OD X 1.75	22
19	102-604	PRESSURE BAR STATIONARY W/TRIMMER	1

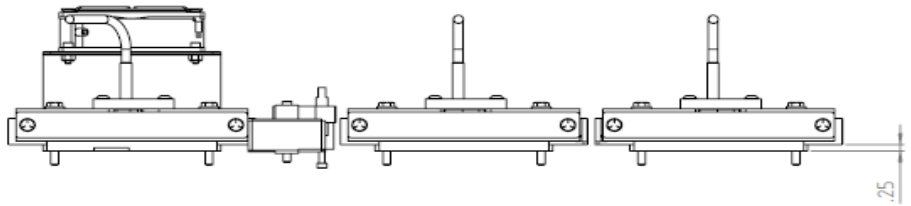


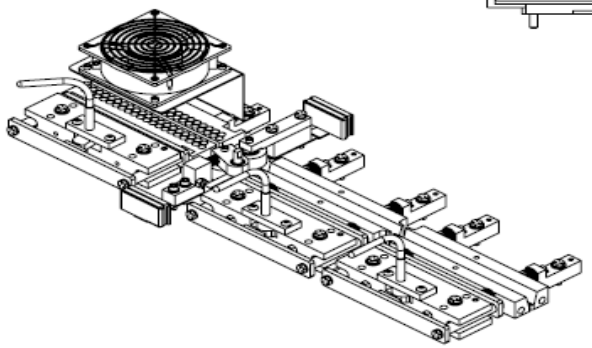
103-00 SEAL ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	103-100	ASSY-HEAT BAR-.25 FACE	2
2	103-101	ASSY-COMPRESSION ROLLER	1
3	103-102	ASSY-COOL BAR	1









		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/64 ANGULAR: ±.5° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.005	DRAWN	MJG	9/23/21
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL SEE BOM	COMMENTS:		
NEXT ASSY	USED ON	FINISH NONE			
APPLICATION		DO NOT SCALE DRAWING			

PROPRIETARY AND CONFIDENTIAL
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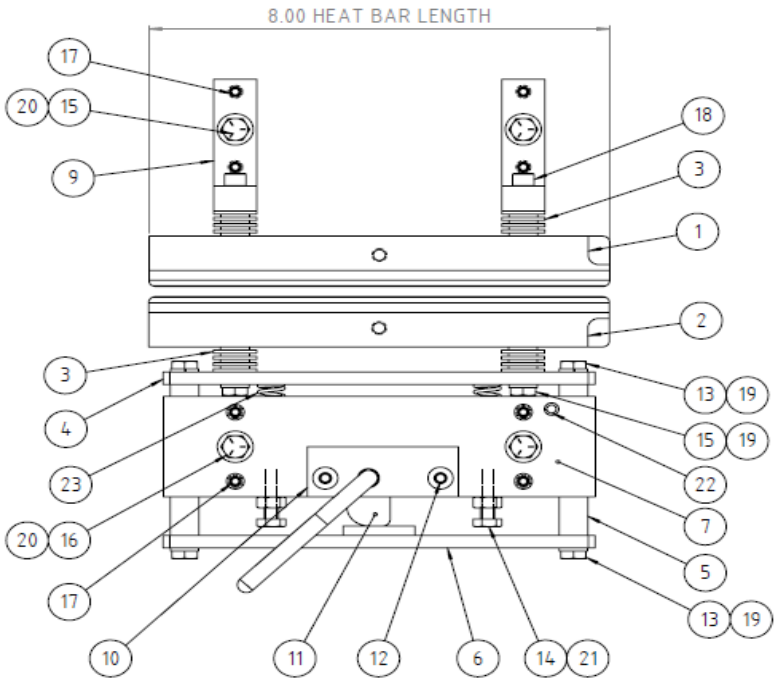
S&S SERVICE PARTS
836 HWY 68003
ASHLAND, NE

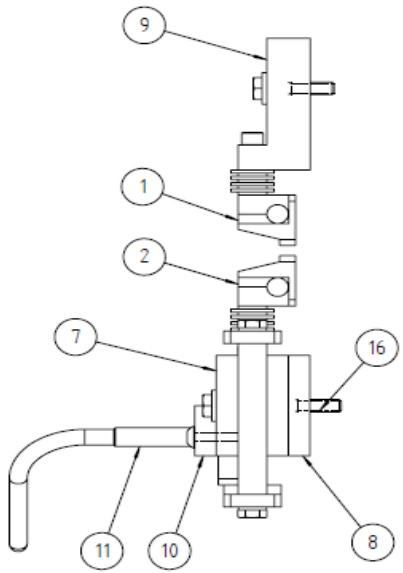
TITLE: ASSY-SEAL SECTION 2H1C

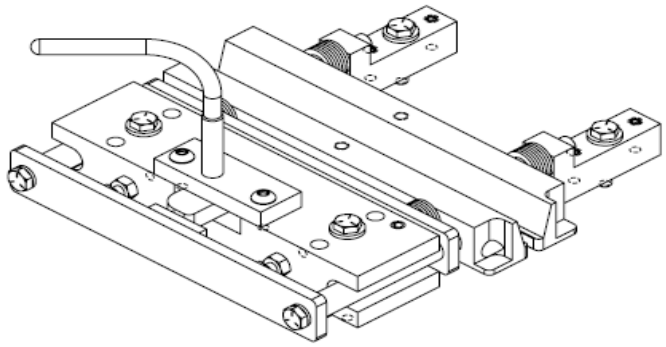
SIZE	DWG. NO.	REV
C	103-00	

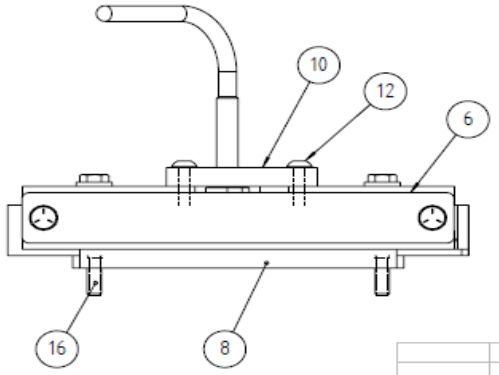
SCALE: 1:3 WEIGHT: SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	103-104	HEAT BAR-1/4" FACE (L)	1
2	103-01	HEAT BAR-1/4" FACE (R)	1
3	103-02	SPACER-HEAT BAR	4
4	103-20	CROSS BAR	1
5	103-21	SLIDE SHAFT	2
6	103-22	WELDMENT-STOP BAR	1
7	103-23	SUPPORT BLOCK	1
8	103-25	SPACER	1
9	103-26	BRKT-STATIONARY BAR	2
10	103-39	HOLDER-RELEASE CAM	1
11	101-08	CAM-BAND RELEASE	1
12	92949A540	SCR-BUTTON 1/4-20 X .75 SST	2
13	92865A540	SCR-HEX HD CAP 1/4-20 X .75	4
14	92240A542	SCR-HEX HD CAP 1/4-20 X 1.00 SST	2
15	91247A544	SCR-HEX HD CAP 1/4-20 X 1.25	4
16	92198A551	SCR-HEX HD CAP 1/4-20 X 2.25 SST	2
17	92311A540	SCR-SET 1/4-20 X .75 SST	8
18	92196A546	SCR-SOC HD CAP 1/4-20 X 1.50SST	2
19	92147A029	WASHER-LOCK 1/4 SST	6
20	91950A029	WASHER-FLAT SAE 1/4 SST	4
21	91845A029	NUT-HEX FULL 1/4-20 SST	2
22	92373A373	PIN-SPRING Ø.25 X 1.25	1
23	LC 063G 12 M	SPRING-COMP .063 WIRE .48 OD x 2.5	2









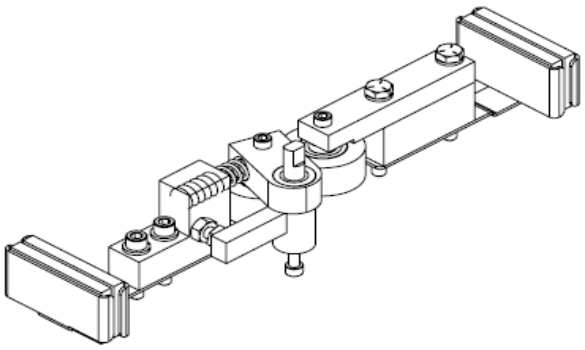
S&S SERVICE PARTS
409 St. Croix Avenue
New Richmond, WI 54017

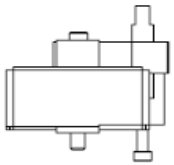
TITLE: ASSY-HEAT BAR-.25 FACE

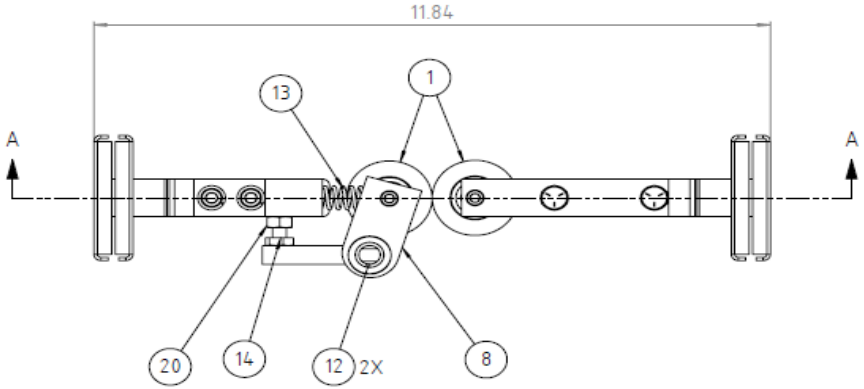
SIZE C | DWG. NO. 103-100 | REV

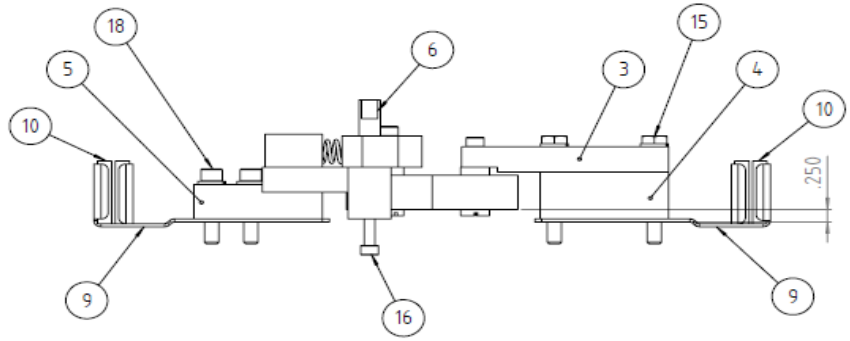
SCALE: 5:8 | WEIGHT: | SHEET 1 OF 1

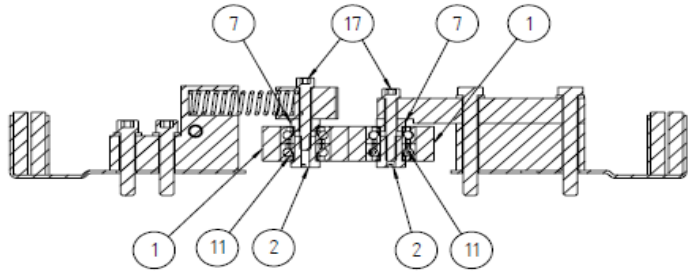
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	103-27	COMPRESSION ROLLER	2
2	103-28	SHAFT-COMP ROLLER	2
3	103-29	BRKT-STATIONARY COMP ROLLER	1
4	103-30	SPACER	1
5	103-31	SPRING POST	1
6	103-32	PIVOT POST-COMP ROLLER	1
7	103-33	SLEEVE-COMP ROLLER	2
8	103-34	WELDMENT-PIVOT ARM	1
9	103-106	HOLDER-BAND WIPER	2
10	103-107	FELT PAD F5	4
11	900-017	Bearing	4
12	900-223	Brg-sleeve	2
13	900-165	SPRING-COMP .063 WIRE .48 OD x 2.5	1
14	900-101	Screw	1
15	900-095	Screw	2
16	900-088	Screw	1
17	900-089	SCR-SOC HD CAP #10-24 X 1.25 SST	2
18	900-092	Screw	2
19	900-084	WASHER-LOCK 1/4 SST	4
20	900-084	Washer - Lock	1
21	102-10	HOLDER-SPRING BAR @ COMP	1











SECTION A-A

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/64 ANGULAR: ±3° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.005	DRAWN	MJG	9/16/21
			CHECKED		
			ENG APPR.		
			MFG APPR.		
			Q.A.		
			COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL SEE BOM			
NEXT ASSY	USED ON	FINISH NONE			
APPLICATION		DO NOT SCALE DRAWING			

S&S SERVICE PARTS
409 St. Croix Avenue
New Richmond, WI 54017

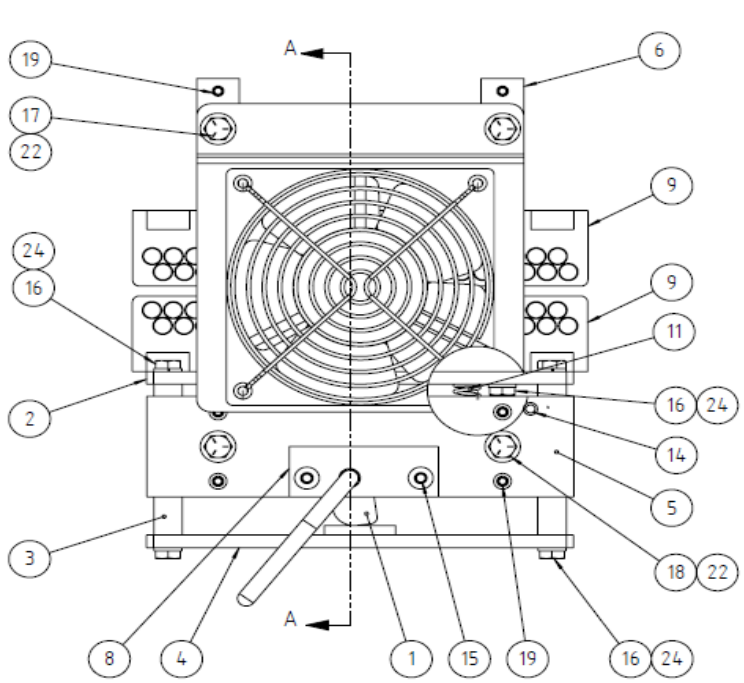
TITLE: ASSY-COMPRESSION ROLLER

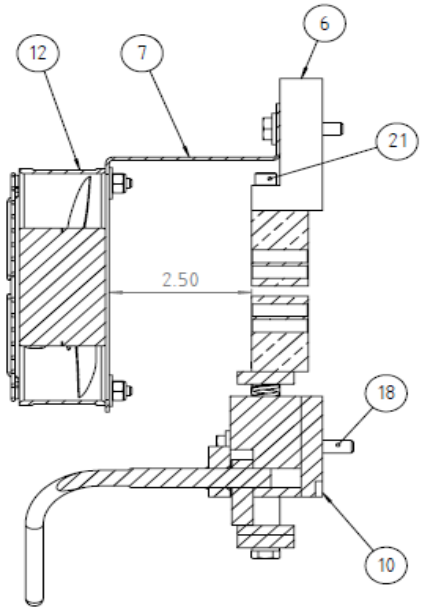
SIZE	DWG. NO.	REV
C	103-101	

SCALE: 5/8 WEIGHT: SHEET 1 OF 1

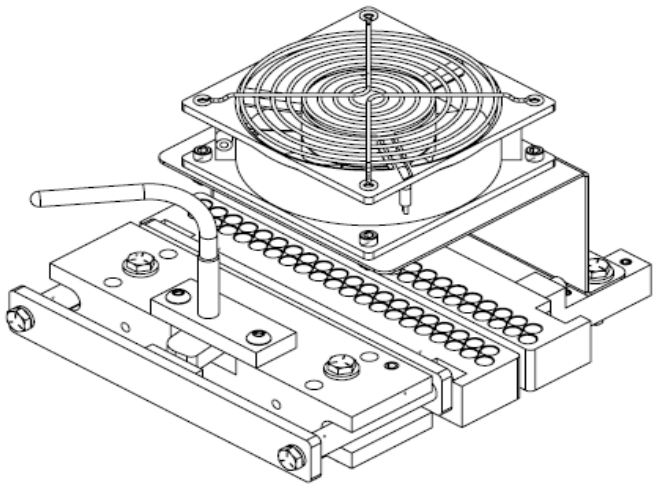
BOM Table

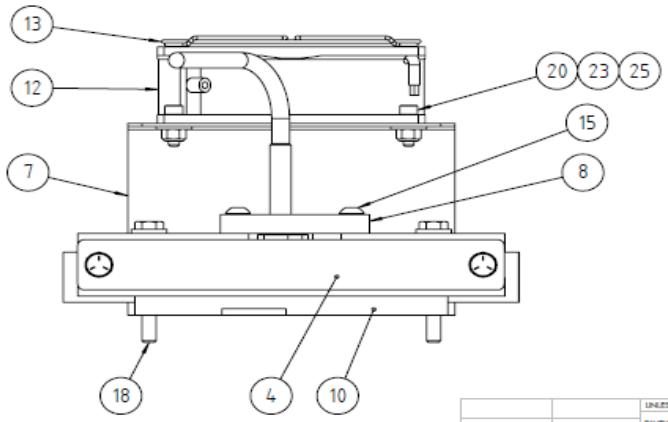
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	101-08	CAM-BAND RELEASE	1
2	103-20	CROSS BAR	1
3	103-21	SLIDE SHAFT	2
4	103-22	WELDMENT-STOP BAR	1
5	103-23	SUPPORT BLOCK	1
6	103-26	BRKT-STATIONARY BAR	2
7	103-35	AIR CHUTE	1
8	103-39	HOLDER-RELEASE CAM	1
9	103-103	AIR COOL BAR-DRILLED	2
10	103-105	SPACER-COOL BAR	1
11	LC 063G 12 M	SPRING-COMP .063 WIRE .48 OD x 2.5	2
12	900-136	FAN-COOLING	1
13	900-022	FAN GUARD	1
14	92373A373	PIN-SPRING Ø.25 X 1.25	1
15	92949A540	SCR-BUTTON 1/4-20 X .75 SST	2
16	92865A540	SCR-HEX HD CAP 1/4-20 X .75	6
17	91247A544	SCR-HEX HD CAP 1/4-20 X 1.25	2
18	92198A551	SCR-HEX HD CAP 1/4-20 X 2.25 SST	2
19	92311A540	SCR-SET 1/4-20 X .75 SST	8
20	92196A244	SCR-SOC HD CAP #10-24 X .62 SST	4
21	92196A541	SCR-SOC HD CAP 1/4-20 X .88 SST	2
22	91950A029	WASHER-FLAT SAE 1/4 SST	4
23	92141A029	WASHER-FLAT SST 1/4	4
24	92147A029	WASHER-LOCK 1/4 SST	6
25	91831A011	NUT-HEX NYLON LOCKING #10-24 SST	4





SECTION A-A

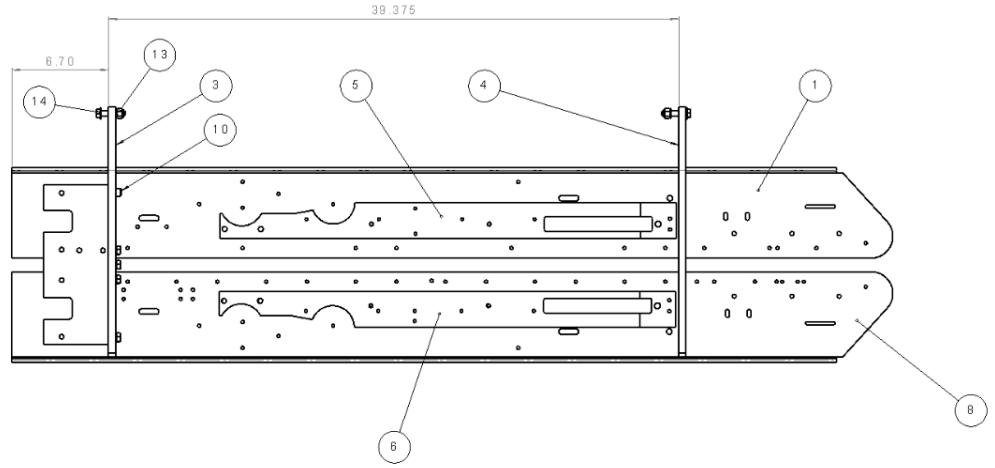


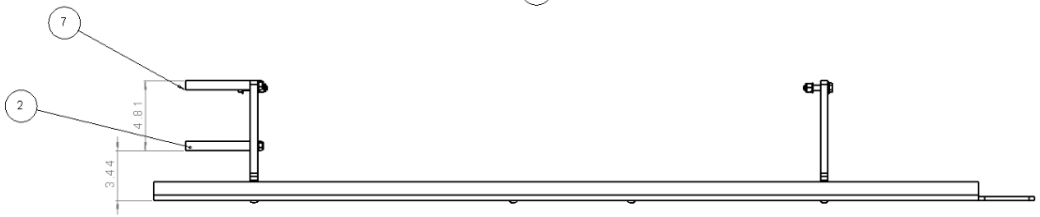


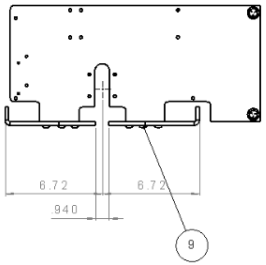
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	S&S SERVICE PARTS 409 St. Croix Avenue New Richmond, WI 54017
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/64 ANGULAR: ±.5° TWO PLACE DECIMAL ±.03 THREE PLACE DECIMAL ±.005	DRAWN	MJG	9/16/21	
			CHECKED			TITLE: ASSY-COOL BAR
			ENG APPR.			
			MFG APPR.			
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			
			COMMENTS:			
		MATERIAL SEE BOM				SIZE C DWG. NO. 103-102 REV
NEXT ASSY	USED ON	FINISH NONE				SCALE: 5/8 WEIGHT: SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING				

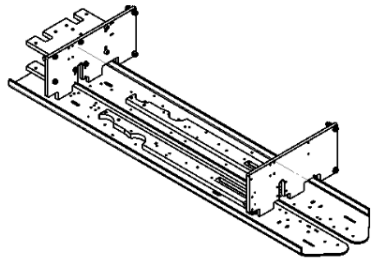
104-500 FRAME ASSEMBLY (1001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	104-01A	REAR DECK PLATE-2 HEAT	1
2	104-03	BEARING PLATE-BOTTOM	2
3	104-04	BRIDGE-REAR	1
4	104-05	BRIDGE-FRONT	1
5	104-06A	Fixed Side Spine	1
6	104-07A	Moving Side Spine	1
7	104-09	Bearing Plate Top	1
8	104-02A	FRONT DECK PLATE-2 HEAT	1
9	92949A581	SCR-BUTT HD 5/16-18 X .75 SST	12
10	92196A626	SCR-SOC HD CAP 3/8-16 X 1.00 SST	2
11	90126A031	WASHER-FLAT SAE 3/8	4
12	92147A031	WASHER-LOCK 3/8 SST	9
13	91831A127	NUT-HEX LOCK NYLON 3/8-16	4
14	92865A626	SCR-HEX HD CAP 3/8-16 x 1.75 SST	4
15	92865A626	SCR-HEX HD CAP 3/8-16 x 1.25 SST	5









S&S SERVICE PARTS
409 St. Croix Avenue
New Richmond, WI 54017

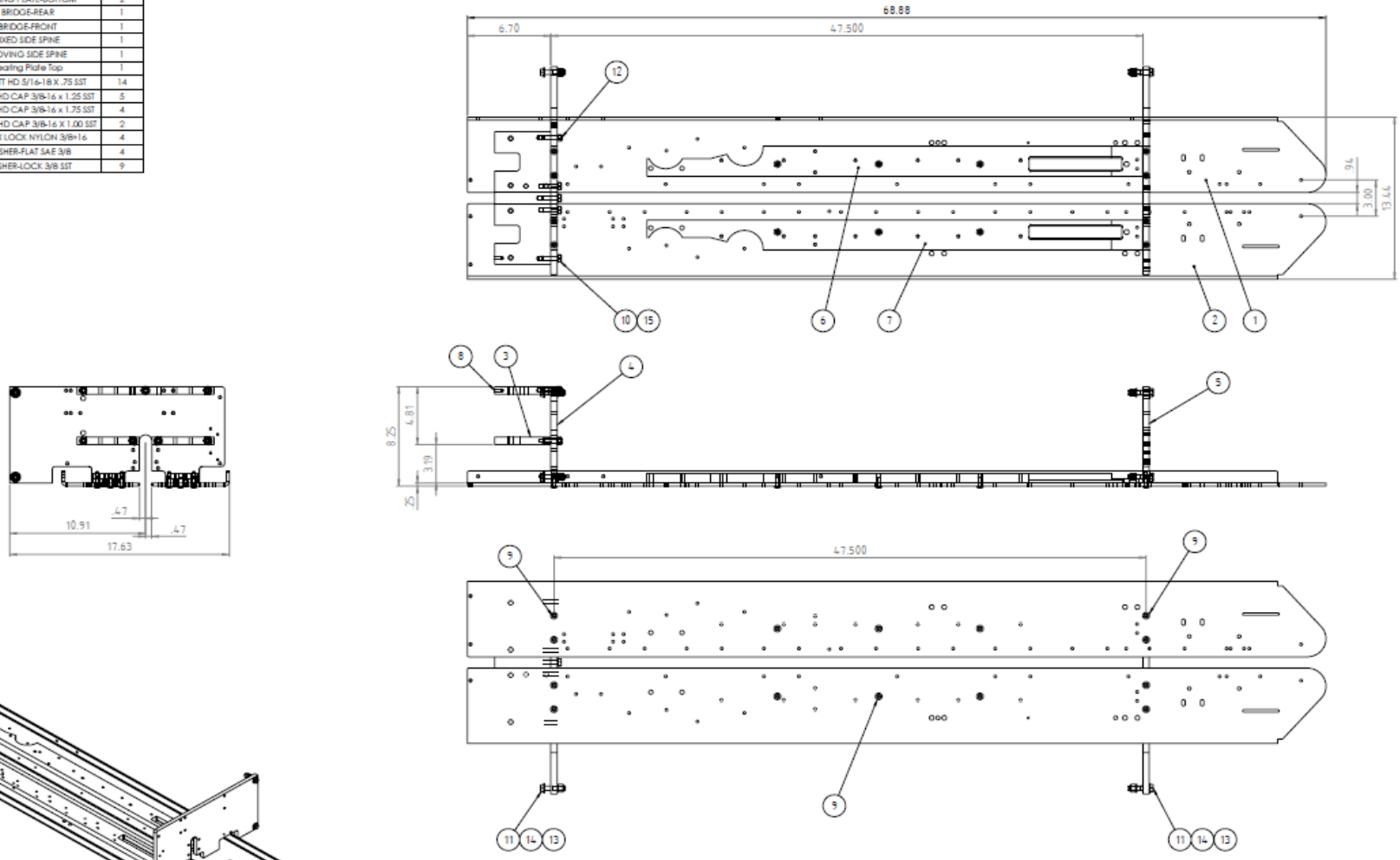
TITLE: ASSY-FRAME NBS 2001

SIZE D | DWG. NO. 104-500 | REV

SCALE: 1:8 | WEIGHT: | SHEET 1 OF 1

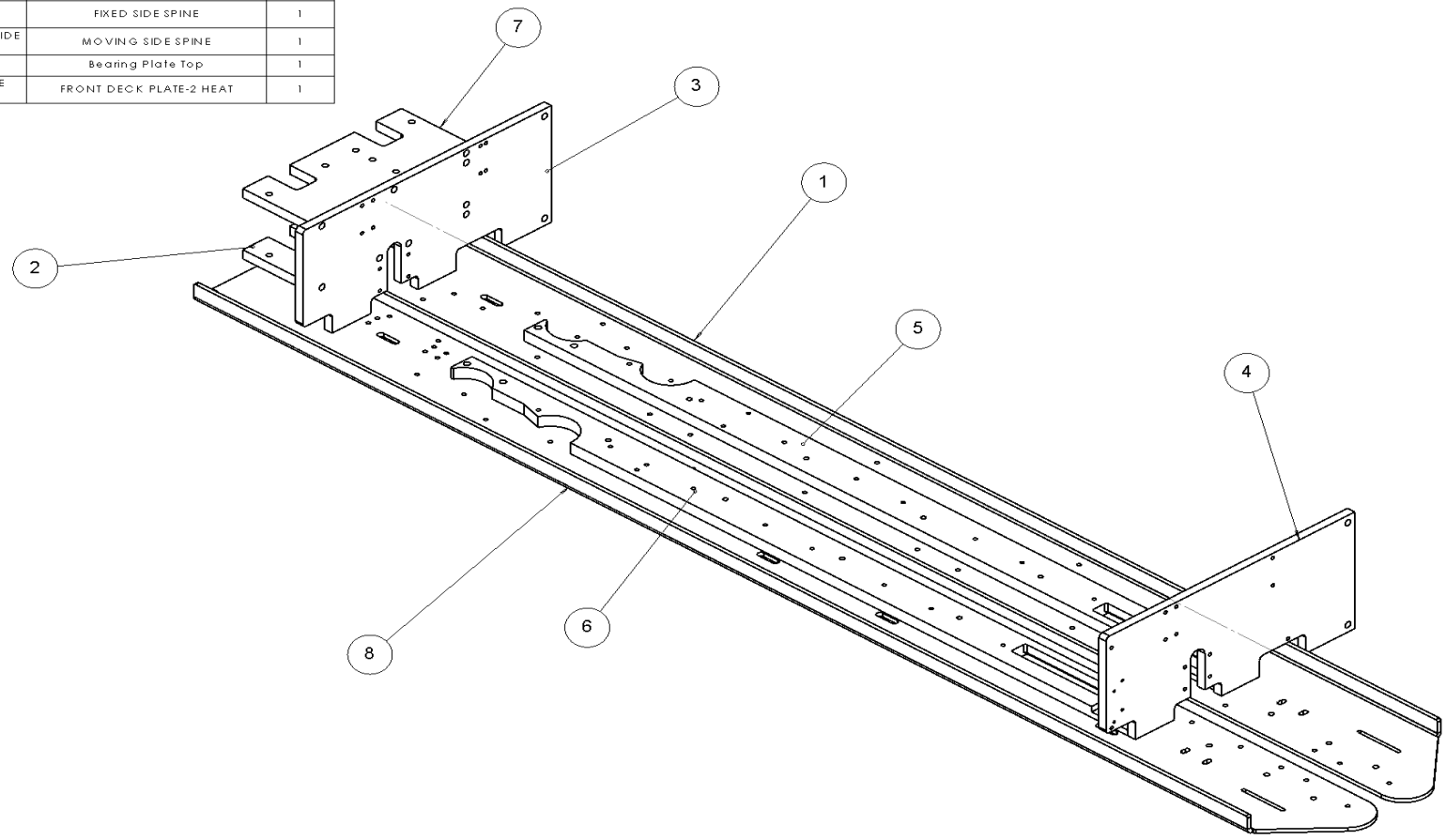
104-00 FRAME ASSEMBLY (2001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	104-01	DECK-REAR-2H1C-RH	1
2	104-02	FRONT DECK PLATE-2 HEAT	1
3	104-03	BEARING PLATE-BOTTOM	2
4	104-04	BRIDGE-REAR	1
5	104-05	BRIDGE-FRONT	1
6	104-06	FIXED SIDE SPINE	1
7	104-07	MOVING SIDE SPINE	1
8	104-09	Bearing Plate Top	1
9	900-127	SCR-BUTT HD 5/16-18 X .75 SST	14
10	900-114	SCR-HEX HD CAP 3/8-16 x 1.25 SST	5
11	900-114	SCR-HEX HD CAP 3/8-16 x 1.75 SST	4
12	900-094	SCR-SOC HD CAP 3/8-16 X 1.00 SST	2
13	900-077	NUT-HEX LOCK NYLON 3/8-16	4
14	900-062	WASHER-FLAT SAE 3/8	4
15	900-085	WASHER-LOCK 3/8 SST	9



104-600 ASSEMBLY FRAME (3001)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	104-072 DECKPLATE REAR 3H1C RL	DECK-REAR-2H1C-RH	1
2	104-03	BEARING PLATE-BOTTOM	2
3	104-04	BRIDGE-REAR	1
4	104-05	BRIDGE-FRONT	1
5	104-306 FIXED SIDE SPINE	FIXED SIDE SPINE	1
6	104-307 MOVING SIDE SPINE	MOVING SIDE SPINE	1
7	104-09	Bearing Plate Top	1
8	104-071 DECKPLATE FRONT 3H1C RL	FRONT DECK PLATE-2 HEAT	1



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/64
ANGULAR: ± 0°
TWO PLACE DECIMAL ± .01
THREE PLACE DECIMAL ± .005
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
SEE BOM
FINISH
NONE
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	MR	3/20/23
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

S&S SERVICE PARTS
409 St. Croix Avenue
New Richmond, WI 54017

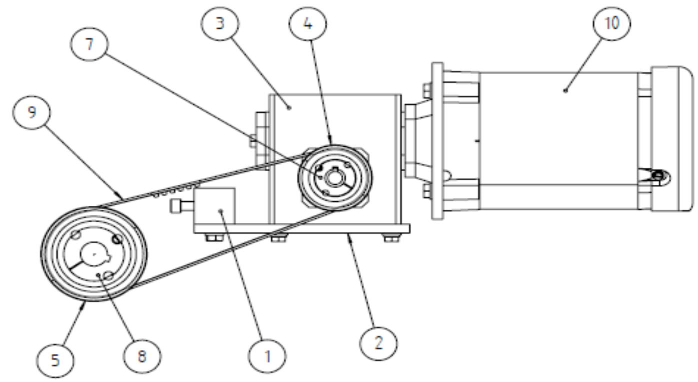
TITLE: ASSY FRAME NBS 3001

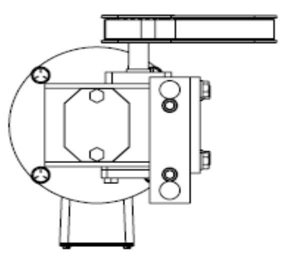
SIZE C | DWG. NO. 104-600 | REV

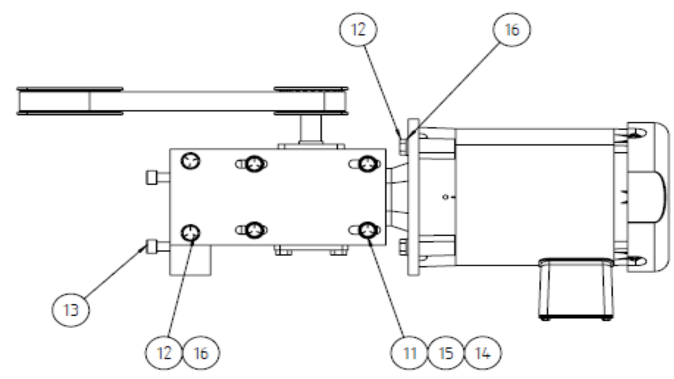
SCALE: 1:8 | WEIGHT: | SHEET 1 OF 1

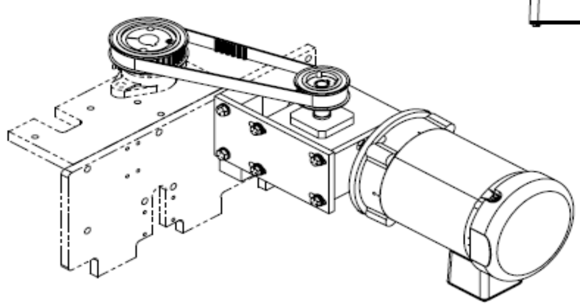
105-00 DRIVE ASSEMBLY

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	105-01	POST-DRIVE	1
2	105-02	PLATE-REDUCER MOUNTING	1
3	900-155	REDUCER-GEAR BMQ-815	1
4	900-185	PULLEY-TIMING 24T POWERGRIP	1
5	900-188	PULLEY-TIMING 36T POWERGRIP	1
6	900-052	BELT-TIMING 720-8MGT-20	1
7	900-198	BUSHING-TL1108 .750	1
8	900-200	BUSHING-TL1610-1.00	1
9	900-052	BELT-TIMING 720-8MGT-20	1
10	900-207	MOTOR-.50 208-230/460 1720 RPM	1
11	900-110	SCR-HEX HD CAP 5/16-18 X 1.00	4
12	900-113	SCR-HEX HD CAP 3/8-16 X 1.00	6
13	900-094	SCR-SOC HD CAP 3/8-16 X 1.00 SST	2
14	900-061	WASHER-FLAT SAE 5/16	4
15	900-083	WASHER-LOCK 5/16 SST	4
16	900-085	WASHER-LOCK 3/8 SST	6









PROPRIETARY AND CONFIDENTIAL
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NEXT ASSY | USED ON | APPLICATION

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/64
ANGULAR: ± .5°
TWO PLACE DECIMAL ± .01
THREE PLACE DECIMAL ± .005
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL SEE BOM
FINISH NONE
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	MJG	9/27/21
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		

COMMENTS:

S&S SERVICE PARTS
836 HW6 68003
ASHLAND, NE

TITLE: ASSY-MAIN DRIVE

SIZE C | DWG. NO. 105-00 | REV

SCALE: 1:3 | WEIGHT: | SHEET 1 OF 1

Electrical components

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

900-173	SELECTOR SWITCH 22MM MAINT 1NO 10A
900-174	DOOR SAFETY SWITCH
900-175	SPEED POTENTIOMETER
900-176	SPEED POTENTIOMETER KNOB
900-179	1 1/4 X 1 5/8 WIRE DUCT
900-180	WIRE DUCT CAP
900-211	THERMOCOUPLE
	PRIMARY TEMP CONTROLLER (FRONT) CONTACT ELEVATION PACKAGING WITH SERIAL NUMBER OF SEALER
	SECONDARY TEMP CONTROLLER (REAR) CONTACT ELEVATION PACKAGING WITH SERIAL NUMBER OF SEALER
900-260	Latching relay
900-261	22 mm Alarm Light
900-216	ENCLOSURE
900-217	ENCLOSURE SUBPANEL
900-218	CONTROL ENCLOSURE
900-219	CONTROL ENCLOSURE SUBPANEL
900-226	4 POLE TB345 SP
900-229	VFD - input 3ph ph 480V, .1 HP
900-230	VFD - input 1ph 240V, .1 HP
900-231	VFD - input 3ph 240V, .1 HP
900-240	LABEL - LIVE ELECTRICAL 1.25 x 3
900-242	EMERGENCY STOP DECAL
900-243	EMERGENCY STOP PUSHBUTTON MAINTAINED TWIST RELEASE NO DECAL
900-248	3KVA TRANSFORMER 480/208 WYE 3 PH (SEE SCHEMATIC WHERE APPLICABLE)
900-262	Heat Contactor
900-263	Reset Pushbutton Assy
900-167	SOLID STATE RELAY 208/230 VOLT
900-172	NO CONTACT BLOCK 2.2 MOUNTING BASE 10A