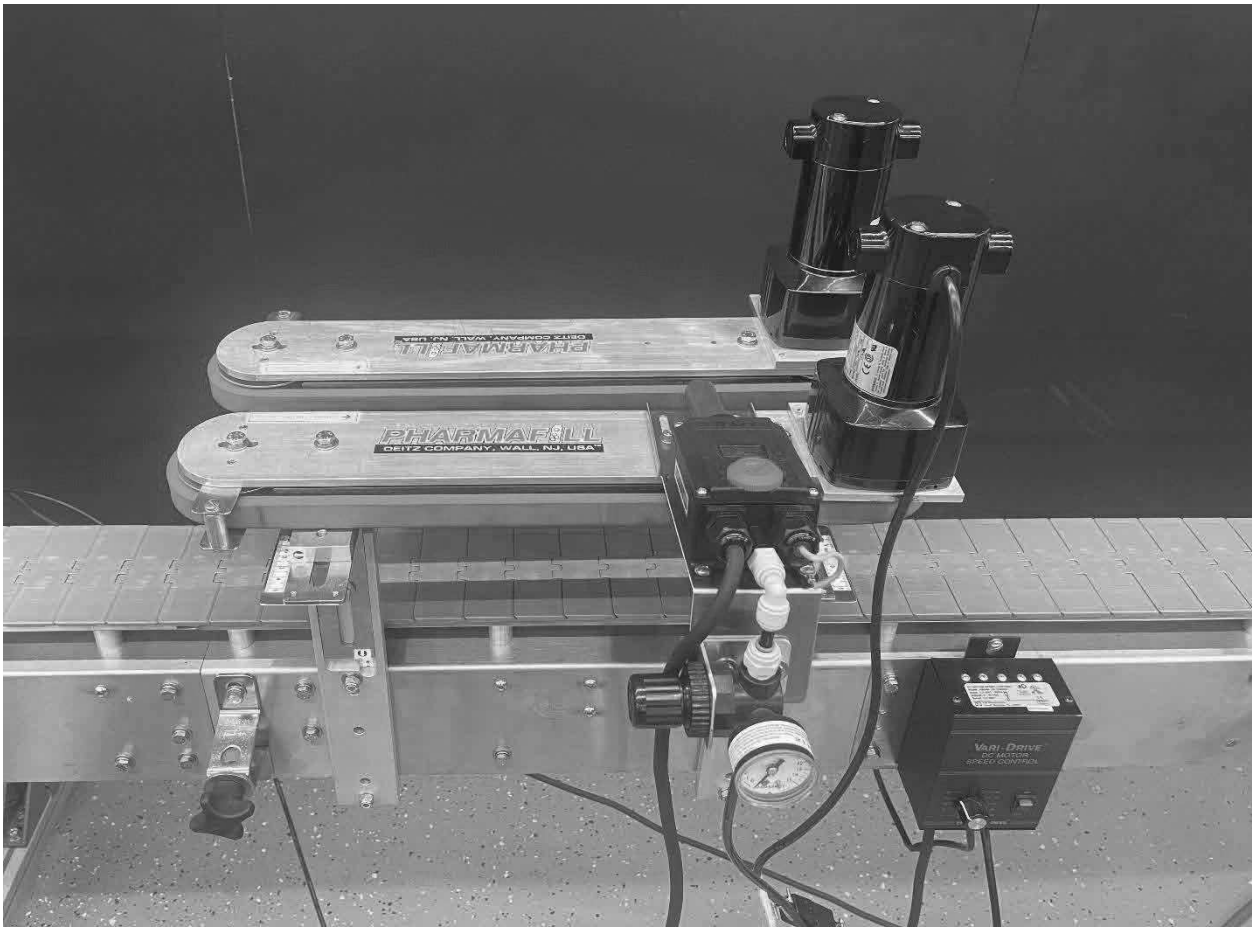
PHARMAFILL™

DEITZ COMPANY, WALL, NJ, USA



Model BCV2 Shoulderless Bottle Bander

Operation Manual

Rev A

CONTENTS

Section 1 - ILLUSTRATIONS

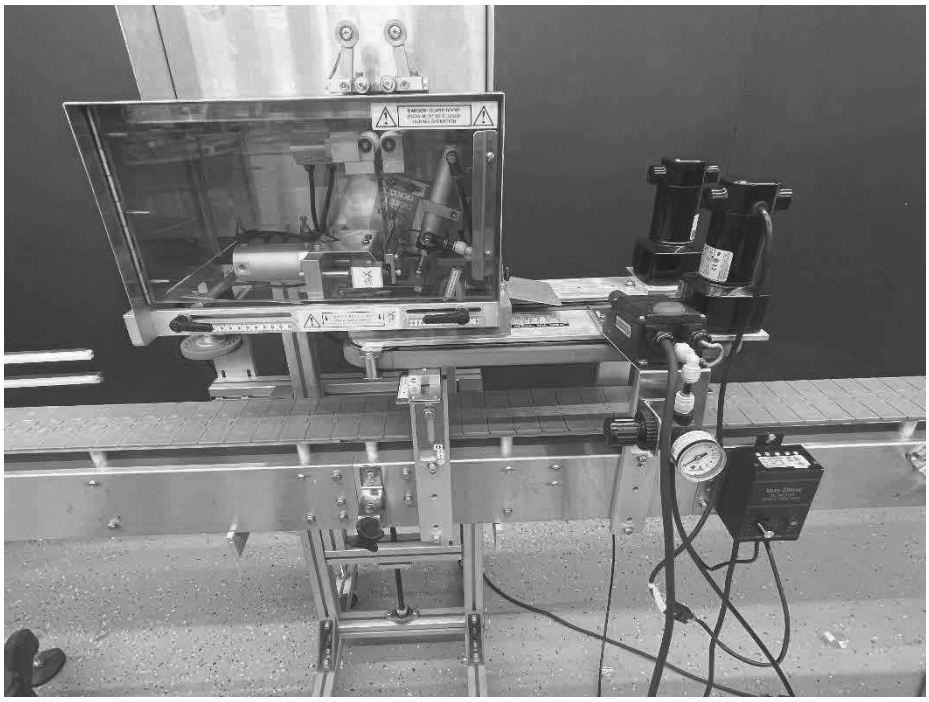


Fig.1: Typical alignment of NB1 and BCV2.

Fig.2: Typical placement of NB1 Start Sensor (blue) at BCV2 Front Belt Tension Screw (green).

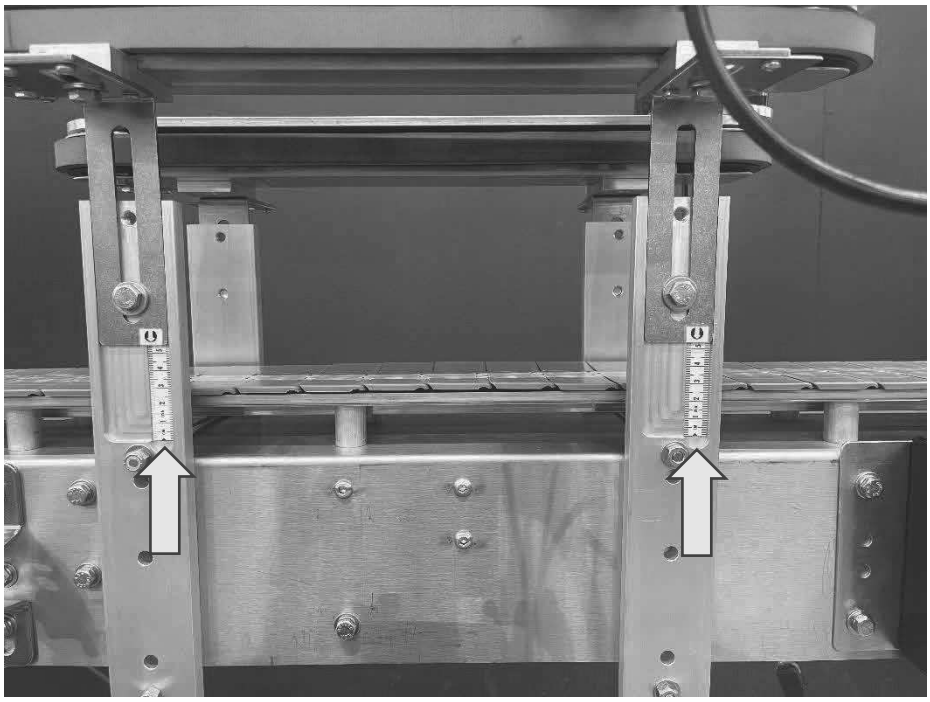


Fig.3: Set height for Front and Rear belts (Front Belt shown).

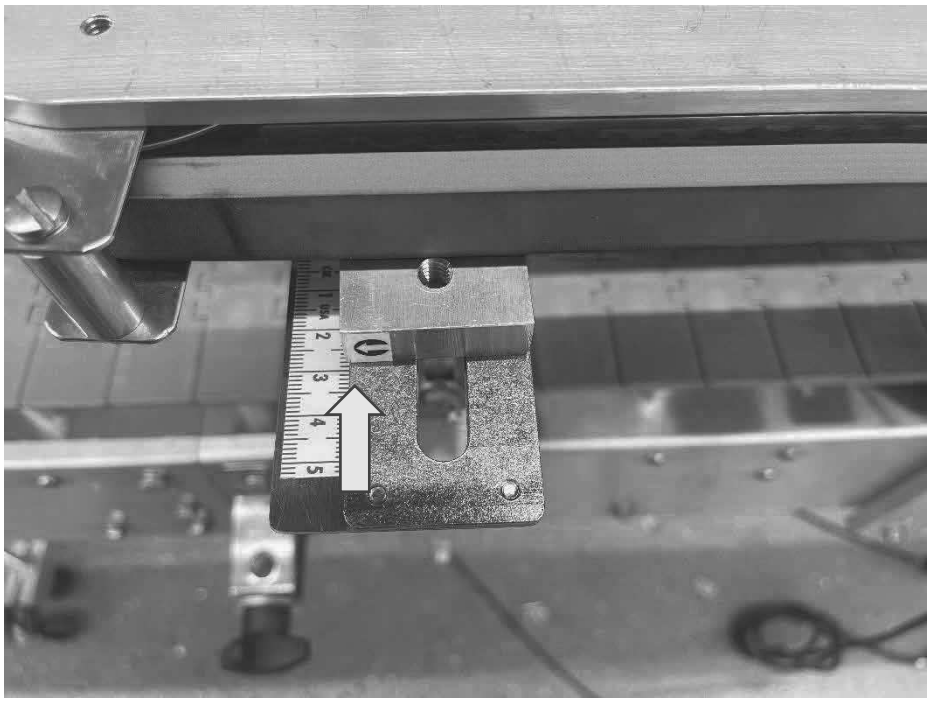


Fig.4: Upstream Width

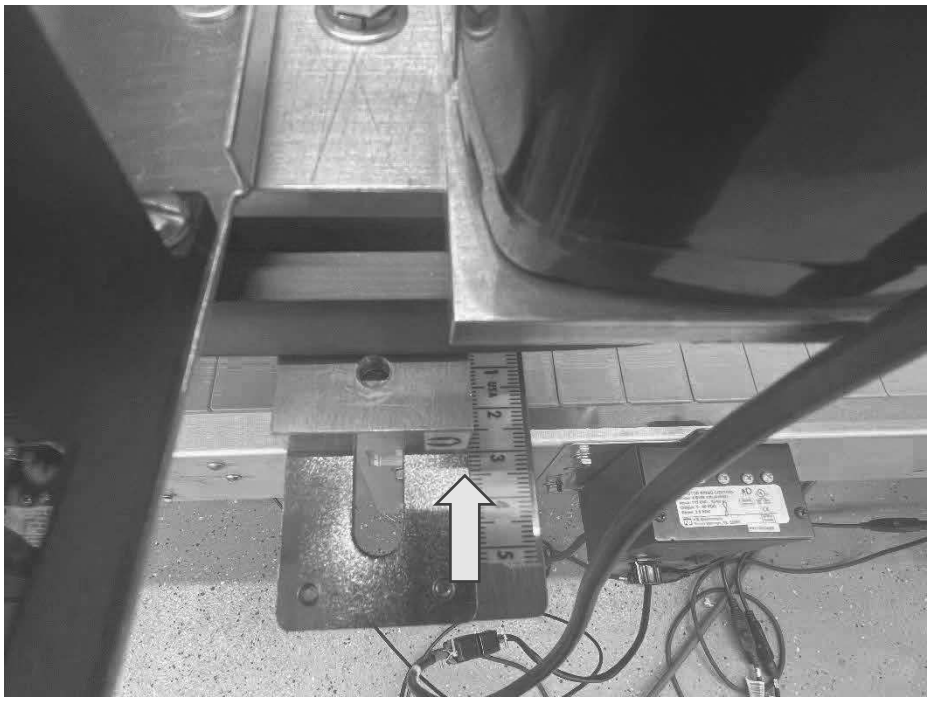


Fig. 5: Downstream Width

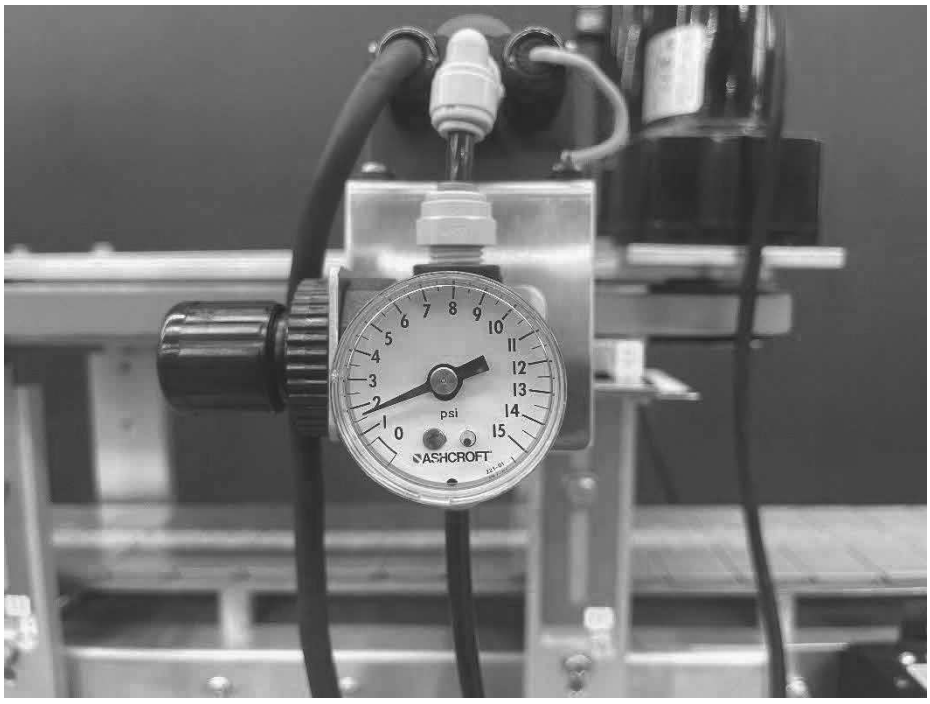


Fig.6: Air must be flowing through the Heat Gun before heat is turned on.

Fig.7: Top number is the actual temperature (red). Bottom number is the called temperature (green).

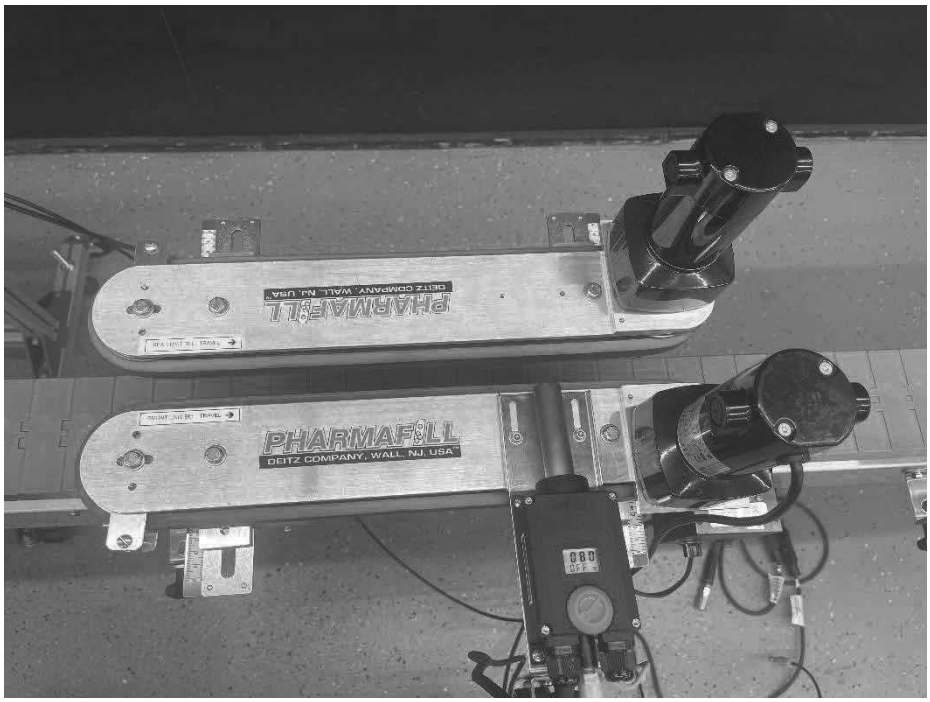


Fig. 8: Overhead view over BCV2 unit centered to standard Deitz conveyor.

Fig. 9: Downstream view from NB1 Neck Bander to BCV2 Shoulderless Bottle Bander.

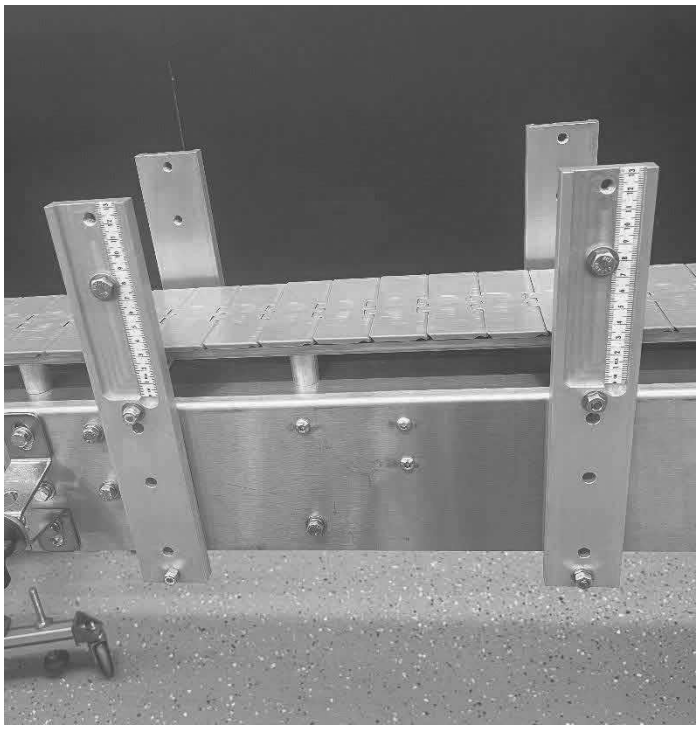


Fig. 10: BCV2 Mounting Assembly with Tall Vertical Adjustment Bars

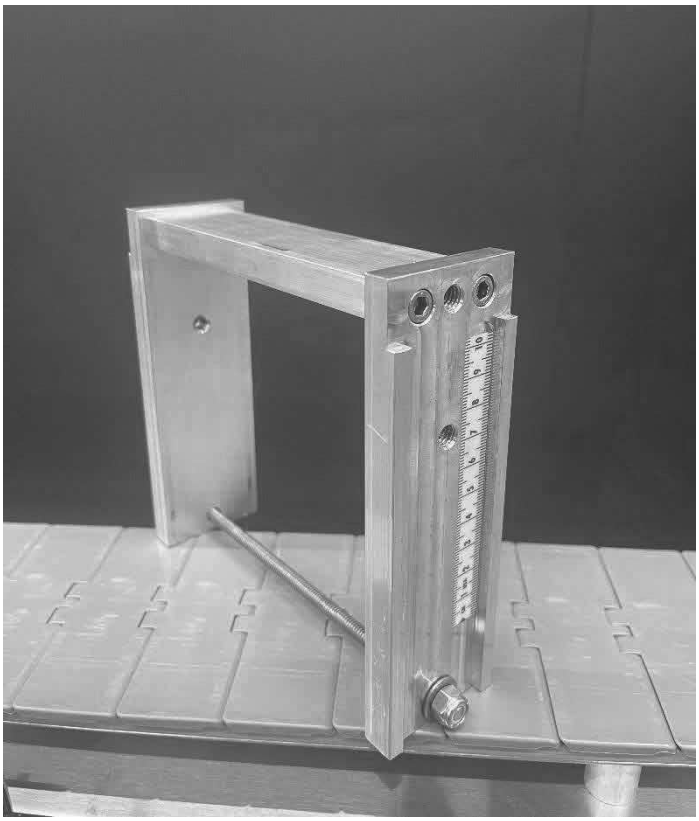


Fig. 11: Standard Mounting Assembly for Deitz CV 4.5 (1 of 2) with Short Vertical Adjustment Bars

Fig. 12: BCV2 Mounting Assembly (2 of 2)

Section 2 - SAFETY REMINDER

Warning

This machine contains moving parts and operates automatically. This may present a hazard to personnel.

Never operate this machine with any covers or guards removed or any guard switches or safety devices removed or bypassed.

Only people who have been correctly trained should operate or clean this machine.

Only people who are correctly qualified and trained should carry out maintenance, installation, or any other service work.

Never clean or service the machine without isolating the electrical supply and isolating the air supply.

Always test for the presence of voltage before touching or working on electrical components.

Note that there might be other requirements that could apply.

Refer to the manuals supplied by the component manufacturers for further safety instructions.

Section 3 - INTRODUCTION

Thank you for purchasing a Pharmafill Model BCV2 Shoulderless Bottle Bander. We at Deitz Company hope you will find that the Model BCV2 meets or exceeds your expectations and requirements for an affordable, reliable, and innovative addition to your packaging operation.

Pharmafill products are designed and manufactured by Deitz Company Inc., in Wall, NJ, USA. We have manufactured machinery for the bottle filling industry since 1966 and started our Pharmafill line in 1993. We are a small (but growing) family-owned business that emphasizes quality, innovation, and superior customer service.

If you have any questions or comments, please contact us by phone or visit our website. Chances are someone whose last name is Deitz will handle your inquiry personally.

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The operation manual is designed to make it easier for you to know the machine and to make use of its intended range of operation. It contains important instructions on how to operate the machine safely, adequately, and economically. Observing these instructions helps to avoid risks, to reduce cost for repair work and machine downtime, and enhances the machine's operational reliability and lifetime.

The operation instructions are to be supplemented by further instructions due to existing national regulations on accident prevention and environmental protection.

Section 3 – INTRODUCTION (cont'd)

If used in compliance with the instructions contained in this manual and if safety devices are regularly maintained and properly working, this machine is not dangerous to the operator.

This manual is to be kept accessible to all operators using this machine and it is assumed that, before use, the operator will read fully and understand this manual and will follow instructions stated within.

As this machine may be used in the packaging of hazardous substances the operator should be aware of the precautions required for these substances.

In addition to the operating instructions and the binding regulations on accident prevention valid in the country where the machine is being used and at its operational site, the recognized technical rules on safe and proper working must be observed as well.

These operating instructions and the information contained therein have been compiled with due care and attention. However, DEITZ COMPANY does not take any responsibility for misprints, translation errors or other errors and any damage resulting from.

DEITZ COMPANY retains the right to make changes to the described products to improve functionality, reliability, and other design considerations. The measurements or data shown on schematics, sketches and photos are not binding. They are for description purposes.

The information and drawings found in the operation manual are the intellectual property of DEITZ COMPANY and may not be copied or given to third parties.

Section 4 - SPECIFICATIONS (Also see technical info at end of manual)

GENERAL

Model	BCV2 Shoulderless Bottle Bander
Type	AD1198 REV A
Product Capability	9 lbs (4kg)
Maximum Rate	100 feet/minute

INPUTS

Voltage	110 VAC[1] (Optional 220VAC)
Cycles	50/60 HZ
Phase	1
Amperage	1.0A
Compressed Air	N/A
Room Humidity	85% RH non-condensing

DIMENSIONS

Floor Footprint	20-1/4" Wide (51.44cm) 17-1/2" to 20" Deep (44.45cm - 50.8cm)
Height[2]	Short Variable 8-1/2" to 12" (21.59cm - 30.48cm) Tall Variable 14-1/2" to 18" (36.83cm - 45.72cm)
Container Size	0" to 3-1/2" (0cm - 8.89cm)
Weight	Fully assembled: 26.5 lbs (12.02kg) Front Belt Assembly: 12.5 lbs (5.67kg) Rear Belt Assembly: 10 lbs (4.54kg) Mounting Assembly: 4 lbs (1.81kg)

OTHER

Ideal Conveyor Height	36" +/- 1" (92cm +/- 2.5cm)
Construction Materials	Stainless Steel, (Anodized) Aluminum,

Notes:

1. Other input voltages are available as factory options if specified at the time of order

2. May be adjusted further by adjusting or modifying mounting position. Measurement is from top of conveyor belt.

Section 5 – GENERAL INFORMATION – Getting to know the machine

1. WHAT IT DOES

The Pharmafill Model BCV2 is a bottle transfer system used to 1) hold a band in place at a set position on the neck of a shoulderless bottle or on a length of a bottle's neck above its shoulder, and 2) to apply a tack shrink to the material that will hold its place as it travels into the heat shrink tunnel. It is intended to be located directly under the band application process and before the heat shrinking process.

The system is in two parts: the mounting assembly, which can be affixed around the frame of the conveyor body or attached directly to each side of the conveyor, and the belt assemblies, which face each other and spin in opposite directions to promote smooth travel downstream.

2. FEATURES AND CAPABILITIES – (for specifications, please see Section 4)

-Variable speed control to match line speed

-Quickly adjusts to suit container height and width

-Transfers bottles without passive diverters

SETTING UP FOR A RUN

1. Using the NB1 Neck Bander, determine the appropriate cut length for the band application.
2. Adjust each BCV2 unit UP or DOWN to the height that will hold the band in the appropriate place on the container.
3. Slide each BCV2 unit IN or OUT to the width that will hug the neck of the container, so the band rests evenly on each side.
4. After determining the set speed of the standard conveyor, use the variable speed control of the BCV2 to match that speed. The container should travel through the BCV2 unit smoothly without tipping or dragging.
5. Supply air to the HG1 Heat Gun at 1-5 PSI. Set heat gun temperature. Conveyor speed, band material, proximity of heat gun to container, heat gun temperature, and air flow will all affect the functionality of the tack shrink.

Please contact Deitz Company for more details

Section 6 – INSTALLATION AND COMMISSIONING

NOTE: PLEASE RETAIN THE PACKING CRATE AND MATERIALS UNTIL THE MACHINE IS FULLY OPERATIONAL, TESTED AND APPROVED.

1. Unpacking

a. Carefully open the box.
b. Remove all packing materials and any additional boxes that may be inside.
c. Remove the two (2) BCV2 assemblies, front and rear, and Conveyor Mounting Assembly.
d. Place each BCV2 unit on a working surface (a table or sturdy cart).
e. Remove any shrink-wrap, bags, bubble wrap and/or protective inserts from conveyor units.
f. Inspect all supplied equipment for damage.
g. If any damage is present, please notify DEITZ COMPANY immediately. If possible, send a photo.
h. Follow the procedures on the following pages to assemble and test the machine.

2. Install Conveyor Mounting Assembly

a. If you are using a Deitz conveyor, you will have an assembly that mounts under the conveyor belt and around the body of the conveyor. If you are using another conveyor, you'll need to mount the Vertical Adjustment Bars directly to each side of the conveyor.
b. Secure "L" brackets to each of the four (4) Vertical Adjustment Bars.
c. Place the front drive unit on top of two "L" brackets and secure with supplied hardware.
d. Follow the same procedure for the second unit.

Refer to pages 2-3 in this manual for images of standard setup.

3. Apply Service - Connectors for motors and speed control are color-coordinated

a. Connect two ends with red tape.
b. Connect the two remaining connectors.
c. Make sure Speed Control Power Switch is in OFF position.
d. Connect power plug to 110 VAC.

4. Basic Operational Test

a. Move Power Switch to ON position

b. Turn Speed Dial to ONE (1)

Motors should engage and belts should be moving very slowly.

c. Turn Speed Dial to TEN (10)

The machine should be running at full speed.

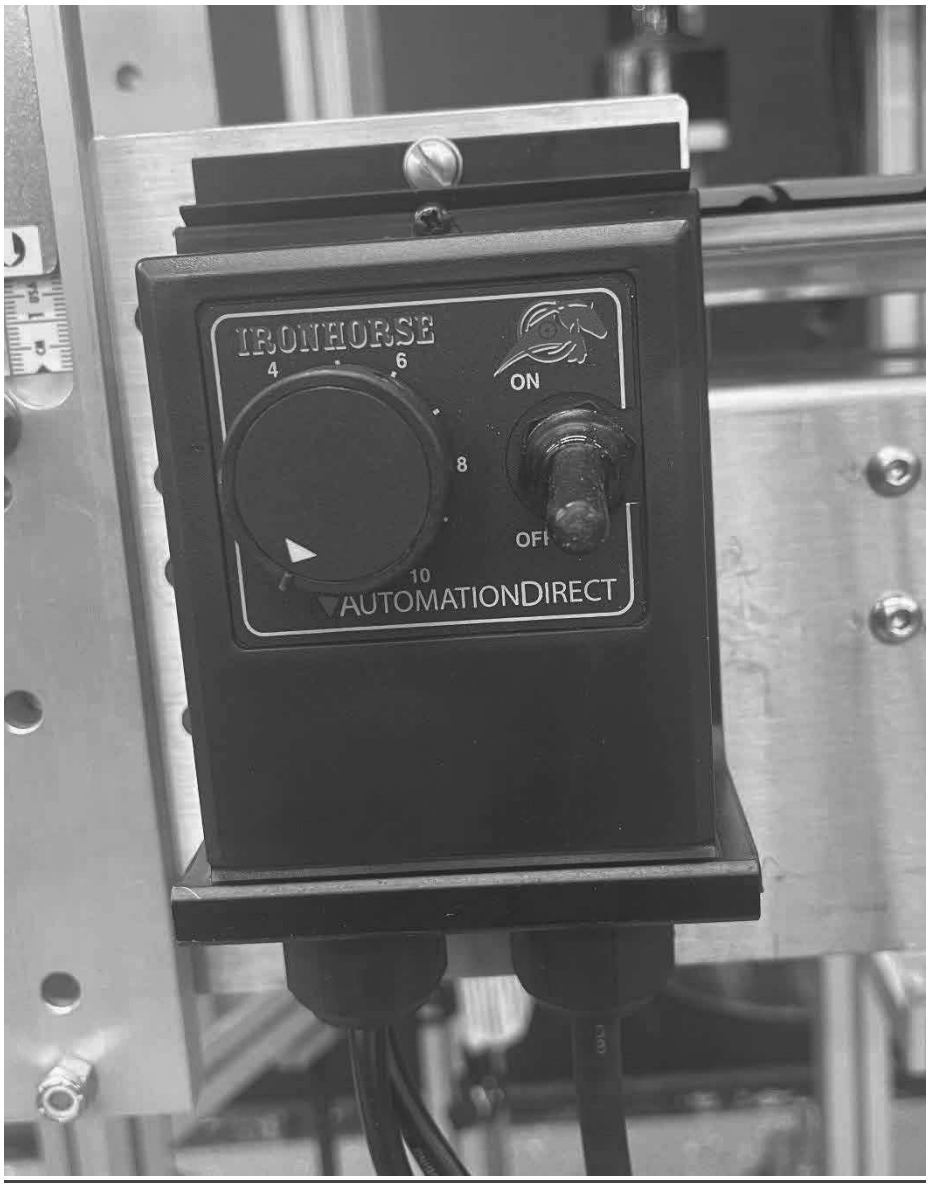
d. Turn Speed Dial to FIVE (5)

5. Integrate with Line

b. Adjust the height of your machine so the belts will grab your container.

c. Adjust the space between the belts so they will grab the container.

Section 7 – Speed Control



Variable Speed Control can be used to match the speed of other transfer devices and can easily accelerate or decelerate. Mounting plate can be oriented to either side of the device.

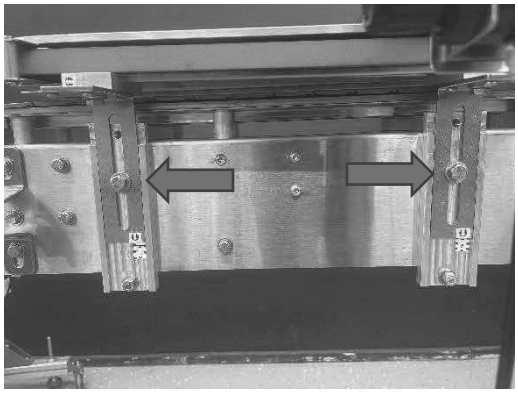
For best results:

-Use the ON/OFF switch to control power
-Use the 0-10 dial to control speed

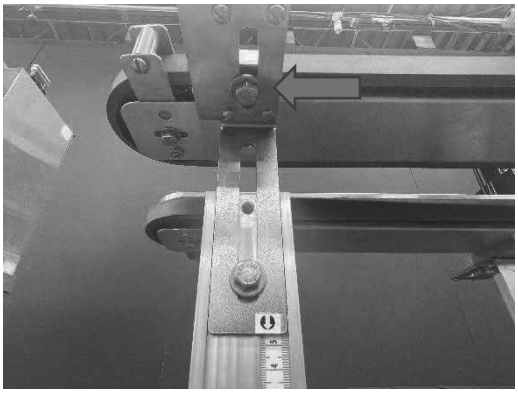
Section 8 – Set Up

1. **Set Up Checklist**
   - Motors are connected to Speed Control
   - Speed Control is connected to 110 VAC
   - Belt Assemblies are secured to BCV2 Mounting Assemblies
   - Belt Assemblies are facing each other

2. **Adjust Machine Height**
   - Loosen 5/16-18 hex head bolts on Mounting Assemblies to adjust the height of the drive belts.



3. **Adjust Machine Width**
   - Loosen 5-16/18 hex head bolts on Mounting Assemblies to adjust the space between the drive belts.



4. **Set Up Heat Gun**
   - Connect compressed air to air regulator between 1-5 PSI.
   - Connect 110VAC to Heat Gun.
   - Set dial to desired temperature.

NOTE: Higher PSI will create lower actual temperature.

Section 9 - CLEANING RECOMMENDATIONS

Washdown

This machine is not waterproof and is not intended for full wash down. If full washdown is performed on the equipment near the machine, it must be completely protected by a waterproof cover or by other means. Washdown will void the warranty.

Cleaning solutions

Stainless steel is resistant to most cleaning solutions. Other contact materials such as aluminum and nonmetallics (plastics, or rubber) are generally less corrosion-resistant and care should be exercised in their cleaning. Aluminum is readily attacked by acids as well as highly alkaline cleaners, which can render the surface non-cleanable. Rubber belts are subject to stress cracking and clouding from prolonged exposure to corrosive cleaning agents. Use a USDA approved sanitizing solution that is safe for all materials listed below, in a spray bottle, by lightly wiping down all contact surfaces. In the absence of such a cleaner, recommendations follow.

Recommendations

Stainless steel: This material is resistant to damage from most cleaners. Routine cleaning can be done with soap and water, alcohol, or acetone.

Anodized aluminum: Any highly acidic or alkaline cleaner will etch the aluminum over time and damage it. Soap and water, or alcohol is acceptable.

Conveyor Belts: Cleaning rubber with alcohol or acetone will damage them and should never be used. They may be safely cleaned with soap and water.

Preventative Maintenance

Idler Pulleys and Motor Pulleys should routinely be inspected for smooth operation.

(Assembly diagrams can be found in Technical Documents - Section 10.4)

Section 10 – TECHNICAL INFORMATION

Principal of Operation

As a band is applied to a container, it will rest on the top side of each belt and travel downstream past a heat gun, which applies a tack-shrink to the material. This will prevent the material from sliding down the bottle, thus ensuring the tamper evidence. A variable speed control allows the operator to match the speed of the BCV2 with that of the line speed.

Cycle of Operation

The BCV2 Shoulderless Bottle Bander has only one run function. When properly connected, belts will move in the same direction and at the same speed. Speed can be adjusted with Variable Speed Control.

Troubleshooting

- Turn Speed Control ON but the belts do not move.
  -Check that power is properly supplied from 110 VAC to Speed Control and each motor.
  -Check that Speed Dial is above ZERO
- Belts move in the wrong direction.
  -Switch the connections from the Speed Control to the motors.
- Power is properly supplied but the belts do not move.
  -Contact Customer Support at Deitz Company

Index of Technical Notes and Drawings (document section begins after this page)

Addendums or additional technical data

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Prepared by: John Deitz

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CUSTOMER INSTALLATION OF BCV2 BOTTOMLESS CONVEYOR + HG1 HEAT GUN

INSTALLATION - see drawing "9027-CUST NB1 with BCV2 and HG1 Installation" (5pgs)

1. If your NB1 was not built specifically to be used with the BCV-HG1 combo, the first step is to install Offset Adapter Blocks onto lift stand of NB1 Neck Bander and replace the original LS-CV Brackets with new ones (page 1).
2. Install the Conveyor Adapter Blocks onto your conveyor to mount the BVC2 Hugger Belt Conveyor (pages 2-4).
3. Mount the BVC2 Speed Control where convenient on your conveyor. Plug-in to a 120 VAC outlet.
4. Mount the HG1 Heat Gun where indicated. Plug-in to separate 120 VAC outlet (15A).
5. Connect compressed air lines (page 5).

SETUP NOTES

- BCV2 BOTTOMLESS CONVEYOR

  Container must be centered (front-to-back) under sleeve application point.

  Speed (typical): 40% on speed control dial (approx. 25-30 feet)

- HG1 HEAT GUN

  It is recommended to use the least amount of heat from the HG1 Heat Gun that is adequate to keep the band from slipping down the container. This is so the distortion of the band at the spot where the heat is applied is minimized and the heat tunnel will smooth it out when the full heat is applied.

  Accessory tip on heat discharge: NONE

  Temperature setting (typical): 450-500° F

  Air pressure setting (typical): approx. 3-4 PSI

  NOTE: AIR MUST BE FLOWING WHENEVER HEAT GUN IS HOT TO PREVENT DAMAGE TO HEATER ELEMENT. Turn on air flow before turning on heat (dial above zero). When shutting down, turn off heat (set dial to zero) and allow air flow to continue for 30 seconds.

NOTE	REV	DESCRIPTION	DATE
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REVISION –

NUMBER: 9027-104

IF YOUR NB1 WAS NOT BUILT FOR USE WITH THE BCV2-HG1 COMBO, IT MUST BE RE-MOUNTED TO THE LIFT STAND TO PROVIDE CLEARANCE FOR THE BCV2.

YOU WILL NEED TWO (2) OFFSET ADAPTER BLOCKS AND TWO (2) HEX HEAD SCREWS 5/16-18 X 1" AND TWO (2) OFFSET CONVEYOR BARS (PROVIDED WITH THIS KIT)

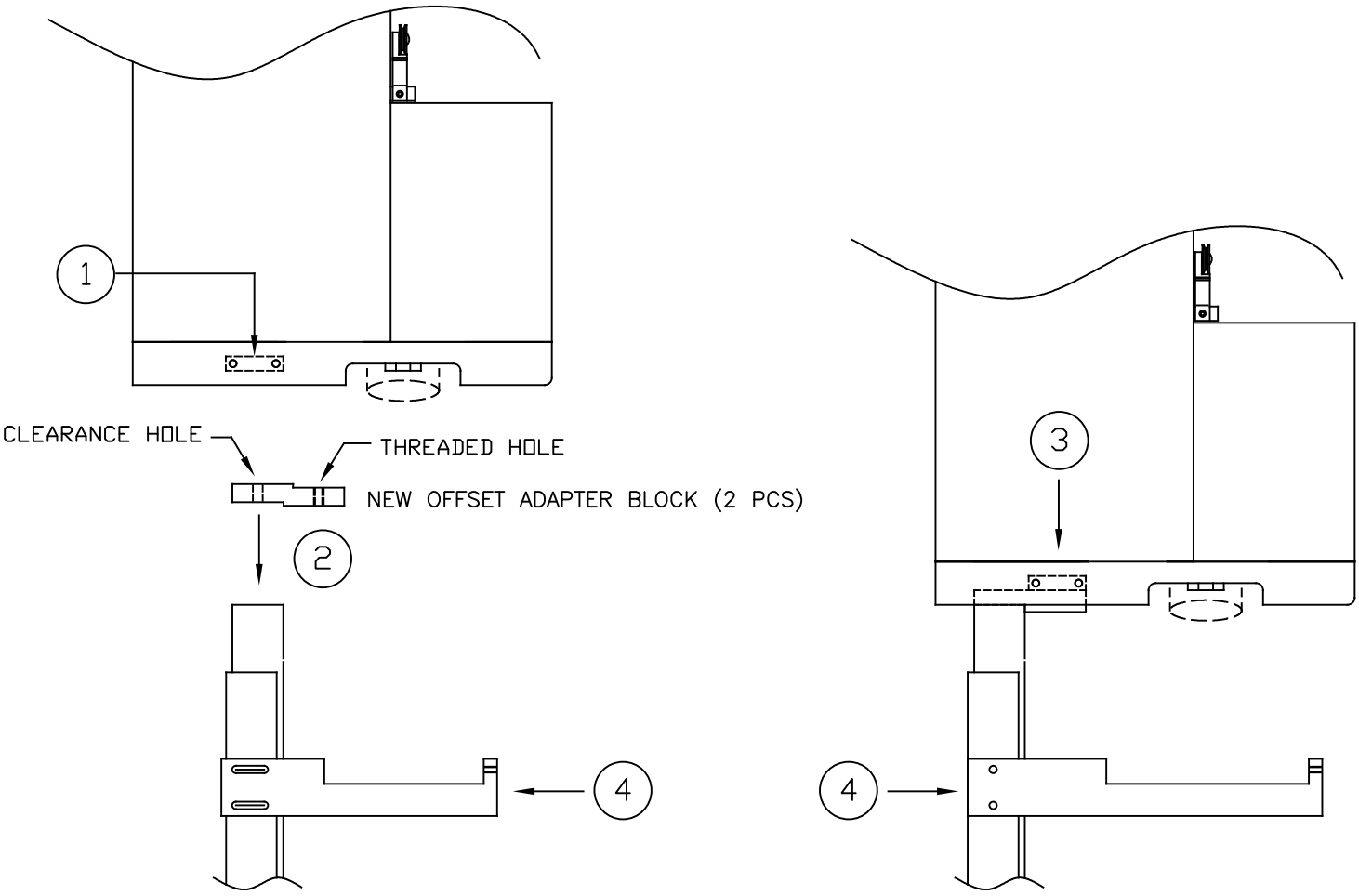
START BY REMOVING THE BACK COVER FROM THE NB1.

1. WHILE SUPPORTING THE NB1, USE A 13MM WRENCH TO REMOVE THE TWO (2) HEX SCREWS WHICH HOLD THE NB1 ONTO THE LIFT STAND. PLACE THE NB1 ASIDE.

2. INSTALL TWO (2) OFFSET ADAPTER BLOCKS ONTO THE LIFT STAND USING THE HEX SCREWS YOU JUST REMOVED.

3. MOUNT THE NB1 ONTO THE OFFSET ADAPTER BLOCKS USING TWO (2) HEX HEAD SCREWS 5/16-18 X 1"

4. REMOVE TWO (2) OLD CONVEYOR BARS AND INSTALL TWO (2) NEW OFFSET CONVEYOR BARS.



DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING – PRODUCT INFO	PROJECT BCV2-HG1	BY SJD	DATE: 2021-01-15
	TITLE NB1 NECK BANDER WITH BVC2 AND HG1 INSTALLATION DETAILS	SHEET 1 OF 5	
		NUMBER 9027-CUST	REVISION –

NOTE	REV	DESCRIPTION	DATE
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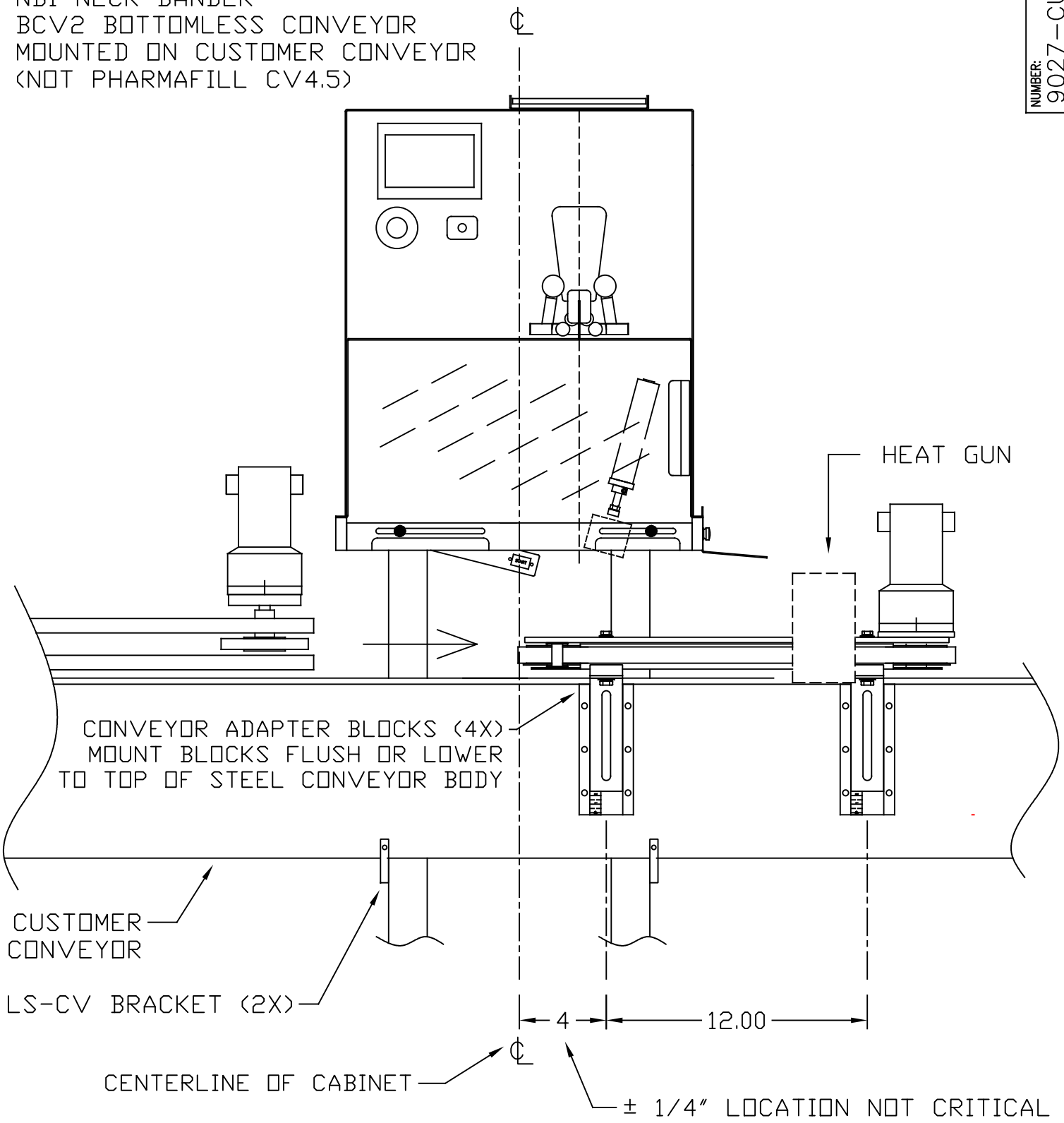
REVISION –

NUMBER: 9027–CUST

FRONT VIEW
NB1 NECK BANDER
BCV2 BOTTOMLESS CONVEYOR
MOUNTED ON CUSTOMER CONVEYOR
(NOT PHARMAFILL CV4.5)



DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING – PRODUCT INFO	PROJECT BCV2–HG1	BY SJD DATE: 2021–01–15	
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		NUMBER 9027–CUST	REVISION –

NOTE	REV	DESCRIPTION	DATE
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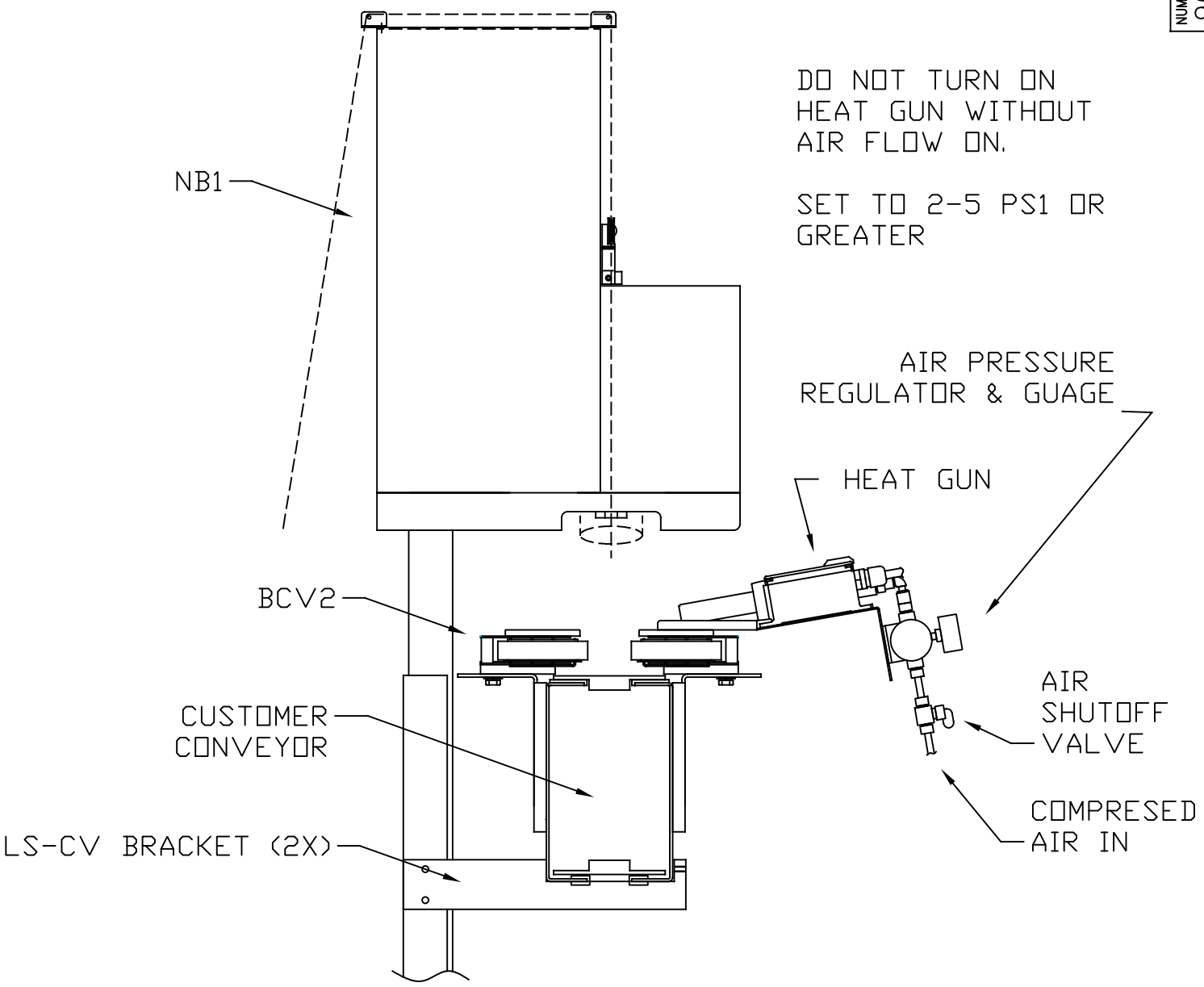
REVISION –

NUMBER: 9027–CUST

SIDE VIEW
NB1 NECK BANDER
BCV2 BOTTOMLESS CONVEYOR
MOUNTED ON CUSTOMER CONVEYOR
(NOT PHARMAFILL CV4.5)



DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING – PRODUCT INFO	PROJECT BCV2–HG1	BY SJD DATE: 2021–01–15	
	TITLE NB1 NECK BANDER WITH BVC2 AND HG1 INSTALLATION DETAILS	SHEET 3 OF 5	
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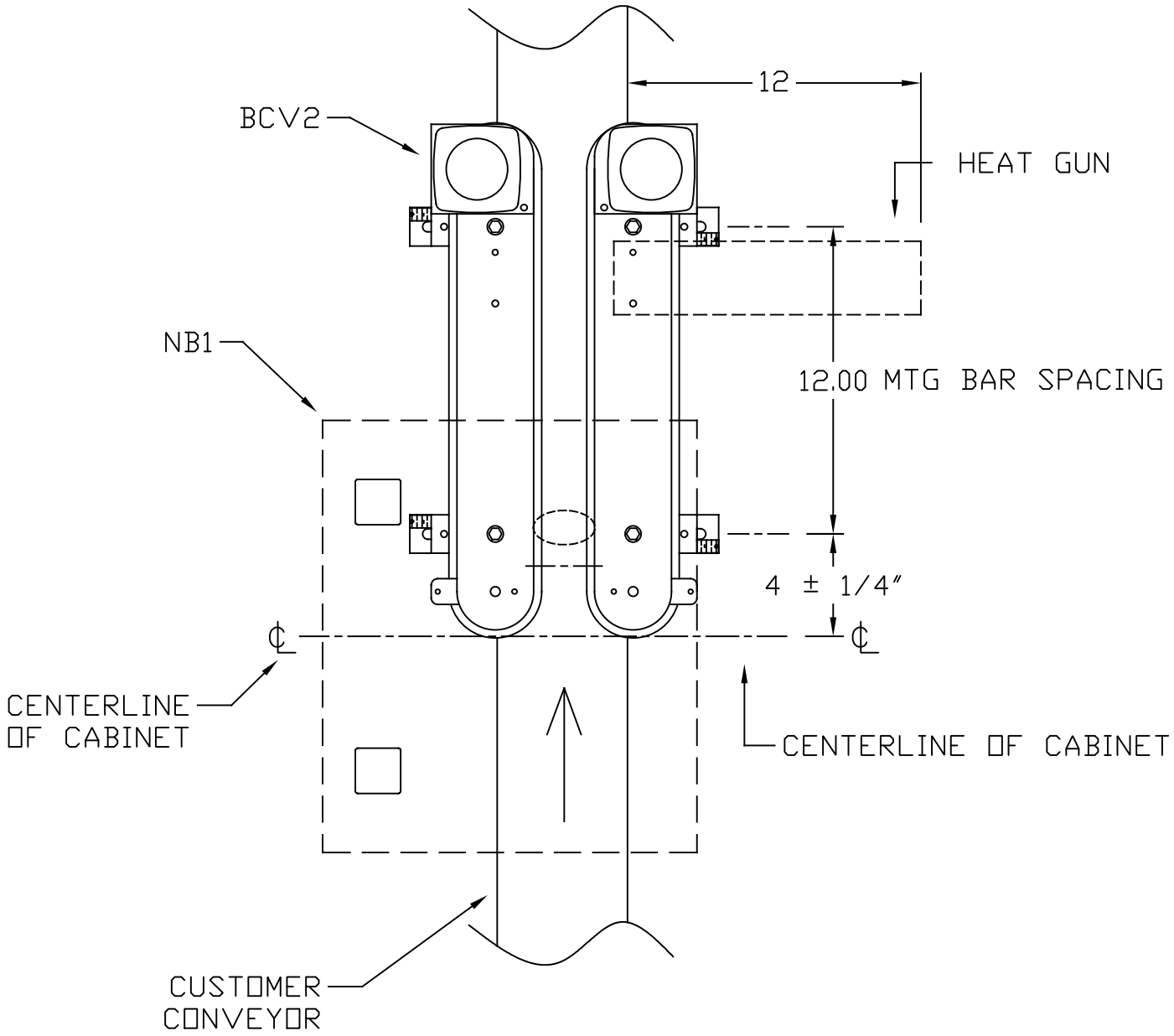
REVISION –

9027–CUST

TOP VIEW
NB1 NECK BANDER
BCV2 BOTTOMLESS CONVEYOR
MOUNTED ON ON CUSTOMER CONVEYOR
(NOT PHARMAFILL CV4.5)



DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING – PRODUCT INFO	PROJECT BCV2–HG1	BY SJD DATE: 2021–01–15	
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REVISION -

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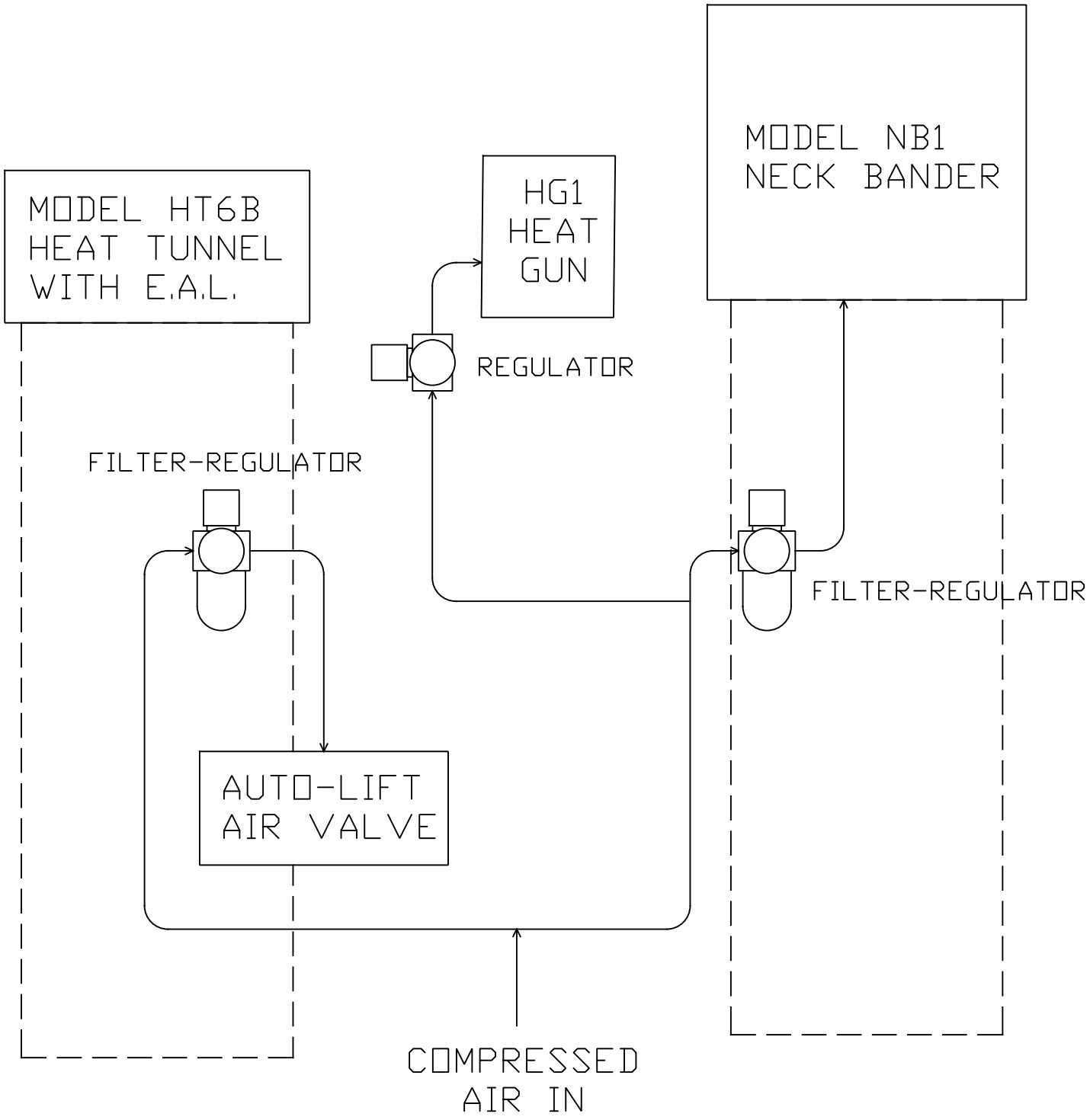
COMPRESSED AIR LINE HOOKUP DETAILS AS VIEWED FROM REAR



DEITZ COMPANY, INC. ROUTE 34, WALL, N.J. TECHNICAL DRAWING – PRODUCT INFO	PROJECT BCV2-HG1	BY SJD DATE: 2021-01-15	
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		NUMBER 9027-CUST	REVISION -