

## Component Locator

See Figure 1 and Refer to Table 1.

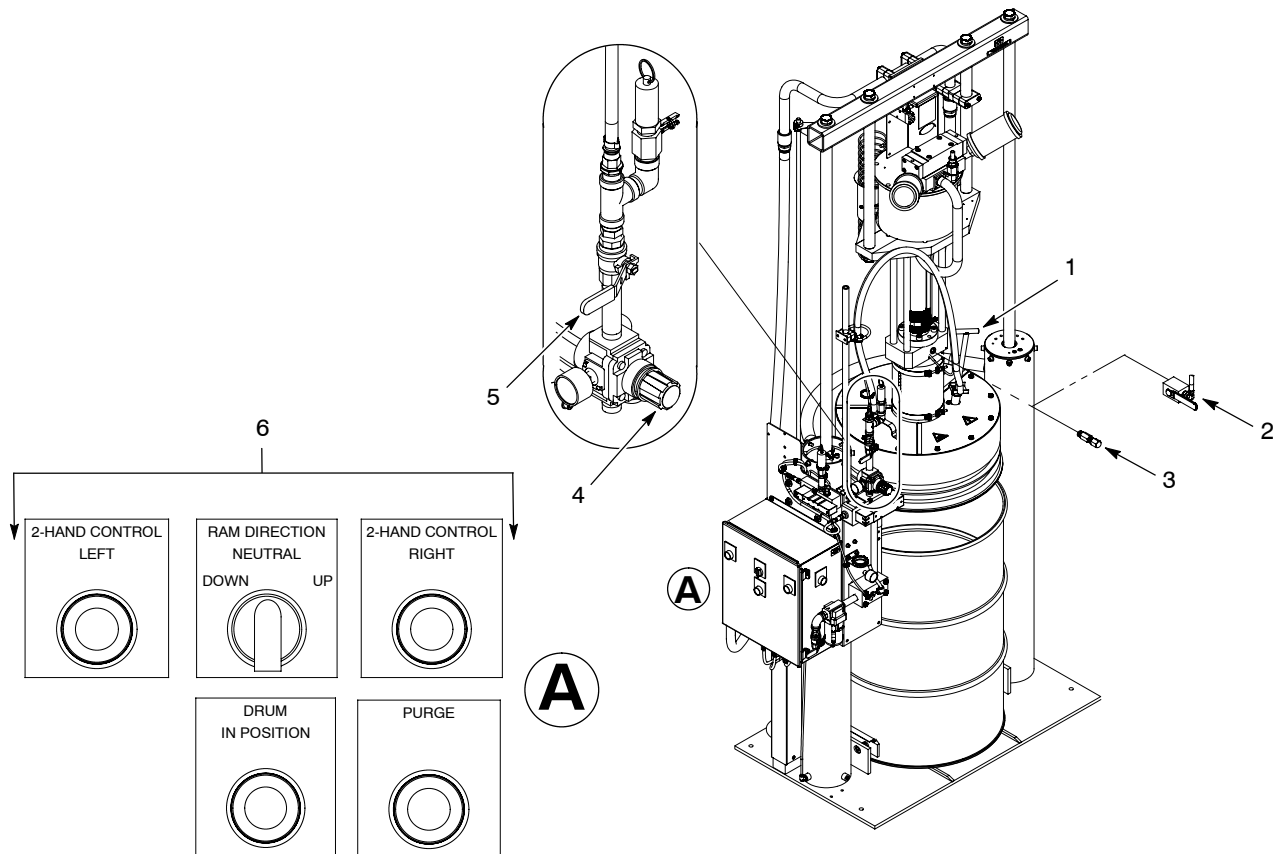


Figure 1 Component Locator

Table 1 Component Description

Item	Description
1	<b>Bleeder Stem:</b> Bleeds air from below the follower when a new material drum is loaded into the system
2, 3	<b>Ball Valve (2) or Bleed Valve (3):</b> Bleeds air from the pump hydraulic section
4	<b>Air Motor Regulator:</b> Controls air pressure to the air motor
5	<b>Air Motor Lockout Valve:</b> When closed, locks out air pressure to the air motor; prevents the pump from stroking but it does not shut off the ram air supply. <b>NOTE:</b> The ram air supply is required to raise and lower the ram when the air motor is deactivated.
6	<b>Ram Controls:</b> <ul style="list-style-type: none"> <li>• PURGE: Momentary push button for purging material from the inactive pump during drum changes</li> <li>• 2-HAND CONTROL LEFT/RIGHT: Enables/disables ram movement</li> <li>• RAM DIRECTION: UP/DOWN/NEUTRAL selection switch for ram</li> <li>• DRUM IN POSITION: Illuminates when a drum is positioned under the follower plate</li> </ul> Refer to the <i>Using the Ram Controls</i> section for more information.  <b>NOTE:</b> It is important to remember that NEUTRAL does not mechanically lock the ram. Air pressure remains in the ram cylinders. Small air leaks in the circuit can cause the ram to drift upward or downward. Never leave the bulk unloader in the neutral position to perform maintenance, or when it is not in use for long periods of time. When performing maintenance, make sure that the ram and follower are on the bulk unloader base or secured with support blocks.

## Daily Operation

Read and understand these procedures before operating this equipment. Review the *Using the Ram Controls* section if necessary. Contact a local Nordson representative regarding these procedures if necessary.



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

Severe personal injury could result if hands or fingers are caught between the follower plate and container. Keep hands clear of this area.

**NOTE:** It is important to remember that selecting NEUTRAL on the RAM DIRECTION switch stops all ram movement and disables the 2-HAND CONTROL push buttons. Air pressure remains in the ram cylinders. Small air leaks in the circuit can cause the ram to drift upward or downward. When performing maintenance, make sure that the ram and follower plate are on the bulk unloader base or secured using support blocks.

1. See Figure 2. Make sure that the DRUM IN POSITION light (9) is on.
2. Select DOWN on the RAM DIRECTION switch (10). Press and hold in the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time to manually lower the follower into the drum.
3. When the follower enables the Follower In Drum switch, release the LEFT and RIGHT 2-HAND CONTROL push buttons (11). The follower automatically moves downward as material is pumped from the drum.

### How to Change a Container

1. Close the air motor lockout valve (7).
2. Select UP on the RAM DIRECTION switch (10).
3. Press and release the LEFT and RIGHT 2-HAND CONTROL push buttons (11).
4. Remove the old container. Remove the platen ring (5) from the container.
5. Prepare the drum liner opening per the material manufacturer's specifications. Place the platen ring (5) into the drum on top of the drum liner.
6. Remove the bleeder stem (1).

7. Perform the following:

- a. Select DOWN on the RAM DIRECTION switch (10). Press and hold in the LEFT and RIGHT 2-HAND CONTROL push buttons (11) at the same time to manually lower the follower into the drum.
- b. When the follower enables the Follower In Drum switch, release the LEFT and RIGHT 2-HAND CONTROL push buttons (11). The follower will automatically move downward.

8. Perform the following:

- a. Allow air to bleed from the bleeder stem fitting as follower moves downward.
- b. When material starts to continuously flow from the bleeder stem fitting, select NEUTRAL on the RAM DIRECTION switch (10). Install the bleeder stem (1).

9. Select DOWN on the RAM DIRECTION switch (10). Press and hold in the LEFT and RIGHT 2-HAND CONTROL push buttons (11) at the same time to start automatic ram movement.

10. Open the air motor lockout valve (7).



**WARNING:** Do not open the bleed valve more than three turns. The bleed valve and material may be forced from the valve body.

11. Depending upon the system, perform one of the following using minimal pump air pressure:

- Bleed the remaining air through the ball valve (2) and dispense guns.

**Or**

- Open the bleed valve (3) no more than three turns. Bleed the remaining air through the bleed valve and dispense guns.

12. Press the purge button (8) to cycle the pump.

13. After all air is bled, close the ball valve (2) or the bleed valve (3).

14. Set the air motor regulator (6) to the desired operating pressure if necessary.

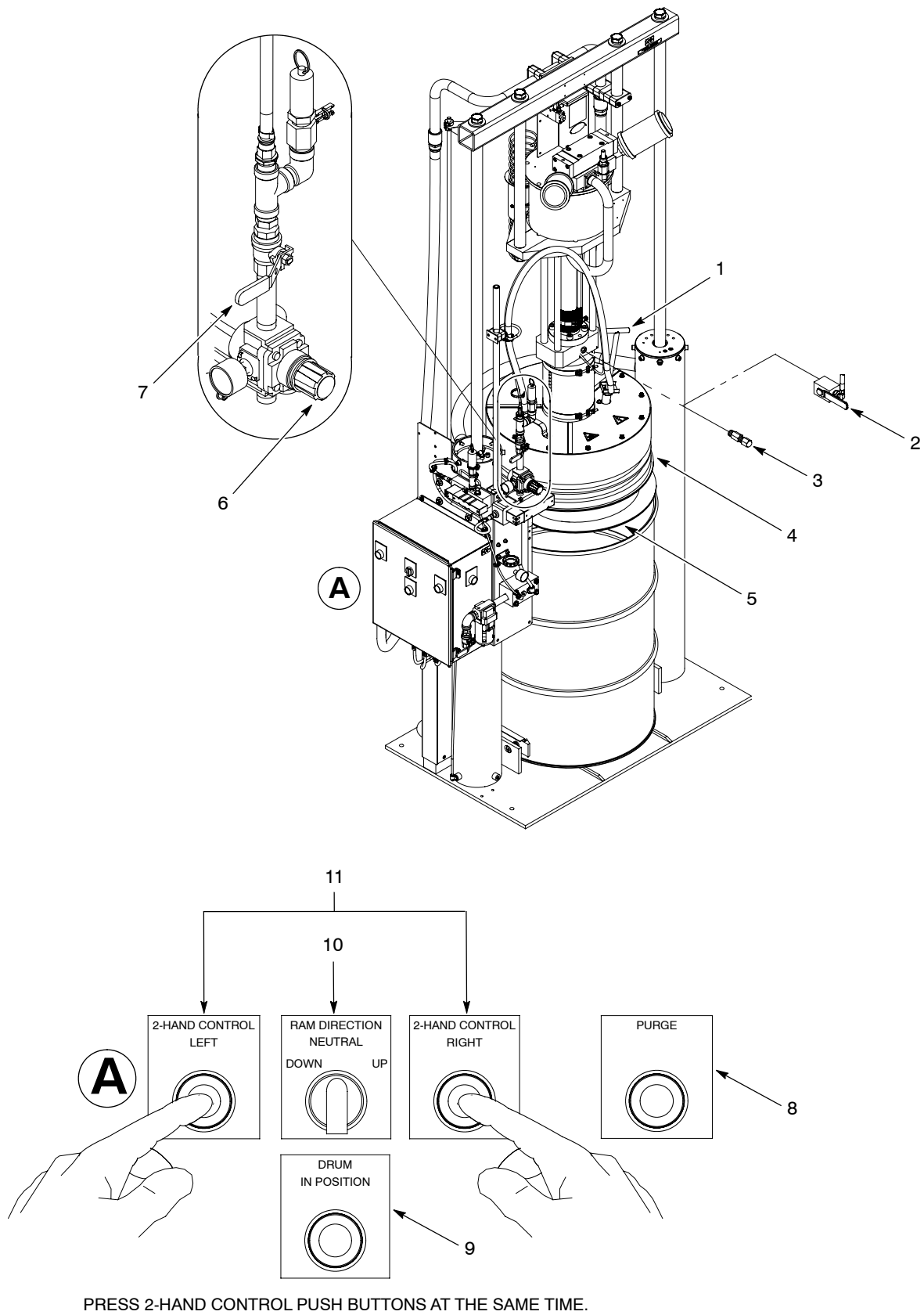


Figure 2 Changing a Container

## Using the Ram Controls



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

Read and understand this section before operating this equipment. Contact a local Nordson representative regarding these procedures if necessary.

Refer to the *Daily Operation* section for detailed operating procedures.

### Lower and Raise the Ram Without a Drum in Position

See Figure 3. Ram operation can only be done manually when a drum is not positioned on the bulk unloader.

Use the following procedure to manually operate the ram.



**CAUTION:** Place support blocks (A) on the frame as shown to prevent damage to the drum follower (B) and position sensor (C).

1. Select the desired RAM DIRECTION. Press and hold in the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time to manually lower or raise the ram.
2. Release the LEFT and RIGHT 2-HAND CONTROL push buttons to stop ram movement.

**NOTE:** It is important to remember that selecting NEUTRAL on the RAM DIRECTION switch stops all ram movement and disables the 2-HAND CONTROL push buttons. Air pressure remains in the ram cylinders. Small air leaks in the circuit can cause the ram to drift upward or downward. When performing maintenance, make sure that the ram and follower are on the bulk unloader base or secured using support blocks.

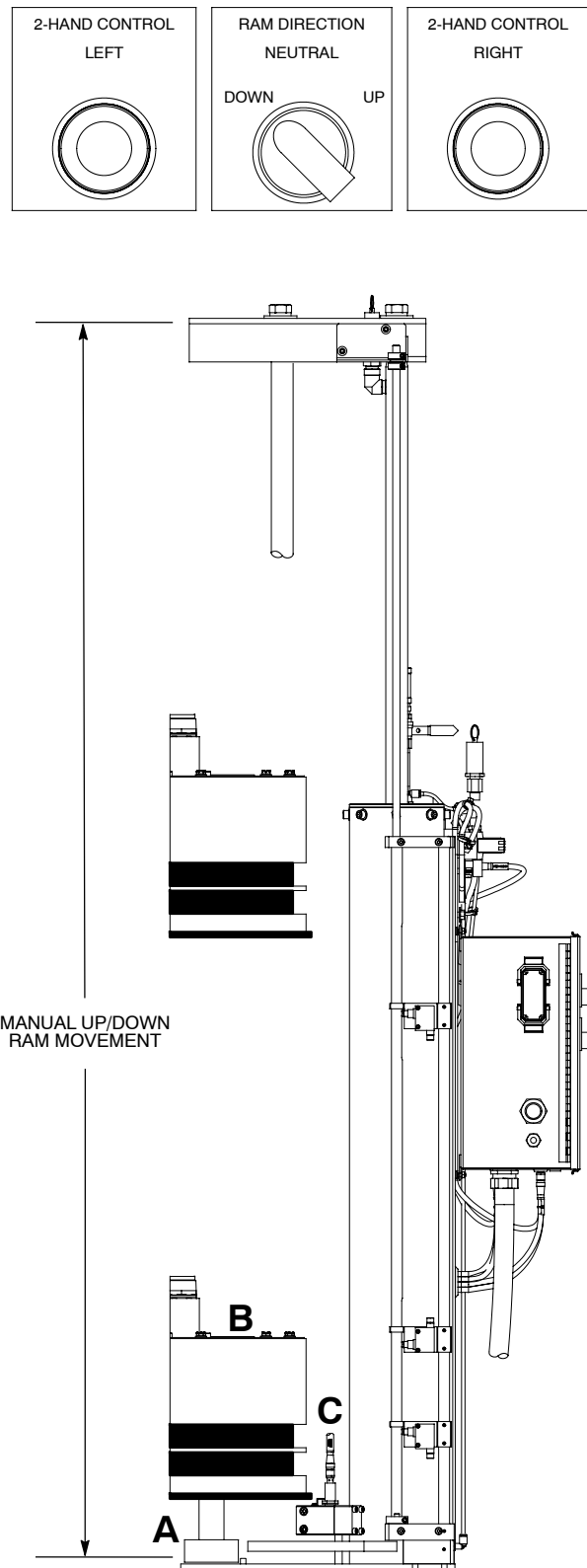


Figure 3 Manual Ram Operation Without a Drum in Position

## ***Lower the Ram With a Drum in Position***

See Figure 4. Lowering the ram must be done manually until the follower enables the Follower in Drum switch (A). The ram will automatically move downward until the follower enables the Drum-Empty switch (B) which stops the air motor.

Use the following procedure to lower the ram.

1. Select DOWN on the RAM DIRECTION switch. Press and hold in the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time to manually lower the follower into the drum.
2. When the follower enables the Follower In Drum switch (A), release the LEFT and RIGHT 2-HAND CONTROL push buttons.

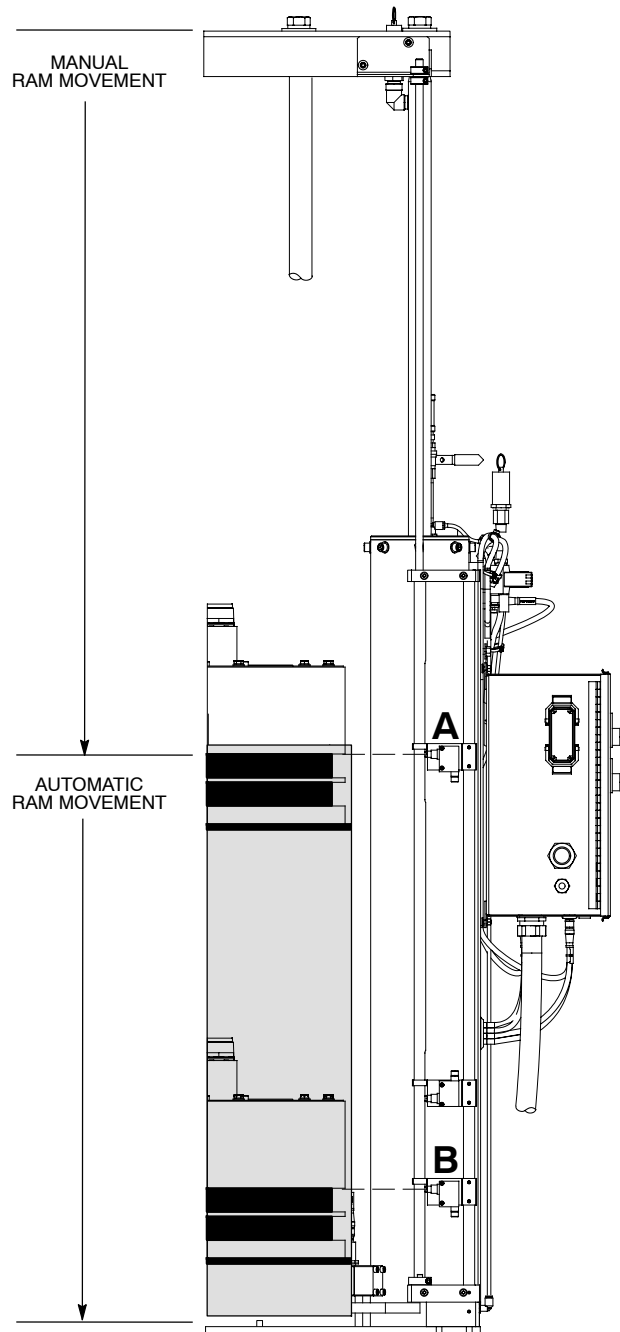
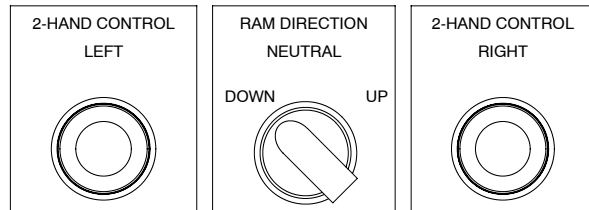


Figure 4 Lowering the Ram With a Drum in Position

## ***Raise the Ram With a Drum in Position***

See Figure 5. Raising the ram can be done automatically when a drum is positioned on a bulk unloader. The ram will move upward until it reaches the end of travel.

Use the following procedure to raise the ram.

1. Select UP on the RAM DIRECTION switch.
2. Press and release the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time to automatically raise the ram.

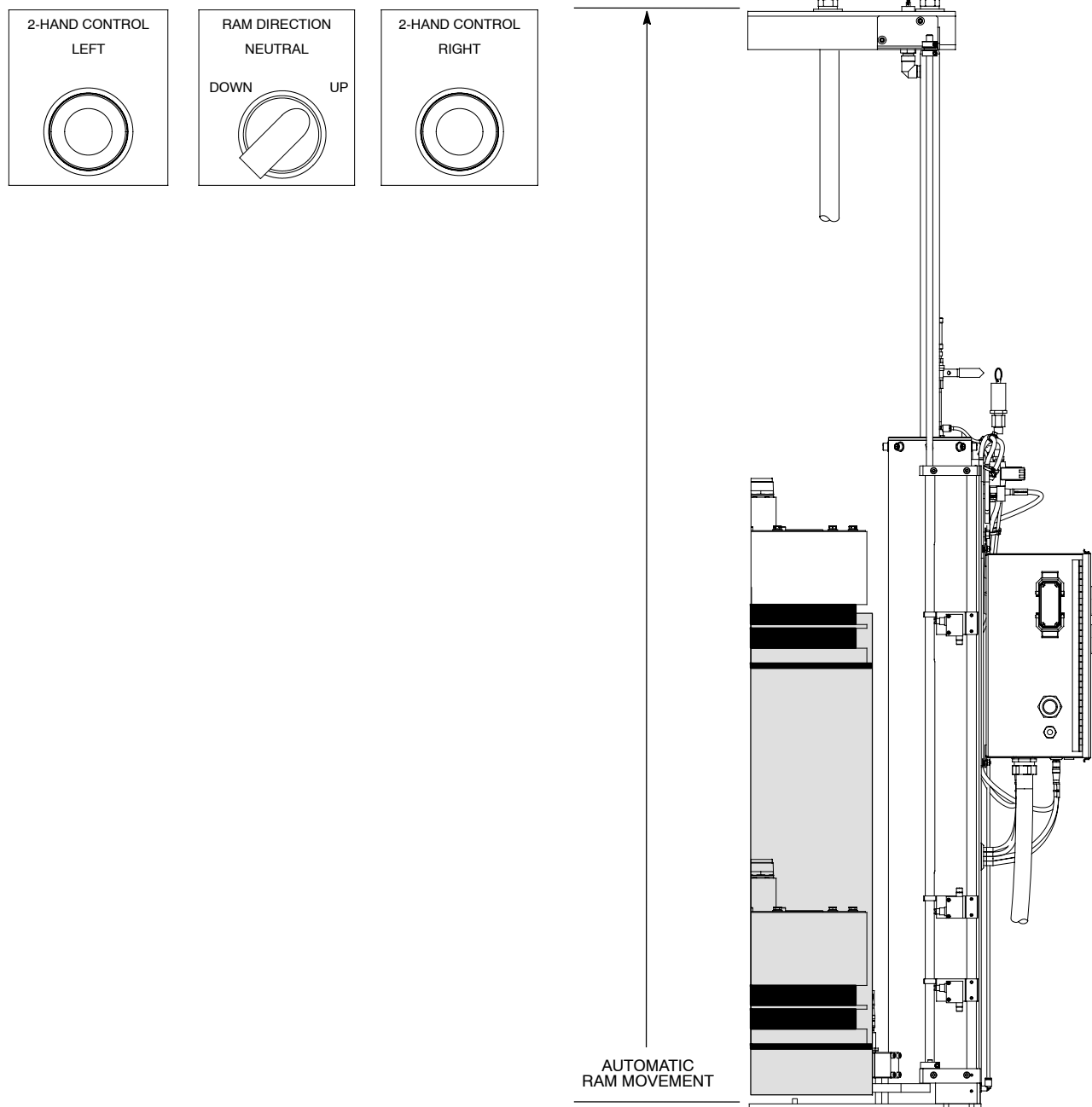


Figure 5 Automatically Raising the Ram With a Drum in Position

## Ram Operation for Service and Maintenance

See Figure 6. When performing service and maintenance, use the following procedure to manually raise or lower the ram.



**CAUTION:** If the follower needs to be lowered when a material drum is not positioned on the frame, place support blocks (A) as shown to prevent damage to the follower (B) and drum position sensor (C).

1. Lower the ram:
  - a. Select DOWN on the RAM DIRECTION switch.
  - b. Press the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time and hold in. Release the push buttons to stop ram movement.
2. Raise the ram:
  - a. Select UP on the RAM DIRECTION switch.
  - b. Press the LEFT and RIGHT 2-HAND CONTROL push buttons at the same time and hold in. Release the push buttons to stop ram movement.

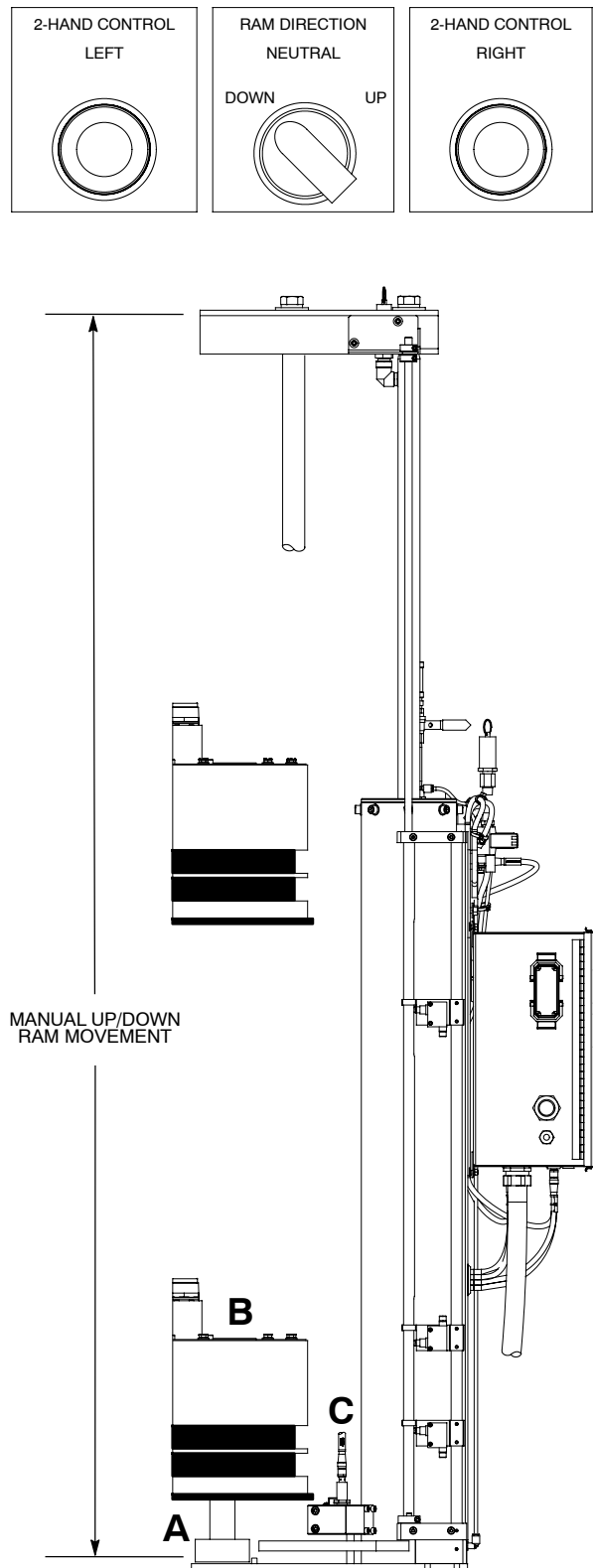


Figure 6 Manual Ram Operation for Service and Maintenance

