



Quick Sheet Instructions

CURTAIN MACHINE POTENTIOMETER

970370 BALL SCREW POTENTIOMETER KIT

970371..... ACME SCREW POTENTIOMETER KIT

Table of Contents:

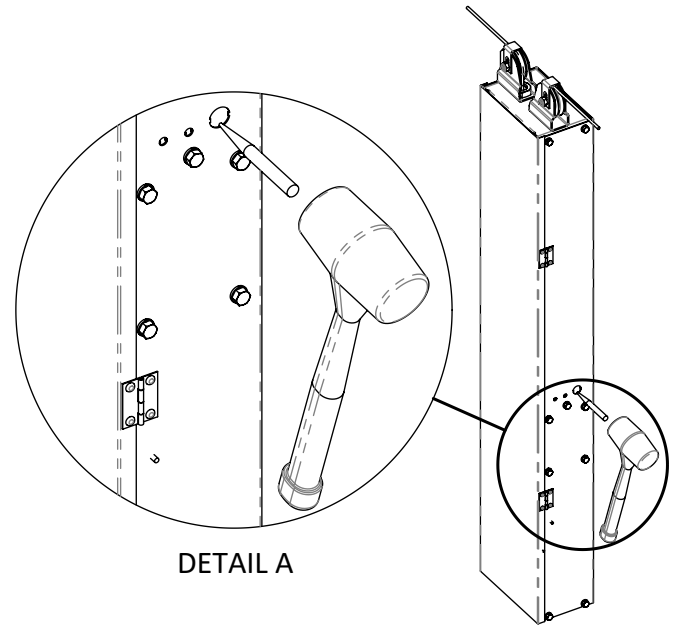
Page 1 Installation Instructions

Page 2 Parts List, Electrical Warning

Page 3 Retrofit Instructions for Gen 2 Machines

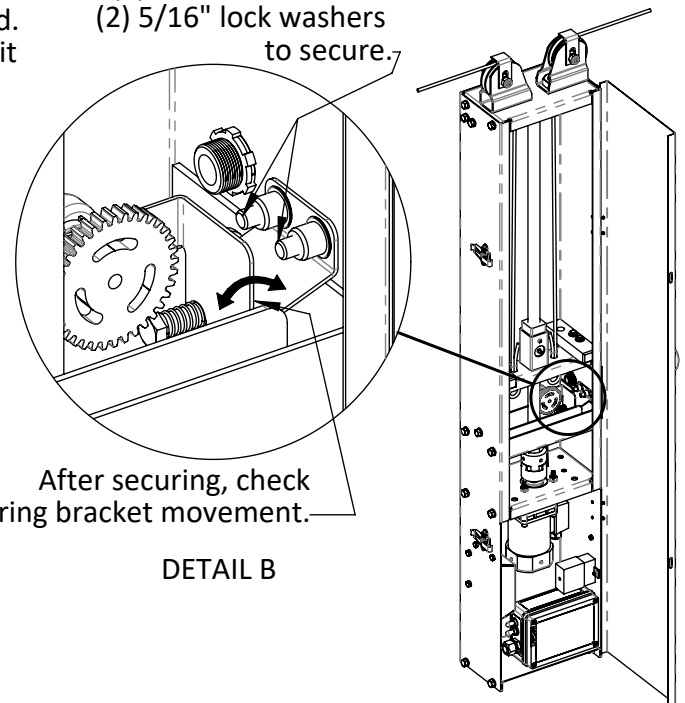
Installation Instructions:

1. Use a hammer and punch to remove knockouts on side of box, as shown in Detail A.
2. Run the machine to the closed position (NOTE: there needs to be enough room for the potentiometer, with at least 1" of clearance between the potentiometer and the load block).
Important: Position end stop collar so the load block cannot travel too far and hit the gear! Reference Detail C.
3. Rotate the gear on the potentiometer counter clockwise (while looking at the end of the shaft) until it stops. Then rotate the potentiometer clockwise half a turn.
4. Mount the potentiometer as shown in Detail B, using (2) 5/16" x 1" bolts.
5. Be sure the gears are meshing well with the screw thread. Also check the action of the spring bracket, making sure it compresses without binding, as shown in Detail B.
6. Set the open-position end stop collar.
7. Run the machine to the fully open position and watch the gear for proper meshing.
8. Route wires through strain relief. Wire the potentiometer in accordance with your controller's instructions. *Note: Green wire needs to be connected to the input signal on the control.*



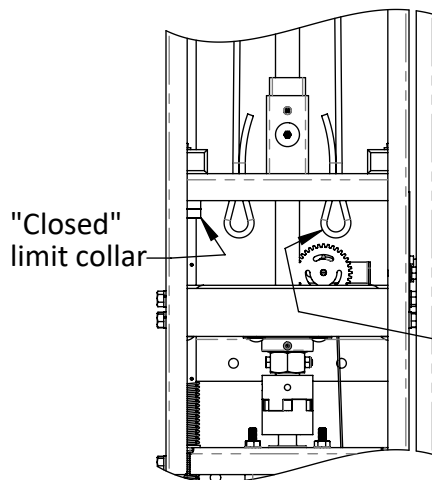
DETAIL A

Use (2) 5/16" x 1" bolts & (2) 5/16" lock washers to secure.



After securing, check spring bracket movement.

DETAIL B

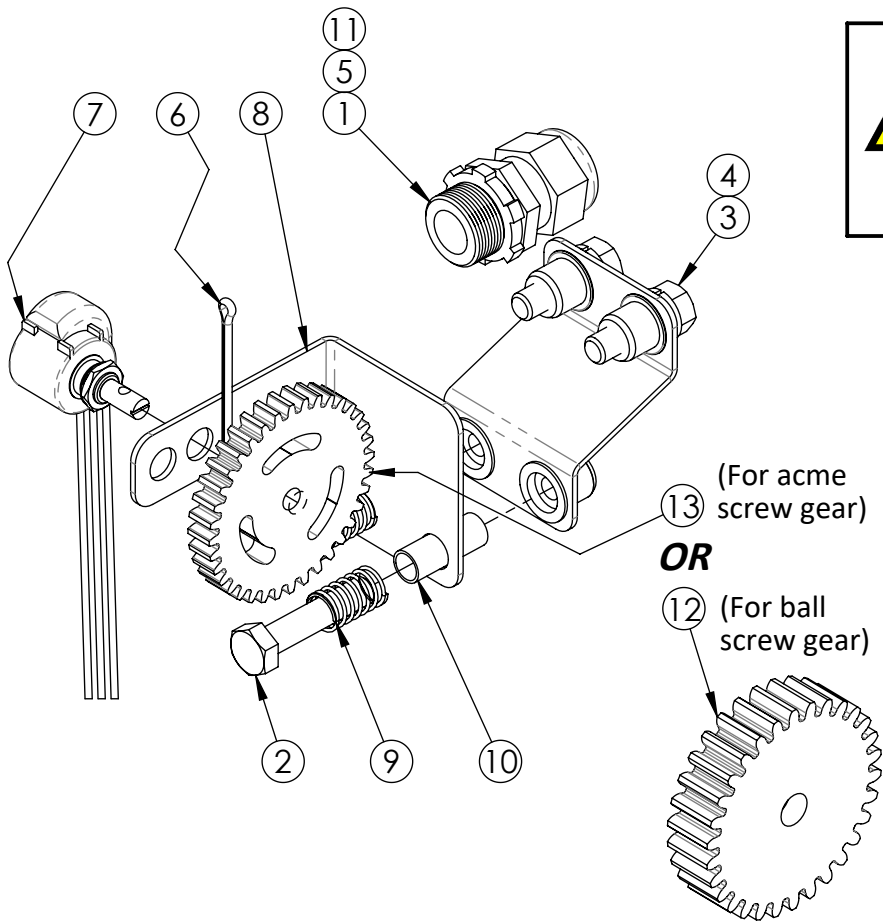


"Closed" limit collar

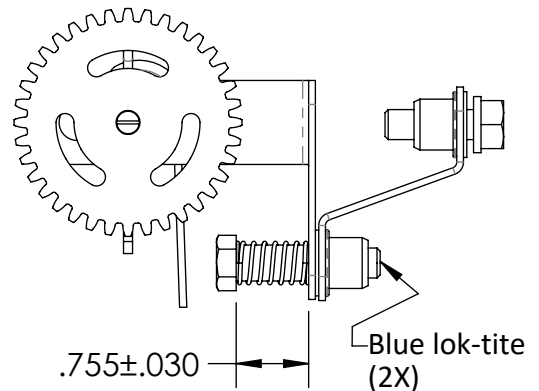
Position end stop collar so the load block & cable cannot travel too far and hit the gear!

DETAIL C

Parts Page (for repair only, kits come from factory assembled)



Disconnect electrical power and remove all load from machine before servicing or maintaining the machine. All local and national codes must be followed. Wiring must be done by a licensed electrician.



Assembled View

Parts List

Item No.	Part No.	Description	Qty
Common Parts			
1	420473	CONDUIT NUT, 1/2" NPT	1
2	690081	HEX BOLT, 5/16-18 X 1-1/2 ZP	2
3	690168	HEX BOLT, 5/16-18 X 1 ZP	2
4	690244	LOCK WASHER, 5/16 ZP	2
5	750030	STRAIN RELIEF, 1/2" NPT	1
6	970154	COTTER PIN, 3/32 X 1-3/4 ZP	1
7	970156	POTENTIOMETER, 10 TURN	1
8	970362	BRACKET, POTENTIOMETER SPRING	1
9	970366	COMPRESSION SPRING	2
10	970369	NYLON TUBE, 3/8 OD, 5/16 ID	2
11	HW-71-204	O-RING, 11/16 ID, 13/16 OD	1
970370 - Potentiometer Kit for Ball Screw Curtain Machines			
12	970158	GEAR FOR BALL SCREW, 30 TOOTH	1
970371 - Potentiometer Kit for Acme Screw Curtain Machines			
13	970159	GEAR FOR ACME SCREW, 36 TOOTH	1

North America:

Phone: 800.99VALCO (800.998.2526)

Fax: 419.678.2200

Email: sales@val-co.com

990198 [A] 12/21/2023

Page 2

International:

Phone: (+1) 419.678.8731

Fax: (+1) 419.678.2200

Email: intl.sales@val-co.com

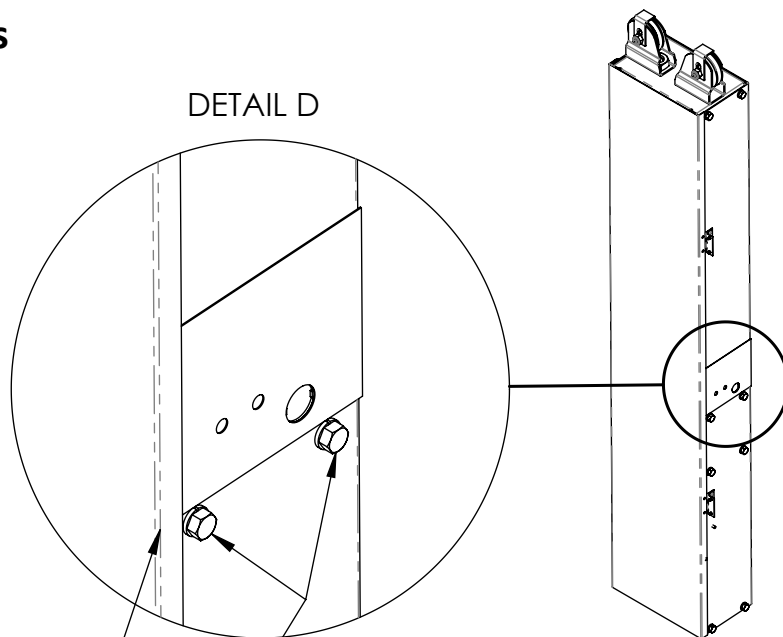
Retrofit for Gen II Curtain Machines

IMPORTANT! Print scale must be 1:1

Reference this page for 9704XX curtain machines (prior to November 2017 manufacture). The machines will need holes drilled in the side of the box to mount the potentiometer.

Cut out the drill template below. Follow instructions to mark and drill the (2) mounting holes for the potentiometer.

Then, follow instructions on page 1 for mounting instructions.



Align drill template as shown.

Gen II machines only have (2) bolts securing bearing plate.
WARNING: If your machine has 3 bolts as shown on page 1, Do not use this template!

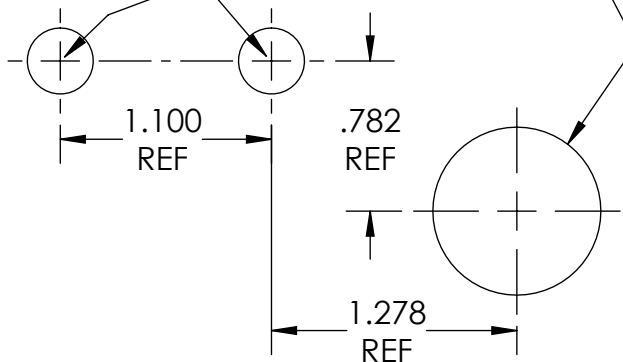
Drill Template



1.) Align this edge with the back of the curtain machine

2.) Align circle with $\phi 7/8$ " knockout hole.

3.) Mark (2) center points and then drill $\phi 11/32$ " holes.



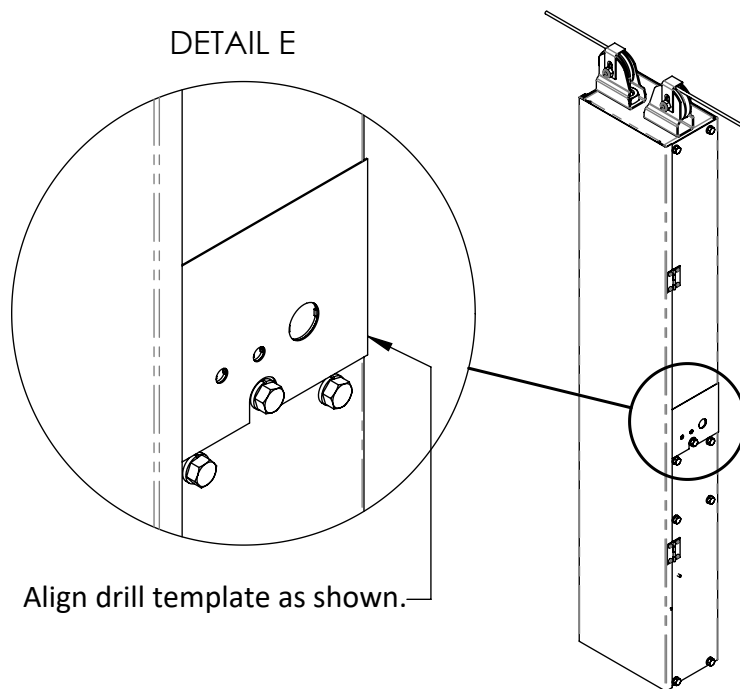
Retrofit for Gen III Curtain Machines

IMPORTANT! Print scale must be 1:1

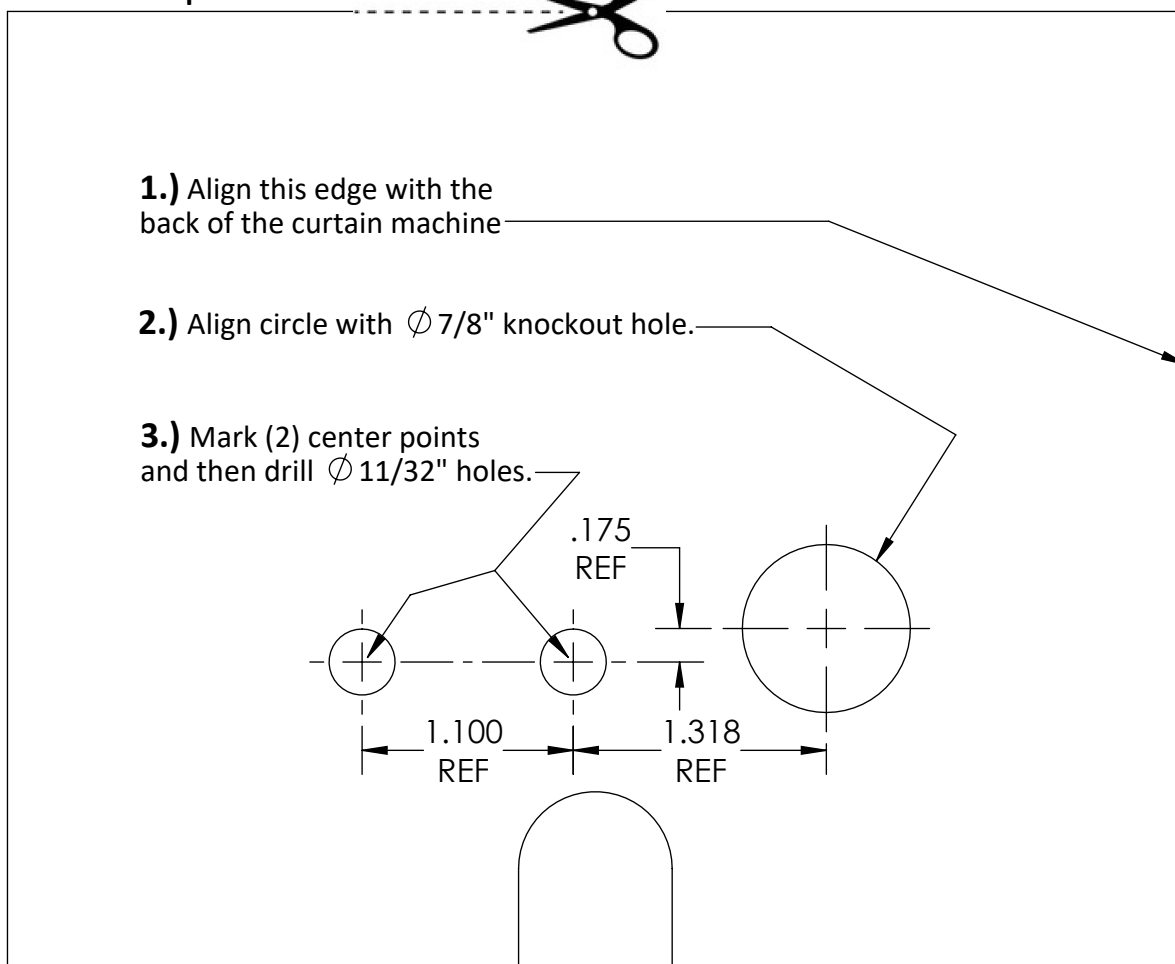
Reference this page for 9705XX curtain machines that do not have knockouts (between manufacture date of November 2017-July 2018) The machines will need holes drilled in the side of the box to mount the potentiometer.

Cut out the drill template below. Follow instructions to mark and drill the (2) mounting holes for the potentiometer.

Then, follow instructions on page 1 for mounting instructions.

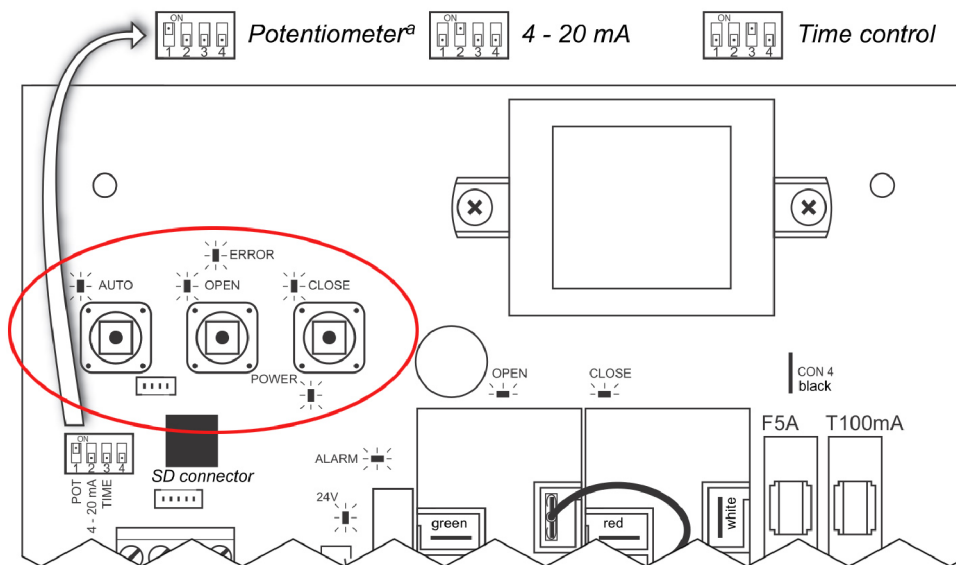


Drill Template

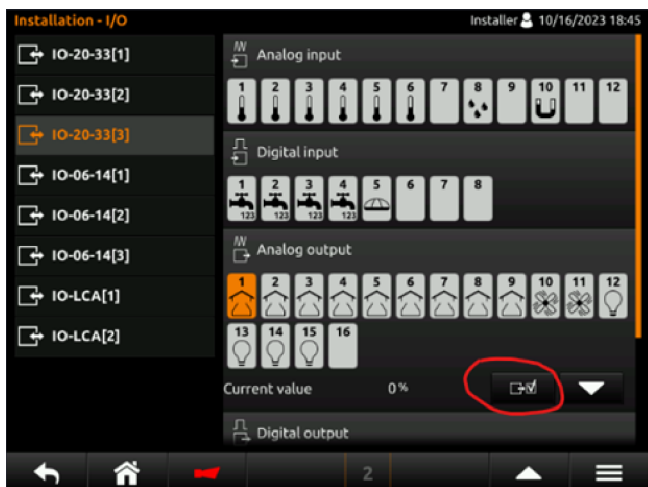


Calibration Process – Hotraco Fortica Controller

1. DIP Switch Settings per page 4.1 in the manual; Setting the DIP switches requires a pointed tool as the individual switches are a flat face design.



2. Press AUTO for 5 seconds to go into calibration mode. Light above the OPEN button will flash.
3. In the Fortica I/O calibration screen, for the curtain machine being calibrated, set the output to Maximum (100%).



4. Press and hold the OPEN button, while holding the OPEN, press the AUTO and then let go of both buttons. The curtain machine will run to the limit.
5. To confirm the limit has been reached, press and hold the OPEN button again and watch for no voltage change.
6. Press the AUTO button to save the value.
7. Adjust the Fortica calibration screen to Minimum (0%).
8. Press and hold the CLOSE button, while holding the CLOSE, press the AUTO and then let go of both buttons. The curtain machine will run to the limit
- 8A. If traveling a short distance, and the difference in voltage is less than 1V, press and hold the closed button for 5 seconds.
9. Press the AUTO button to save the value.
10. Calibration complete.