

# Automation Devices, Inc.

## MODEL 5200 IN-LINE FEEDER INSTRUCTIONS

### ➤ DESCRIPTION

The Model 5200 Series of In-Line Feeders convey oriented parts in a linear motion across tracks designed to transport a specific part. **Reliable track alignment is obtained through the absence of rubber feet.** The track should have its center of gravity as close to the midpoint of the top of the In-Line Feeder as possible for optimum results.

### ➤ LOAD RATING

The Load Rating is the total weight of all components including hardware that will be placed on the top of the In-Line (i.e. the track, shim stock, screws, washers, etc.). **Note: The weight of the parts you are feeding do not add to the Load Rating.**

The maximum track weight for the Model 5200 In-Line feeder is 16 ounces.

### ➤ OPERATION

The Model 5200 In-Line Feeder will operate on 60 Hz standard line current; however, **units may be ordered for 50 Hz operation.** Units are manufactured for 24 VAC, 120 VAC, and for 240 VAC power sources and must be specified when ordered. The In-Line will operate continuously at the full rated voltage; however, ADI manufactures a Model 9150 Series controller which will provide an adjustable full-wave AC output to control the vibration amplitude of the Model 5200 In-Line Feeder.

### ➤ IN-LINE MOUNTING & INSTALLATION

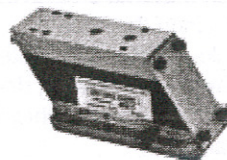
Never mount an In-Line Feeder on an overhanging plate. Heavy tracks swinging .050 inches in each direction need a solid mounting base. Typical In-Line applications require that they be elevated to bring the track up to the level of the discharge of the vibratory parts feeder. See below.

In-Lines are tuned *without* rubber feet unless specified at the time of ordering. However, some applications may require rubber feet. If any form of rubber mount will be used, the In-Line may have to be retuned.

### ➤ TROUBLESHOOTING AFTER INSTALLATION

Find out what differences exist from how the In-Line Feeder was tested at ADI versus the way the In-Line is set up at your facility.

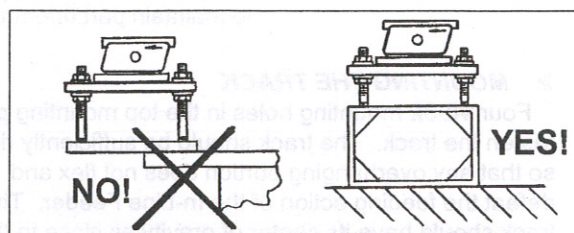
- Does the unit make any noise ... a slight hum? Check your power source up to the connection to the In-Line's coil.
- Are you using the correct controller?
- Does the weight of your track and mounting hardware



Model 5200  
In-Line  
Feeder

match the load rating stamped on the In-Line's side plate?

- Are the track mounting screws *too long* and restricting the movement of the reaction mass inside the In-Line?
- Is there enough clearance between the In-Line track



and the parts feeder's discharge? What about between the track and the device receiving the In-Line's parts?

### ➤ REPAIR PARTS

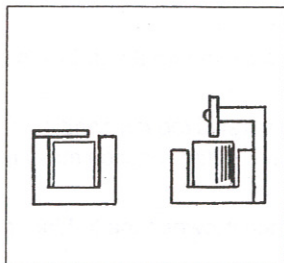
Replacement parts are listed in the exploded view shown in Document AF03.01. When placing a parts order, please provide the operating voltage and the serial number of each In-Line.



### ➤ TRACK DESIGN

The maximum length of the track should not exceed 10 inches. The track should be centered over the In-Line with no more than three inches of overhang at either end.

If you use  $\frac{1}{8}$  inch thick material on gravity tracks, you may want to use  $\frac{3}{16}$  inch thick material for the sides of the In-Line tracks. **Note:** Any material that lies directly on top of the In-Line (shims, risers, etc.) can be of thinner stock. If you need a thicker riser, use light-weight material.

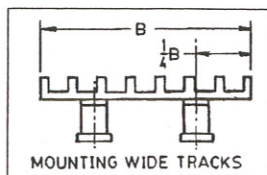
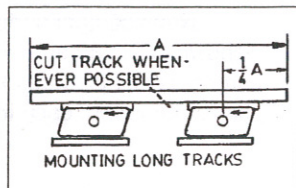


We do not recommend covers over the tracks. They can restrict part movement and make removing bent parts difficult. Rather than covers, it is better to design tracks using round rod or a thin blade as a **hold down** to maintain part orientation.

### ➤ MOUNTING THE TRACK

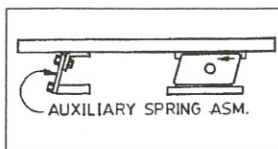
Four #8-32 mounting holes in the top mounting plate fasten the track. The track should be sufficiently rigid so that any overhanging portion does not flex and defeat the feeding action of the In-Line Feeder. The track should have its center of gravity as close to the midpoint of the top of the In-Line Feeder as possible for optimum results. **Avoid excessive track overhang.** No more than 30% of the track should overhang either end of the In-Line's top casting.

**Long Tracks** – This drawing illustrates the preferred location of two In-Lines, in series or tandem, that power a long track. **We recommend to split the track wherever possible.**



**Wide Tracks** – Two In-Lines in parallel, or side-by-side, are the solution when the track is *short but very wide*.

**Auxiliary Spring Assemblies** are another option when dealing with long tracks. This springing method uses only one In-Line Feeder.



### ➤ SOLENOID TO ARMATURE GAP ADJUSTMENT

After a feeder's springing has been adjusted, a higher amplitude of vibration may cause the laminations of the feeder's solenoid (Part Number 5211) to begin hammering, or striking, on the armature plate (Part Number 5216). When this occurs, you can hear the noise emitted from the In-Line. *Another common cause of this hammering is a line voltage increase at your plant.*

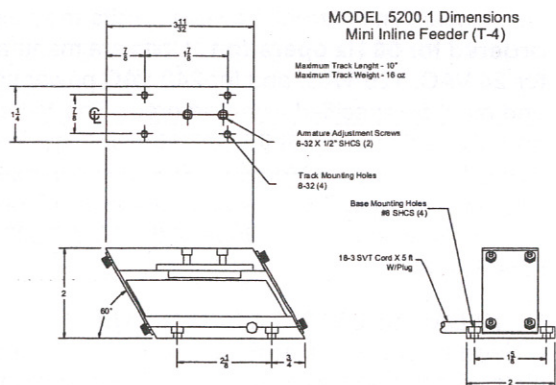
Determine the present gap before making the adjustment.

1. Remove track
2. Adjust gap
3. Reinstall track
4. Put holes through track

**There is no adjustable coil gap for the Model 5200 In-Line Feeder.**

If you have a relatively constant line voltage supply, then increasing the size of the solenoid/armature gap will decrease the feeder's amplitude. Conversely, decreasing the size of the gap will increase the feeder's amplitude.

### ➤ MODEL 5200 DIMENSIONS



A	B	C	D	E	F	G
4 1/2	2	2	3 11/32	1 1/4	1 1/16	1 7/8

H	J	K	L	M	N	O
7/8	7/8	1 5/8	2 1/8			3/4

P	Q Holes	R Holes	S Holes	Shipping Weight
	#6-32 (2 holes)	#8-32 (4 holes)	#8-32 (4 holes)	2 pounds

IF03.01