



INSTALLATION MANUAL DRAWER-IN-HOUSINGS



TOLL FREE: 888.582.0821

Installation

The top and bottom flanges allow for the unit to be welded or bolted into the product flow. If the unit is to be bolted into place, either mild steel or stainless steel bolts can be used. If the flanges have not been pre-drilled by IMI for bolt installation, any drill bit suitable for 304 stainless steel will do a quality job. **A minimum 3/8" diameter bolt is recommended.**

The Drawer-in-Housing must be installed to allow sufficient space for preventive maintenance and tramp metal removal. Allowance must be made for the drawer movement during the cleaning cycle.

———— Self Clean Specific ————

The Air-Actuated, Self-Cleaning Drawer-in-Housing magnetic assembly comes ready to install.

The unit requires 80 to 100 psi of shop air to operate. The filter regulator is located on one side of the Drawer-in-Housing assembly. The standard, electrically operated solenoid valve requires a 120 VAC/60 Hz single phase power source to operate. The solenoid is energized via a user supplied, normally open (NO) switch. A momentary push-button is typically used in many applications. Pushing the button opens the drawer, cleaning the unit. Releasing the button removes power from the solenoid, allowing the drawer to close.

The cable from the solenoid contains three conductors: blue, brown & green/yellow. To be connected as follows:

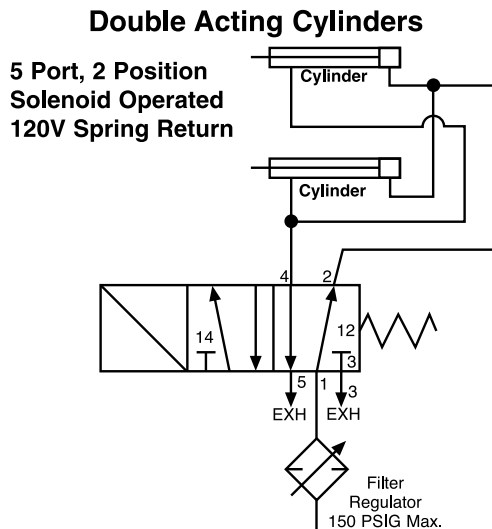
- Brown** - Connected to **switched** leg of 120 VAC supply circuit
- Blue** - Connected to **neutral** leg of 120 VAC supply circuit
- Green/Yellow** - Connected to **ground** bus of circuit

Solenoid Specifications: Coil -120V/60 Hz - 110V/50 Hz, 7.0 Watts, Class H insulation, Rated for continuous duty at 90%-105% of rated voltage. Enclosure rated for NEMA 4/IP 65 per DIN 40050. Molded with three pin plug-in connector.

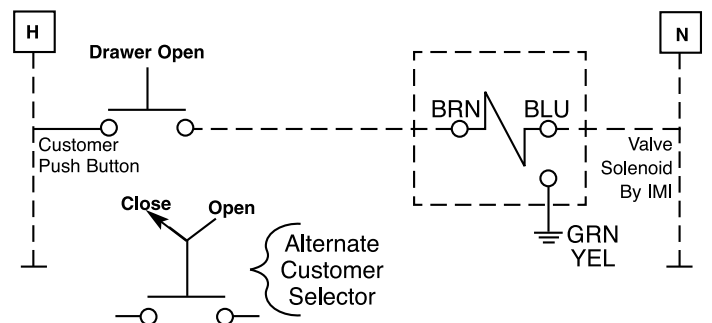
Cable - 5 ft lg., 3 conductor cord, equivalent to 18/3 SVT

Coil Resistance: 920 ohms cold, DC resistance Measure with a Digital Multimeter (DMM) connected to brown & blue leads

Self Cleaning Pneumatic Schematics



Self Cleaning Electrical Schematics



Operating Principle

The Drawer-in-Housing has been designed to allow the product to cascade through 1 to 4 banks of tubes, depending on the unit size. Tube spacing and banks vary according to the product being cleaned and the degree of cleaning required. Captured tramp metal is held on the tubes until cleaning is activated.

Cleaning Guidelines

Ensure that the product flow has been shut off and that the drawer assembly is empty of product. The recommended cleaning interval is at least twice in an 8 hour shift. However, cleaning is dependent on the amount of tramp metal being separated from your particular product. If you see heavy concentrations of metal, additional cleaning is necessary.

Manual Clean (SimpleClean™) Procedures

1. Ensure that the product flow has been shut off and that the drawer assembly is empty.
2. Release clamps on side of housing.
3. Open door & pull drawer assembly(s) out using the finger holes.
4. Use an air hose to blow the collected tramp metal off the tubes or use a rag/gloved hand to wipe the collected tramp metal down to the back end of the tubes where a non-magnetic area allows for most collected material to easily fall away or to be wiped off of the tubes.
5. Place drawer assembly(s) back into the housing.
6. Re-clamp the door into the closed position.
7. Restart the product flow.

EZ Clean Procedures

1. Ensure that the product flow has been shut off and that the drawer assembly is empty of product.
2. Release clamps on side of housing.
3. Open the drawer, sliding the tube assemblies through the wiper seals located in the seal plate. The door moves to the doorstop of the housing on the surface of the magnetic tubes via operator supplied force (The force required to open the drawer is directly proportional to the amount of metal collected on the magnetic tubes). At the front of the housing the collected tramp metal moves beyond the magnetic portion of the tube and falls free of the tubes into the provided collection tray.
4. Re-clamp the door into the closed position.
5. Restart the product flow.

Self Clean Procedures

1. Ensure that the product flow has been shut off and that the drawer assembly is empty of product.
2. Activate the air cylinders by energizing solenoid valve. This opens the drawer, sliding the tube assemblies through the wiper seals located in the seal plate. The wiper seals clean the collected metal off the tubes while the drawer opens, by pushing it on to a non-magnetic section at the ends of the tubes. The metal then falls off the tubes and into the provided catch pan.
3. After the drawer is fully extended and stops, de-energize the solenoid valve. The air cylinders will then close the drawer for operation.
4. Restart the product flow.

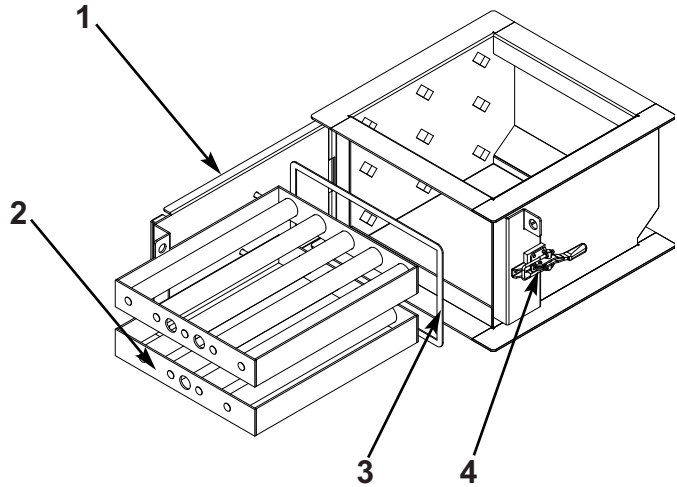
NOTE: Compressed air must be supplied at all times to ensure drawer remains in the closed position during operation.

Illustration & Parts

Manual Clean

Pictured: Manual Clean Housing

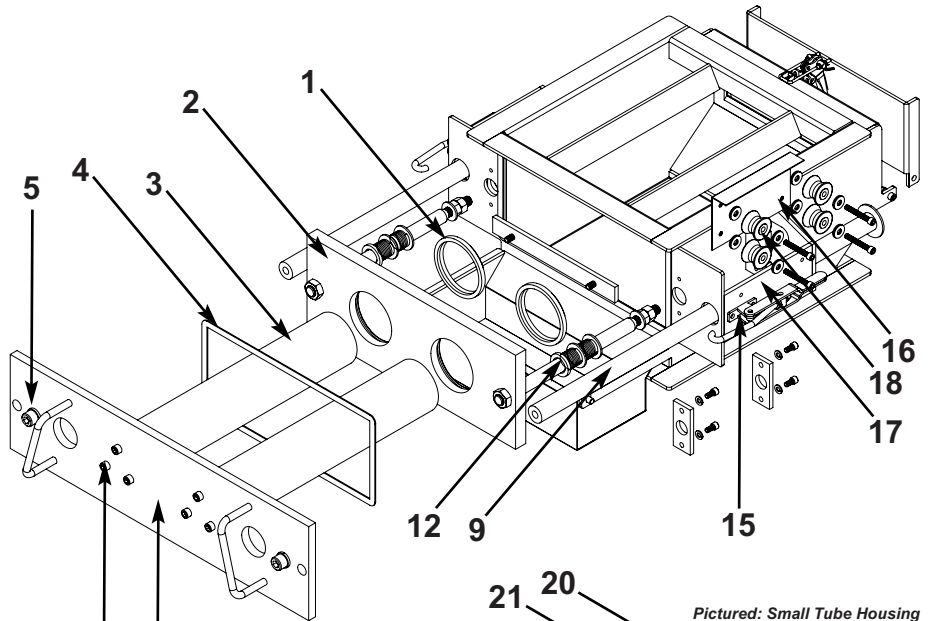
- | Ref. No. | Description |
|----------|---------------------|
| 1. | Access Door |
| 2. | Grate Tube Assembly |
| 3. | Door Gasket |
| 4. | Door Latch |



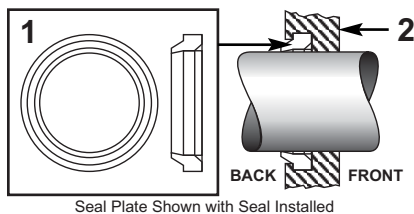
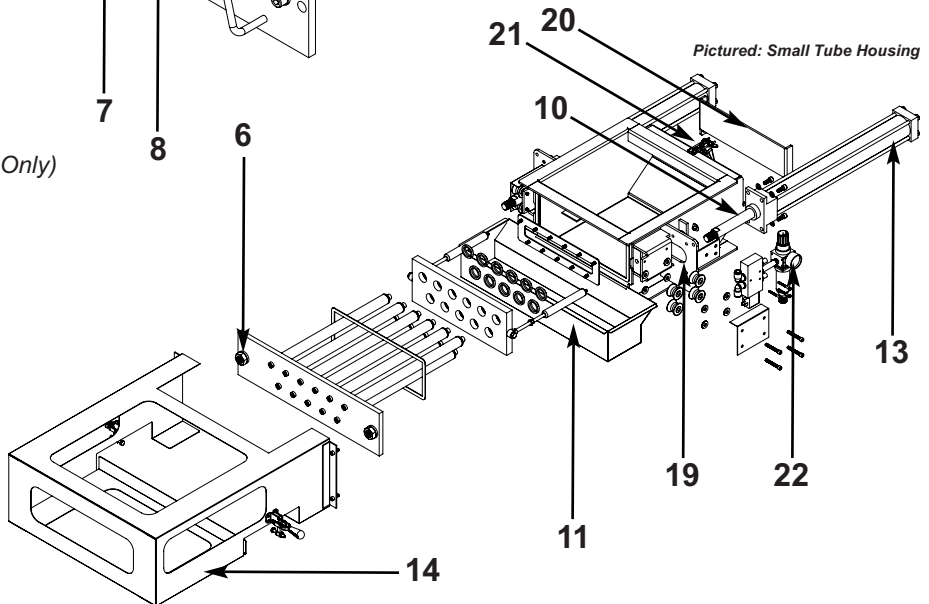
EZ & Self Clean

Pictured: Large Tube Housing

- | Ref. No. | Description |
|----------|-------------------------------------|
| 1. | Wiper Seal |
| 2. | Seal Plate |
| 3. | Tube Assembly |
| 4. | Door Gasket |
| 5. | Guide Rod Bolts (EZ Only) |
| 6. | Cylinder Bolts (SC Only) |
| 7. | Tube Assembly Bolts |
| 8. | Tube Front Plate |
| 9. | Guide Rods (EZ Only) |
| 10. | Cylinder Rods (SC Only) |
| 11. | Catch Pan |
| 12. | Spring Shocks |
| 13. | Cylinder (SC Only) |
| 14. | Guard Assembly (SC Only) |
| 15. | Door Clamp Assembly |
| 16. | Bearing Cover |
| 17. | Guide Bracket |
| 18. | Bearing Assembly |
| 19. | Cylinder Mount |
| 20. | Rear Access Door |
| 21. | Rear Door Clamp |
| 22. | Air Valve / Regulator Set (SC Only) |



Pictured: Small Tube Housing



Wiper Seal Replacement

Wiper seals should be inspected for normal wear every three to six months to ensure the integrity of the seal is intact.

To replace worn out or damaged washer seals:

EZ Clean Procedures

1. Open the drawer until it stops.
2. Unbolt the *Spring Shocks (12)* from the *Seal Plate (2)*.
3. Next remove the *Guide Rod Bolts (5)* from the *Tube Front Plate (8)*. This separates the drawer assembly from the housing.
4. Set the drawer assembly on a non-ferrous work surface and unbolt the *Tube Assembly Bolts (7)* and remove the *Tube Front Plate (8)* from the tubes.
5. Slide the *Seal Plate (2)* off of the tubes.
6. Push the worn out or damaged *Wiper Seals (1)* out of the *Seal Plate (2)*.
7. Gently push new *Wiper Seals (1)* in.
8. After new seals are installed in the seal plate reassemble the unit carefully, and check drawer travel to assure proper operation.

Self Clean Procedures

1. Remove *Guard Assembly (14)*.
2. Activate *Air Cylinders (13)* to open the drawer until it stops.
3. For safety, turn off air supply to *Regulator Valve Assembly (22)*. Disconnect supply tubing from all cylinder ports.
4. Remove the *Spring Shocks (12)* from the *Seal Plate (2)*.
5. Remove the *Cylinder Bolts (6)* from *Tube Front Plate (8)*. This separates the drawer assembly from the housing.
6. Set the drawer assembly on a non-ferrous work surface and unbolt the *Tube Assembly Bolts (7)* and remove the *Tube Front Plate (8)* from the tubes.
7. Slide the *Seal Plate (2)* off of the tubes.
8. Push the worn out or damaged *Wiper Seals (1)* out of the *Seal Plate (2)*.
9. Gently push new *Wiper Seals (1)* in.
10. After new seals are installed in the *Seal Plate (2)*, reassemble the unit carefully, and check drawer travel to assure proper operation.

Comments or Concerns?

We believe Industrial Magnetics, Inc. offers the finest Drawer-in-Housing available today. Great pride has gone into the design and manufacture of this unit. Any comments or concerns should be directed to our Customer Service Department at 1-888-582-0821. **We appreciate the opportunity to serve you!**

INDUSTRIAL MAGNETICS, INC.

06/10

1385 M-75 South • Boyne City, Michigan 49712 • Phone: (231) 582-3100

Fax: (231) 582-2704 • Web: www.magnetics.com • E-mail: imi@magnetics.com

AUTOMATION

888-582-0823

MAG-MATE™

888-582-0822

TRAMP METAL

888-582-0821