flagler

General Operating Instructions
For Flagler Duct Flange Machine
Model H-414-DF2

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Installation Instructions:

Make sure that all foreign matter has been removed from the machine which may have accumulated during transit.

Thoroughly inspect the machine for any physical damage.

Once the machine is positioned into its permanent location it must be leveled. Each of the corners has adjustment screws. Use a level on top of the machine, level the machine in both directions.

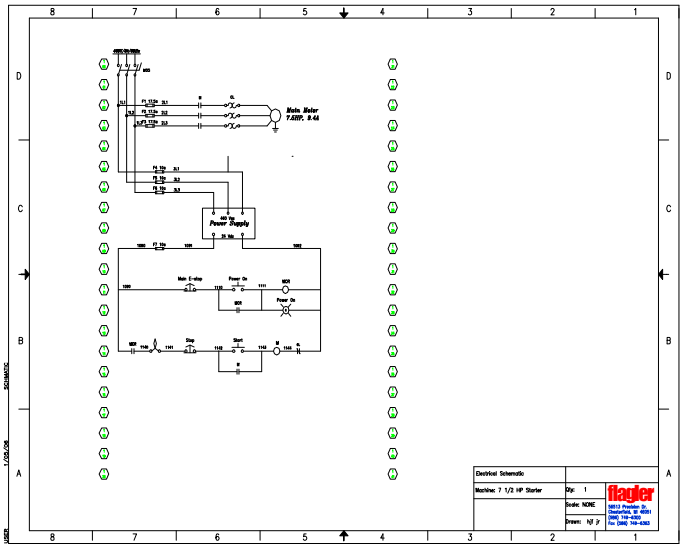
Machine Transport:

The Flagler Duct Flange Machine weighs approx. 3,500 lbs. depending on options. When transport this machine via flatbed truck, the machine must be strapped down to the bed of the truck using the Transport Strap Knockouts, located in the four corners of the machine.

NEVER STRAP THE MACHINE DOWN BY STRAPPING OVER THE ENTIRE MACHINE. THIS CAN CAUSE MAJOR DAMAGE TO THE SHORT PARTS FEEDER SIDE RAIL.

Electrical Connection:

This machine is designed to run off of Volt, 3 Phase, and 60 Hertz Power. Operator controls are 24 Volt DC power. The electrical panel is designed and built specific to voltage when ordered. See electrical schematic on the following page.



It is recommended that a minimum 30 amp breaker is mounted prior to the connection to the machine is made. A licensed electrician should perform the machine connection.

The only connection to the machine is the 3 phases into the main disconnect switch of the machine along with a ground. Check rotation, if rotation is incorrect, change 2 of the incoming leads.

Once the electrical connection has been made, check to make sure that all of the electrical functions of the machine are in working order.

Lubrication and Maintenance:

Bearings: **All bearing points on this machine have a grease fitting. It is recommended to use a #2 Lithium grease or equivalent. The bearing locations should be greased every 40 hours of operation.**

NOTE: Some hard guarding may have to be removed to access all of the grease fittings.

Roller Dies: **When forming galvanized material sheet metal, the galvanized will flake and chip off of the material and onto the roller dies. Extra care should be given to prevent the galvanizing from building up on the dies. A degalvanizer spray should be used periodically to keep the galvanized material from building up, especially on rolls which have knurls.**

Gears: **A coating of open gear grease should be kept on the gears at all times. This can be monitored when removing the guarding to grease the bearings and apply when necessary.**

Chain: **Apply oil to chain once a month depending on usage. Using an oil can apply oil directly to chain while running.**

Gear Motor: **See the gear motor data from SEW in regards to gear motor maintenance. Normally it is recommended to change the oil in the gear motor once a year.**

All material run through this machine should be free of all foreign matter, such as dirt and grime. This is important as it will minimize any unnecessary wear on the roller dies. A preventative maintenance schedule should be set immediately. This schedule should include the periodic lubrication of the machine and the periodic cleaning of the entire roller die set to remove any foreign matter. In general, a scheduled wiping off or cleaning of the entire machine.

Capacities:

The capacities of the standard Flagler DF1 and DF2 is 18-26 Ga. The capacity of optional tooling varies depending on the set ordered.

Standard Sets Include, but not limited to:

Roll Set	Location	Max. Capacity (mild steel)
Clip	Right	20
1 1/2" Standing Seam	Right	16
1/2" Pittsburgh	Right	16
3/8" Pittsburgh	Right	18
5/16" Pittsburgh	Right	20
1" Standing "S" Cleat	Center	22
2" x 2" Angle	Center	16
2 1/8" Bar Slip	Center	20
1/2" Pittsburgh	Right	16
1 1/4" Standing Seam	Right	18

MINIMUM PART LENGTH of 24" THROUGH ANY OF THE TOOLING WHEN NOT USING A SHORT PARTS FEEDER.

NOTE: When forming stainless steel, the capacity of each roll set is reduced by 2 even gauges. For example; the DF1 roller dies have a capacity of 18 Ga. MS and 22 Ga. Stainless. It is also recommended to lightly oil the material prior to forming.

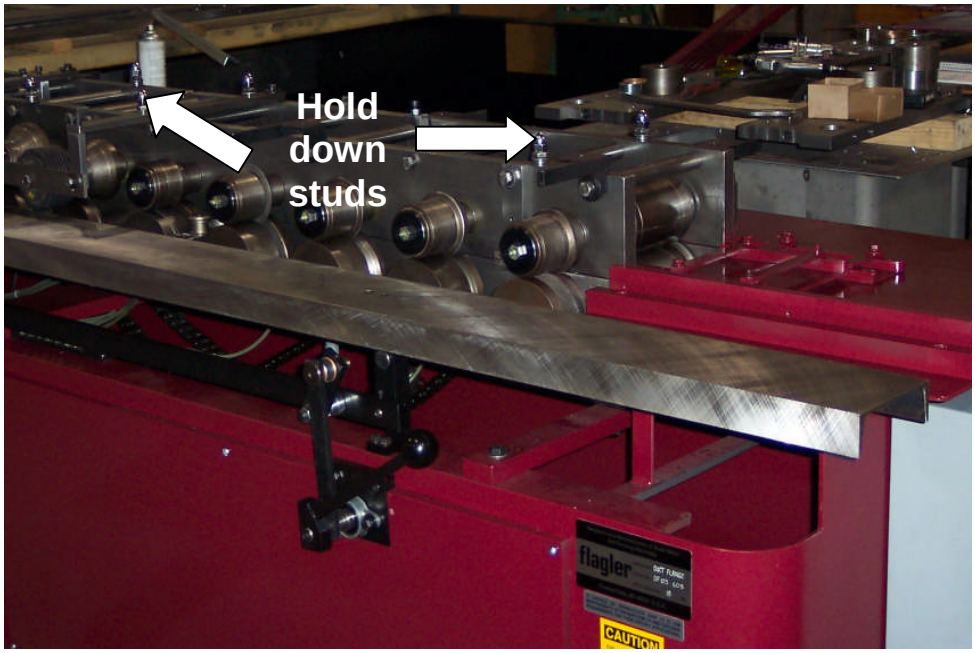
OPERATING INSTRUCTIONS FOR DUCT FLANGE ROLLS

All Duct Flange machines are shipped setup for the maximum capacity of 18 Ga. These settings do not need to be adjusted from 18-22 Ga. When running 24-26 Ga. there may be a couple of adjustments required to form a good flange.

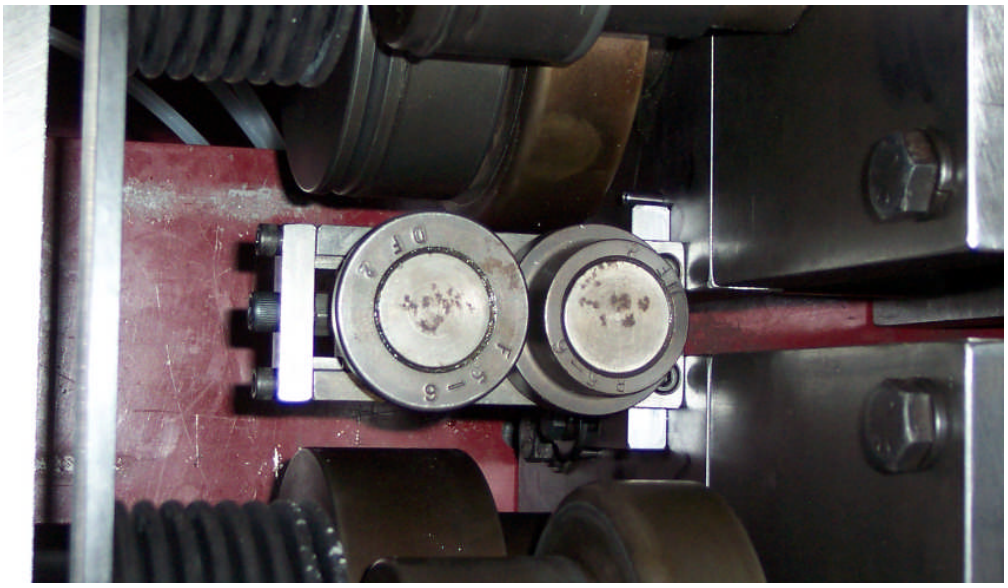
Possible adjustments may be:

1. **Feed Gauge Adjustment; the hem on top of the Duct Flange will decrease in size the lighter the gauge material which is run. To lengthen this hem, simply move the feed gauge to allow more material to enter the rolls.**

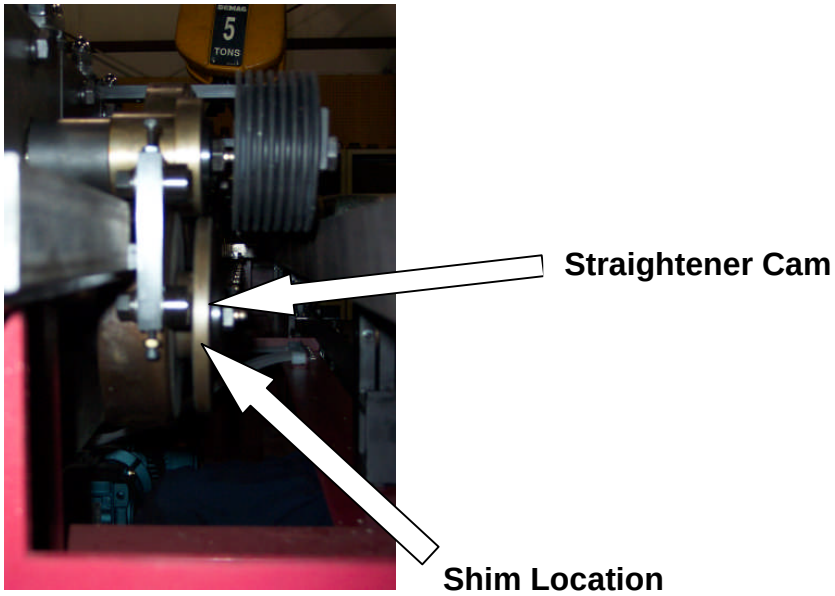
2. **Head Pressure; More head pressure may be necessary when running lighter gauges through the machine. To tighten the head pressure, merely tighten down the hold down studs on top of the machine directly above the roller**



3. **Lighter Gauge Material may also cause the corner clips to fit loose into the flange. To tighten the flange profile, loosed the idler rolls located between stations 4 & 5 (on DF1) and between stations 7 & 8 (on DF2). The Front Idler Roll is locked into position, loosen the jamb nut and move the front roll in to loosen up the flange and out to tighten up the flange.**

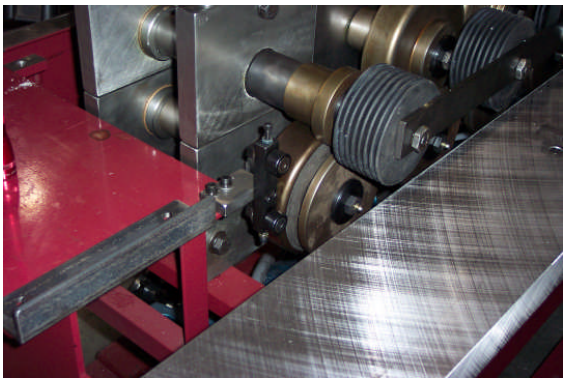


4. **Lighter Gauges may also flare out of 90 degrees. This can be corrected by removing a shim which is located in between the split rolls at the last station of the machine.**



Straightness:

When forming different materials and/or different material thicknesses it may be necessary to adjust the machine for straightness. This is done 2 different ways:



1. Upward or downward bow: This is controlled by the cams located on the exit end of the machine. If the form bows downward, adjust the 2 cams upward. If the form bows upward, adjust the 2 cams downward.

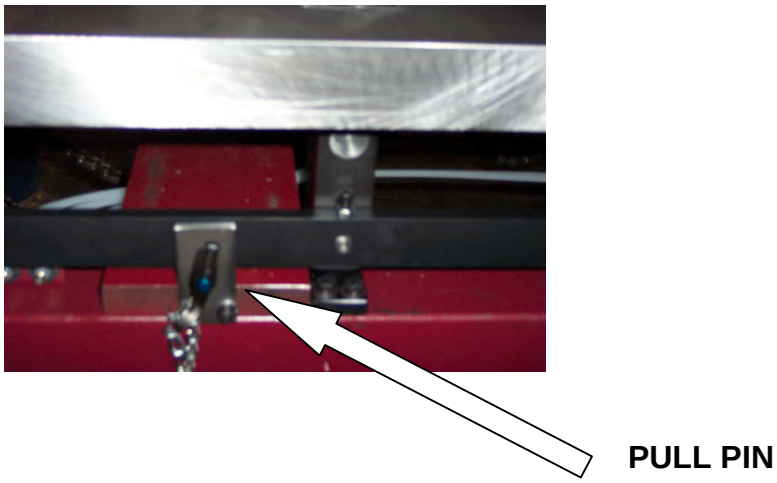
2. Sideward bow: This is controlled by the shim as mentioned above. There is a shim, or multiple shims depending, between the bottom #12 roller die set. For running lighter gauges, these shims should be removed. Make sure to reinsert these shims when changing back to heavier gauges.

Running Duct Flange Shorter Than 20":

The machine is equipped with a short parts feeder as standard equipment. Any parts shorter than 20" must be clamped to the short parts feeder. Otherwise you run the risk of the part not tracking through the roller dies properly.

To Run the Feeder:

1. **Pull the pin out from under the channel rail which holds the side table at the proper height.**



2. **Lower the rail into position.**

Push Rail toward the rear of the machine. This will drop the rail down.

3. **Slide the sort parts feeder carriage onto the rail with the toggle lock clamps at the front part of the machine.**

4. **Clamp the metal down to the carriage using both clamps.**

5. **Feed the material into the machine and let the carriage travel down the length of the machine.**

6. **For pieces shorter than 8” in length, it may be necessary to push the carriage through the machine since the spacing between the roller dies is 8” and the part will not feed from one station to the next.**

7. **When changing back to running longer sheets through the machine, raise the short parts feeder rail upward and reinsert the T-Pin.**

Feed Gauge:

The Duct Flange is equipped with a 2 piece feed gauge.

One piece is a 2” x 2” angle iron mount which is slotted to the table top for adjustment of the leg length.
The second piece is a hardened piece or ½” x 2”. This bar can be flipped around in case that the gauge begins to wear. There are 4 usable services which can be used.