

**OPERATING INSTRUCTIONS
RDN 140, 148 & 160 BELT PULLERS
WITH AC FLUX VECTOR DRIVE**

**"CAUTION"
"DO NOT OPERATE MACHINE WITH GUARD REMOVED"**

UNCRATE AND INSPECT

This machine has been carefully crated to assure safe arrival to your plant. It is important that you immediately inspect the equipment upon arrival at your plant and report any possible damage incurred in transit to the trucker.

It is suggested that you uncrate the equipment as soon as possible so that any concealed damage may be discovered. Compare the packing list with items received and in turn cross check the items with your purchase order and report any discrepancies to RDN MFG. CO. INC. at the address or phone number above.

START-UP PREPARATIONS

The Belt Puller is positioned downstream of the extrusion line cooling equipment. The machine should be carefully aligned with other extrusion equipment in the line and adjusted to the proper extrudate center line height with the threaded jack screws.

The machine requires three phase 60 hertz supply power. It is equipped with a UL listed power cord and twist lock power plug. The machine should be connected to the plant power supply through a disconnect switch fused in accordance with the National Electrical Code and any applicable state and local codes. Also, make sure the power is grounded through the power cable to the plant electrical ground.

Make sure that the equipment is properly wired for the voltage, phase and cycles supplied at your plant. Should there be any questions regarding the electrical connection, do not hesitate to contact us.

The air supply to the Belt Puller should be 1/2" diameter. The supply pressure should be 60-80 psi. A pressure regulator with gauge and filter are provided for the air supply. The pressure regulator should be set for a maximum of 60 psi.

OPERATION

The bottom belt is fixed and threaded jack screws with pads are provided for setting its height. The top belt is pneumatically actuated. Mechanical stops, which are adjusted by means of a handwheel on the upstream end of the machine, determine the belt opening in the closed position. An adjustable pressure regulator and gauge are provided to set the belt closing force. The pressure should be adjusted to provide enough gripping force to move the extrudate without slipping, but not deform it.

There are adjustable air flow regulators in the lines of the belt closing air cylinders. These are adjusted to insure that the take-up assembly closes evenly from end to end.

The machine is equipped with an AC Flux Vector variable speed control and motor. The major drive train components from the motor to the belt drive sheave are:

1. (OPTIONAL) A four speed manual shift transmission with ratios of 4.01:1, 3.04:1, 1.82:1 and 1.00:1.
2. A fixed speed reducer.
3. Double 40 roller chain with spring loaded tension idler.

The puller speed is adjusted by selecting the proper transmission ratio (if so equipped) and then adjusting the ten turn speed reference potentiometer to the desired line speed.

CAUTION - The transmission should be shifted only when the machine is stopped!

Each take-up assembly includes a poly "V" drive sheave, a poly "V" idler sheave with threaded belt tension adjusting screws and rollers to provide back-up for the facing surfaces of the belts.

The traction belts are 6 inch wide poly "V" design with 40/50 durometer solid neoprene gripping surface. Each take-up assembly also includes a poly "V" drive sheave, a poly "V" idler sheave with threaded belt tension adjusting screws and rollers to provide back-up for the facing surfaces of the belts.

MAINTENANCE AND LUBRICATION

Before any maintenance to machine, stop operation by pushing the stop button, and unplugging the machine from main power.

This machine was designed for continuous operation with a minimum amount of maintenance. Keep the machine cleaned and lubricated and it will remain in good working condition.

Facilities should be made to remove water from the extrudate before it reaches the puller. Water will corrode the machine and reduce its useful life. Also, water on the belts will reduce traction.

The pulleys are aluminum Poly "V" groove, which eliminates all tracking problems. If dirt or a piece of plastic should stick to one of the pulleys, it could cause a variation in the precision extrusion. Stop the machine and clean off pulley with knife or scraper.

The top drive assembly includes a Torque-Tamer which is defaulted to 5,500 ft. lbs. of torque. This can be adjusted by tightening or loosening the (3) adjusting bolts that are located on the unit.

To obtain good traction, the belts should be kept taut. New belts may stretch a bit. If adjusting of belts is required, this may easily be accomplished by taking up on the bearing block positioning screw, located at the entrance end on each side of the belt frame assembly.

If a belt needs to be changed, it may be accomplished by:

I. Top Belt

1. Loosen the bearing block positioning screws to provide belt slack.
2. Remove cap screws from the belt take-up assembly support arm at each end of the belt on the operator side. Rotate the support arms up to allow clearance for belt removal.
3. Remove the old belt and put on the new one.
4. Rotate the support arms into place and replace the socket head screws.
5. Take up on the bearing block positioning screws and adjust these so that the tension is uniform across the belt.

II. Bottom Belt

1. Loosen the bearing block positioning screws to provide belt slack.
2. Remove the support bracket below the belt take-up assembly on the operator side.
3. Remove the old belt and put on the new one.
4. Replace the support bracket.
5. Take up on the bearing block positioning screws and adjust these so that the tension is uniform across the belt.

Note: AC vector and AC Servo motors are designed to run hot. It is not uncommon for the motor temperature to reach 180-200f, depending upon ambient temp.

PULLER LUBRICATION

- Keep a coating of light oil on all shafting.
- Grease all bearings with fittings with No. 2 Lithium base ball bearing grease every 4 - 6 weeks.
- Place a few drops of oil on the roller chain each week.
- The idler sprockets and idler belt pulley have lifetime lubricated sealed ball bearings and require no attention.