OPERATING INSTRUCTIONS
RDN BELT PULLER
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 U.L. 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. A mechanical stop, which is adjusted by means of a handwheel determines the belt opening when the open/close switch is set to the close 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.

The air cylinder has an adjustable air flow valve for the belt closing. This is adjusted to insure that the take-up assembly closes smoothly.

OPERATION:

1. Turn on Disconnect switch.

2. Pull out the Emergency Stop button and press Power On button.

3. Press Start button.

4. Select the desired puller speed by turning the speed control Potentiometer. Clockwise will increase puller speed. Counter clockwise will decrease puller speed

To change the speed repeat Step 4.

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!

The standard traction belts are 6-inch wide poly "V" design with 40/50 durometer solid neoprene gripping surface (standard, other belt materials available). 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 ñEò 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.

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:

1. Loosen the bearing block positioning screws to provide belt slack.
2. Remove the old belt and put on the new one.
3. 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.
- (OPTIONAL) The RDN take-up frame spur gearbox is filled to the center of the sight glass with Mobil brand SHC634 synthetic gear oil. Check and maintain this level. This is a fully synthetic oil and should not need to be changed however because of possible contaminates and gear wear, RDN recommends it be changed every 12 months.

Procedure for removable & reinstallation of the RDN gearbox.

Remove the front take up frame bearings and front plates.
Remove the drive pulleys.
Remove the RDN gearbox.

Re-install;
Gearbox leave (4) mounting bolts loose.
It is recommended to install an new front shaft seal. Oil shaft to protect seal when sliding on.
Install the drive pulleys.
Install the front take up frame bearings and front plates and tighten.
This will pull the gearbox into alignment with the take-up assemblies.
Tighten RDN gearbox.
Install back door and tighten.
It is recommended to install a new door shaft seal. Oil shaft to protect seal when sliding on.
Before you install the rear pillow block bearing;

If you have one, use a dial indicator to read the height of the lower shaft height. Call the height zero.

Install the bearing spacer and mounting tube. Tighten the bolts to achieve the zero and install jamb nuts.