OPERATING INSTRUCTIONS
RDN VACUUM CALIBRATOR

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 immediately to RDN MFG. CO. INC. at the address or phone number listed above.

DESCRIPTION

The RDN Vacuum Calibrator provides mounting for water cooled vacuum sizer tooling and either immersion or spray cooling for plastic shapes and profiles. A handwheel and enclosed gear arrangement at each end of the tank provide micrometer vertical height adjustment.

Handwheels at each end of the tank also allow positioning of the tank in the lateral direction. The unit is mounted on grooved casters. A reversing gear head motor drives an acme threaded screw to provide locomotion for positioning the tank in the extrusion direction.

The cooling compartments are equipped with supply and drain piping with manual shut-offs and pipes along the interior for spray cooling. Water is supplied to the spray pipes from the water manifold through a separate manual shut-off for each pipe. There is an adjustable height drain for water level control for immersion cooling.

All tank drains either:

1). Connect to a 3" PVC drain manifold mounted below the tank and extending the length of the unit or

2). Drain to the stainless steel reservoir if the optional water recirculation system is supplied.

The unit is also equipped to supply vacuum and water cooling directly to vacuum calibrator tooling. For this mode of operation a vacuum manifold with air vent vacuum regulator, vacuum relief valve, vacuum gauge, and 12 vacuum ports including shut-offs, hoses and fittings is supplied. A water manifold with 12 water ports including shut-offs, hoses, and fittings supplies cooling water for the calibrator tooling. The vacuum pump is a direct acting water seal pump with noise muffling system.

The electrical controls include start-stop pushbuttons and magnetic starters with thermal overload protection for each motor.

If the optional Water Saver/Recirculation/Heat Exchanger System is supplied, cooling water is supplied to the water manifold and the compartment spray pipes by a recirculation heat exchanger system mounted on the calibrator frame. A pump circulates the process cooling water through a heat exchanger, the water manifold, the cooling compartments, the calibrator tooling, and the water reservoir.

Heat is removed from the process cooling water by chilled water from an external source circulated through the other side of the heat exchanger. A return line with manual valve is also provided to return process water directly to the reservoir from the heat exchanger. This allows recirculation of a portion or all of the process water through the heat exchanger and reservoir only.

INSTALLATION

The Vacuum Calibrator is designed for mounting on inverted "V" track. The tracks should be level to provide good support, centered to the extruder output centerline, and aligned parallel to the extrusion direction. With the Vacuum Calibrator setting on the "V" tracks couple the acme threaded drive screw to the reversing gear head motor. Move the calibrator to the approximate position on the tracks which will be used for normal extrusion conditions. Thread the acme nut a few turns onto the acme threaded screw. Set the acme nut floor bracket on the floor so the acme screw is parallel to the "V" track. Loosen the 4 mounting bolts for the reversing gear head motor and reposition so that the acme screw is parallel with the floor. Tighten the motor mounting bolts. Fasten the acme nut floor bracket to the floor. Fill the reservoir to approximately 7/8 full. Plug the line cord into an outlet with the proper line voltage. This outlet must be protected by a branch circuit disconnect switch fused in accordance with the National Electric Code and any applicable local codes. Open one of the water valves. (If the tank ends are still open, use the valve in the line from the heat exchanger to the reservoir.)

Depress the water pump start push-button. The pump should run and water should flow from the line with the open valve. If water flows the pump rotation is correct and the line phase rotation is correct. If water does not flow, the pump must be reversed. Depress the water pump Stop push-button. Disconnect the line cord from the power plug. Interchange two of the three power leads at the incoming line terminals in the control box. Plug the line cord into the outlet, start the pump, and again check for water flow. Once the water pump is operating properly the other motor rotations will be correct as all motors were phased at the factory. If the optional Water Saver/Recirculation/Heat Exchanger System is supplied, connect the heat exchanger to the chilled water source. Flexible hose should be used at the heat exchanger to allow movement of the Vacuum Calibrator.

LUBRICATION AND MAINTENANCE

1. Vacuum Pump - Refer to manufacturer's catalog sheets which are part of this manual.

2. Water Pump - Refer to manufacturer's catalog sheets which are part of this manual.

3. Calibrator Gear Head Movement Motor - Refer to manufacturer's catalog sheets which are art of this manual.

4. "V" Groove Wheels - Grease fittings. Re-lubricate on the plant maintenance schedule using Lithium Base Ball Bearing Grease.

5. Tank Vertical Adjustment (Two) - The threaded rods are lubricated at the factory. Apply a light coat of Lithium Base Ball Bearing Grease every six months.

6. Tank Vertical Adjustment (Two) - Grease fittings. Re-lubricate on the plant maintenance schedule using Lithium Base Ball Bearing Grease.

7. Tank Vertical Guide Rod (Four) - Oil filler cap. Re-lubricate on the plant maintenance schedule using SAE 40 oil.

8. The heat exchanger (optional) will require periodic service. The interval between cleanings will be determined by the amount of minerals in the water. Refer to manufacturer's catalog sheets which are part of this manual.