

## Double end Greasing System

DOUBLE END AUTOMATIC GREASING SYSTEM FOR CTRBAAR 6X11 WITH TWO STATIONS MODEL - NEP - 02 - 09 - 118 as per Drg No. NEP - 02 - 09 - 1118 for Double End Automatic Greasing System for CTRBAAT 6X11 with two stations.

### Technical Specifications

#### FIRST STATION:

For Greasing Operations PNEUMATIC GREASE PUMP MODEL - HTPN - GP1000 - 50 - 600.

HI-TECH pneumatic grease pump Model HTPN-GP-1000-50-600 is recommended for grease lubrication on machines where compressed air of around 4-6 kg/cm<sup>2</sup> is easily available and where due to safety or other limitations, the use of motorized unit is not feasible.

The pump is operated by pneumatic pressure i.e. through pneumatic line connected to the ports of a pneumatic cylinder. The cylinder is built in with the pump. During ON period of the pneumatic line, piston inside the cylinder is pushed, ejected out pressurized grease from the outlet port of the pump body. During reverse flow of pneumatic line, grease is sucked through the suction port in the pump. Spring force through follower plate exerts on the top surface of the grease (filled in the reservoir) makes the suction of the grease positive & easier. The grease thus flooded in the cylinder is ready for ejection. For the next lubrication cycle, the pneumatic pressure is given to the forward port of the cylinder. The Grease goes to fixture/Bearings through Seamless 18 Dia tube. The Discharge of pump is 50 Gms to 600 Gms (adjustable).

The pump consists of a 100 kg. Reservoir, mounted on a C.I body which is painted in Blue shade. On the side of C.I body, a pneumatic cylinder is mounted. The pump has well mounting construction for fixing on the machine frame. It should be mounted in vertical position with the help of 4 bolts. The details of various parts of pneumatic pump are as given below.

1-Reservoir - Made from MS Sheet and is having capacity to store 100 kg. Of grease.

2-Lid - This is provided on the top of reservoir of MS sheet.

3-Follower plate this is heavy plate of MS with tel-Tale. This keeps the grease in compressed condition to avoid air pockets.

4-Plunger A piston is provided in the CI body. This is operated by the pneumatic cylinder. By the moment of this, the grease is ejected or sucked in to the grease cavity.

5-Pneumatic cylinder A two port pneumatic cylinder is provided which controls the movement of plunger. The port size is BSP.

6-Grease out let port A BSP Out let connection with 1 BSP NRV is provided.

7-Bleed plug A bleeding port is provided on square C.I body for trapped air in grease.

8-Inlet port- A1/2 BSP Inlet port is provided along with an NRV for filling grease in to the reservoir.

9- Solenoid Valve- The function of this valve to changeover the greasing line after complete greasing at one side of Bearing and line goes to second side of Bearing and its goes alternately. Its coil works at 24 Volt DC

10- Weighing machine with Fixture: A fixture is put on the weighing machine. The recommended Bearing (Both sides) can put into the fixture .The weighing machine gives the exact weight of Grease with visual display at electric control Panel.

Carry out the grease distribution piping on the machine. Mount the grease pump and solenoid control valve at a convenient place on the machine and connect the out let of pump to the distribution line. Connect the inlet of solenoid valve to a compressed air source (pressure 4-6 kg/cm<sup>2</sup>), and outlets of solenoid valve to air inlet ports of pneumatic cylinder of the grease pump. It is necessary to put filter regulator unit in the pneumatic line fed to the pump. This will insure that pneumatic line going to the pump is dust and moisture free. Connect 24 VOLT DC Supply to solenoid valve through timer at Electric Control Panel. Set desired OFF time on timer.

Fill grease in to the pump either by opening the top lid or through grease filling port (it is recommended that grease should be filled through filling port only to avoid ingress of dust or other foreign particles while filling grease manually). Close lid firmly after filling the grease.

Switch on the 220 Volt AC power to Electric Control Panel the output will be 24 Volt DC. The compressed air will now operate the cylinder through forward port of cylinder and grease will be ejected out from the outlet of pump under pressure. After set time is over, the timer will cut off the supply to solenoid valve. The valves spool will now shift and cylinder will return to its original position by air pressure through return port. While returning the plunger will suck grease from reservoir and pump will now be ready for next operation. The Grease goes to solenoid valve and from solenoid valve it goes to both sides of fixture alternately.

**SECOND STATION:** For Sealing Operations.

After Greasing operations Bearings are ready for sealing operations. A power Pack with 6.5 LPM is put under the table. A cylinder is fitted on the table. A Power Press with 27.3 Ton Capacity is used to Press the Bearing Seal with the help of a fixture- seals can be pressed by putting the cylinder Pressure on the both sides of Bearings