

**TELEDYNE HYSON**

Die Charging Equipment

Buying Nitrogen

Commercial grade, water pumped nitrogen can be purchased from most industrial gas suppliers such as Linde, Burdett, or Airco. Nitrogen is an inert, non-flammable gas that comprises approximately 78% of the earth's atmosphere. The average price for a single bottle of nitrogen is approximately \$10 for a 231 cubic foot bottle. Suppliers of industrial gases have not yet universally standardized on bottle fittings, and unless specified, nitrogen bottles may come with any of four different fittings. The C.G.A. (Cylinder Gas Association) is attempting to promote standards and has recommended the CGA-580 fitting for water-pumped nitrogen. This fitting is on the Hyson NCA-1500 charging assembly. When ordering nitrogen it is important to specify the CGA-580 and to insist that it be supplied. Some gas suppliers advise customers that the CGA-580 is used only for food processing, but this is only local custom and not general industry practice.

Charging Nitrogen

Charging a Super Nitro-Dyne system to operating pressure is a simple operation and can be compared to putting compressed air into a tire. Both are closed systems or containers with a check valve in the inlet fitting.

The steps to charge a system to pressure are as follows:

1. Connect the regulator to the nitrogen bottle and the charging hose to the inlet fitting of the CP-1500 Control Panel.
2. Tightly close the exhaust valve on the CP-1500 Control Panel and the shut-off valve on the regulator.
3. Give the regulator valve several turns counter-clockwise to insure a low pressure setting.
4. Open the valve on the nitrogen bottle to admit nitrogen to the regulator.
 - a. The gauge to the operator's right should read the pressure in the nitrogen bottle.
 - b. The left hand gauge reads the regulator pressure.
5. Adjust the regulator until the left hand gauge reaches the desired pressure for the system. (The die designer should have predetermined an approximate starting pressure for the die.)
6. Open the shut-off valve at the regulator and the nitrogen will fill the Super Nitro-Dyne system. When the gauge on the CP-1500 Control Panel matches the left hand gauge on the regulator at the desired operating pressure, the bottle valve can be closed.
7. Disconnect the charging hose from the CP-1500 panel. The pressure gauge should stay at the determined pressure.
8. The press can be operated and pressure adjustments made as indicated by the sample panels. For more pressure add nitrogen; for less pressure bleed off pressure at the control panel valve.

Continuously Connected Nitrogen Bottle

A minor leak in the Super Nitro-Dyne system can easily be sustained for the duration of most die runs by maintaining the connection with the nitrogen bottle.

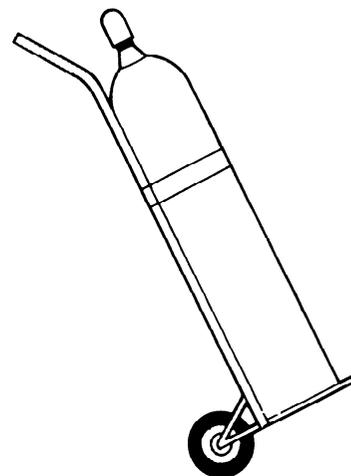
For continuous operation, steps 1 through 5 are repeated. The charging hose is left connected to the CP-1500 Control Panel and the regulator shut-off valve is left open. When the pressure in the system leaks to a value less than the regulator setting, the regulator will open and maintain a uniform pressure in the system.

The nitrogen bottle should be strapped to the press to prevent it from accidentally being knocked over.

Quick disconnect model available. P/N NCA1555.



The NCA-1500 charging assembly is used to transfer nitrogen from a commercial bottle to the Super Nitro-Dyne system. The charging assembly includes a CGA-580 bottle fitting, regulator with bottle and system pressure gauges, shut-off valve, and 10 feet of high pressure hose with a fitting for the panel inlet.



Portable bottle dolly available from welding gas supplier.