INSTRUCTIONS and REPLACEMENT PARTS
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Oxweld
Trade-Mark
NOT TO BE REMOVED

H-12 HYDRAULIC BACK-PRESSURE VALVE

For Use with Fuel Gases
Other Than Acetylene

IMPORTANT: Before connecting the hydraulic to a supply line which has previously contained gas, the supply line must first be isolated (completely shut off) from the source of gas supply, vented, and then purged of all traces of gas. Nitrogen or carbon dioxide should be used for purging.

The Delivery Capacities of the H-12 Hydraulic are:

<table>
<thead>
<tr>
<th>Inlet Gas Pressure</th>
<th>Capacity for H-12-3M</th>
<th>Capacity for H-12-6M</th>
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<tbody>
<tr>
<td>15 psi</td>
<td>3000 cfh</td>
<td>6000 cfh</td>
</tr>
<tr>
<td>30 psi</td>
<td>4500 cfh</td>
<td>9000 cfh</td>
</tr>
<tr>
<td>45 psi</td>
<td>6000 cfh</td>
<td>12000 cfh</td>
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The maximum allowable operating pressure for either size, when used in a fuel gas distributing system, is 50 psi. Pressure drop through this hydraulic is less than 1 psi for all gases having a specific gravity of 2.0 or less.

I. Installation Instructions

A. Install the hydraulic in a true vertical position as illustrated in Figure 1.

B. Make up the necessary gas connections between the hydraulic service outlet tee and the inlet connection on the apparatus to which gas is to be supplied. If this connecting gas line is of considerable length, a shutoff valve should also be provided near the hydraulic service outlet.

C. Remove the liquid-filling plug and the liquid-level plug. Fill the hydraulic with PRESTONE brand anti-freeze through the filling plug opening, until there is an overflow from either the liquid-level opening or the filling plug opening. Replace the plugs.

D. Open the service valve at the hydraulic outlet and close the fuel gas supply valve at the consuming device. Open the station shutoff valve and any other valves on the supply line serving the hydraulic, to fill the hydraulic and the newly installed service connection piping with gas at working pressure.

BE SURE THIS BOOKLET REACHES THE OPERATOR. YOU CAN GET EXTRA COPIES THROUGH ANY LINDE OFFICE.
E. Test for leaks all joints on the hydraulic and service connection piping. These should include the hydraulic filling plug and outlet connections. Use soapy water and maintain operating pressure in the hydraulic and service connection piping. Never test for leaks with an open flame. Eliminate all leaks before putting the hydraulic into service.

II. Operating Instructions

A. To fill the Hydraulic Back-Pressure Valve or to Check the Liquid Level: First close the station shut-off valve and the hydraulic outlet valve. Lift the relief valve cap to vent any gas pressure in the hydraulic through the vent pipe. Remove the liquid-filling plug and the liquid-level plug. Fill through the filling plug opening until there is an overflow from either the liquid-level or filling plug opening. Replace the plugs. The liquid level should be checked regularly, and the correct level maintained at all times.

B. The frequency with which the level should be checked depends upon the conditions of service and the liquid used in the hydraulic. PRESTONE brand anti-freeze is a very satisfactory liquid. If the H-12 is used for a dry gas, use concentrated or undiluted PRESTONE brand anti-freeze unless the hydraulic may be exposed to temperatures below 50°F. Where anti-freeze protection at lower temperatures must be provided, use a water solution of PRESTONE anti-freeze as directed in the booklet "Cold Weather Care of Acetylene Generating and Distributing Equipment," Form 3088, a copy of which is packed with the H-12.

If the H-12 is used for a gas that contains a considerable amount of water vapor, it is desirable to have a solution which will neither absorb, nor give up, any moisture as the gas passes through it. Such a solution is said to be in "equilibrium" with the gas and reduces the necessity of frequently checking liquid levels. Full instructions for obtaining the correct concentration are given in F-3088.

C. If a Flashback Should Occur, check the liquid level immediately. Before resuming service, make sure that the liquid is at the correct level. Refill the hydraulic if necessary.

(Continued on Page 5)
## Replacement Parts List

### FOR HYDRAULIC BACK-PRESSURE VALVES

**TYPE H-12-3M** | **PART NO. 06P67**
---|---
11R12 | Inlet Screen (H-12-6M)
11R15 | Inlet Screen (H-12-3M)
14R12 | Swing Check Valve
14R13 | Swing Check Valve (H-12-6M)
14R15 | Swing Check Valve (H-12-3M)
16R73 | RV-26 Relief Valve (See Valve Illustration for Parts)
52S76 | Relief Valve Cap

### PART NO. DESCRIPTION

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>M-E-U-M-R-8</td>
<td>2-in. Crane No. 592 Malleable Iron Railroad Male Union Elbow (H-12-6M)</td>
</tr>
<tr>
<td>M-E-U-M-R-6</td>
<td>2-in. Crane No. 592 Malleable Iron Railroad Male Union Elbow (H-12-3M)</td>
</tr>
<tr>
<td>M-N-S-6</td>
<td>1-in. Extra Strong Seamless Steel Nipple</td>
</tr>
<tr>
<td>M-N-S-7</td>
<td>1-1/4-in. Extra Strong Seamless Steel Nipple (H-12-3M)</td>
</tr>
<tr>
<td>M-N-S-9</td>
<td>2-in. Extra Strong Seamless Steel Nipple (H-12-6M)</td>
</tr>
<tr>
<td>M-N-S-C-6</td>
<td>1-in. Extra Strong Seamless Steel Close Nipple</td>
</tr>
<tr>
<td>M-N-S-C-7</td>
<td>1-1/4-in. Extra Strong Seamless Steel Close Nipple (H-12-3M)</td>
</tr>
<tr>
<td>M-N-S-C-9</td>
<td>2-in. Extra Strong Seamless Steel Close Nipple (H-12-6M)</td>
</tr>
<tr>
<td>M-N-S-H-S-5</td>
<td>3/4-in. Extra Strong Seamless Steel Short Nipple</td>
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### SYMBOl | DESCRIPTION

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<tr>
<td>P-C-19</td>
<td>1/8-in. x 1-1/8-in. Cadmium Plated Steel Cotter Pin</td>
</tr>
<tr>
<td>M-PP-6</td>
<td>1-in. Crane No. 320-D Square Head Steel Pipe Plug</td>
</tr>
<tr>
<td>M-PP-8</td>
<td>1-1/2-in. Crane No. 320-D Square Head Steel Pipe Plug</td>
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<tr>
<td>M-PP-H-4</td>
<td>1/2-in. Vogt No. 2473 Hex Head Steel Pipe Plug</td>
</tr>
<tr>
<td>M-TE-R-28</td>
<td>1-1/4-in. x 1-1/4-in. Crane No. 264-E Malleable Iron Reducing Tee (H-12-3M)</td>
</tr>
<tr>
<td>M-TE-R-49</td>
<td>2-in. x 2-in. x 2-in. Crane No. 264-E Malleable Iron Reducing Tee (H-12-6M)</td>
</tr>
<tr>
<td>M-TE-R-50</td>
<td>2-in. x 2-in. x 3/4-in. Standard Malleable Iron Banded Tee (H-12-3M)</td>
</tr>
<tr>
<td>M-TE-R-59-1</td>
<td>3-in. x 3-in. x 3/4-in. Standard Malleable Iron Banded Tee (H-12-6M)</td>
</tr>
<tr>
<td>---</td>
<td>1-in. Crane No. 996-E Malleable Iron Railroad Male Union Tee (H-12-6M)</td>
</tr>
<tr>
<td>---</td>
<td>1-1/4-in. Vogt No. 6686 Forged Steel Female Union Tee (H-12-3M)</td>
</tr>
<tr>
<td>---</td>
<td>2-in. Vogt No. 6686 Forged Steel Female Union Tee (H-12-6M)</td>
</tr>
</tbody>
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### HARDWARE ▲

- **COUPLINGS**
  - M-CU-6 | 1-in. Vogt No. 2329 Steel Coupling
  - M-CU-9 | 2-in. Standard Wrought Steel Coupling (H-12-3M)
  - M-CU-11 | 3-in. Standard Wrought Steel Coupling (H-12-6M)

- **ELBOWS**
  - M-EL-6 | 1-in. Crane No. 260-E Malleable Iron Elbow
  - M-EL-S-7 | 1-1/4-in. Crane No. 268-E Malleable Iron Street Elbow (H-12-3M)
  - M-EL-S-9 | 2-in. Crane No. 268-E Malleable Iron Street Elbow (H-12-6M)

- **PLUGS**
  - M-PP-6 | 1-in. Crane No. 320-D Square Head Steel Pipe Plug
  - M-PP-8 | 1-1/2-in. Crane No. 320-D Square Head Steel Pipe Plug

### ALL HARDWARE ITEMS ARE EITHER:

- **a.** Standard hardware (screws, bolts, nuts, washers, pipe fittings, etc.) made by many manufacturers, which can be purchased locally by the description given, or
- **b.** Standard parts or assemblies which we purchase complete from specific manufacturers. For these we give the manufacturer's name, catalog number, etc.

It will save you time and money to purchase these items through local outlets, or directly from the specified manufacturer. If no other source of supply is available, you may order these from us.

### RV-26 RELIEF VALVE

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▲ All hardware items are either:

- a. Standard hardware (screws, bolts, nuts, washers, pipe fittings, etc.) made by many manufacturers, which can be purchased locally by the description given, or
- b. Standard parts or assemblies which we purchase complete from specific manufacturers. For these we give the manufacturer's name, catalog number, etc.

It will save you time and money to purchase these items through local outlets, or directly from the specified manufacturer. If no other source of supply is available, you may order these from us.
III. Maintenance Instructions

A. Before Making Any Adjustments or Repairs to the Hydraulic: CAUTION: Shut off the supply of gas to the hydraulic, and close the station shut off valve. Then lift the relief valve cap to relieve any pressure in the hydraulic through the vent pipe.

B. To Drain the Hydraulic, remove the drain pipe plug at the bottom of the hydraulic. Before replacing the plug, be sure that the screen is clean.

C. No repairs should be made to the hydraulic back-pressure valve except those which can be made merely by replacing parts. Only parts listed as "replacement parts" on Page 4 of this booklet should be replaced. If any other parts require replacement, communicate with The Linde Air Products Company.

D. Operate the Relief Valve regularly at least once a week by lifting the relief valve cap for an instant to permit acetylene to escape through the vent pipe. This guards against sticking of the valve.

E. Clean and inspect the Relief Valve regularly. Follow the instructions given in F-6978 "Instructions for RV-26 Relief Valve" which is packed with the H-12. Also, check for leakage through the relief valve by disconnecting the vent pipe union and using a soapy water solution at this opening.

F. Clean and inspect the two swing check valves at regular intervals. If necessary, replace them.
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