INSTRUCTIONS for

**ACV-4**

**POWDER-PINCH VALVE**

**IMPORTANT**

These INSTRUCTIONS are for experienced operators. If you are not fully familiar with the principles of operation and safe practices for oxy-fuel gas equipment, we urge you to read our booklet “Precautions and Safe Practices for Gas Welding, Cutting, and Heating”, Form 2035. The same information appears in the “Oxy-Acetylene Handbook” which may be purchased from any Linde Distributor. Do NOT permit untrained persons to install, operate, or maintain this equipment. Do NOT attempt to install or operate this equipment until you have read and fully understand these instructions. If you do not fully understand these instructions, contact your supplier for further information.

**INSTALLATION**

The ACV-4 Powder-Pinch Valve provides ON-OFF powder control and is designed primarily for use with the C-60 Cutting Torch. However, it can also be used in place of the powder valves on powder cutting attachments in installations where it is desirable to have the valve conveniently located away from the torch. The ACV-4 powder valve can be operated manually, or can be remotely controlled by air pressure. In the latter method, a length of 1/4-in. air line pipe is screwed into the powder valve in place of the 1/4-in. pipe plug located in the body, or the plug is replaced with an adaptor (10Z30) and a suitable length of hose fitted with nuts (36Z40) is used to connect the valve to the air line. The powder valve lever is left in the open position, and operation is controlled through the air line valve. By this method, a single airline valve can also be used for simultaneous remote control operation of two or more powder valves.

**A. To Connect**

1. The threads on the inlet and outlet connections of the valve are 5/8–18. Two suitable lengths of hose fitted with nuts (36Z40) are required to connect the valve to the C-60 powder adaptor and to the powder dispenser.
2. If the ACV-4 is to be used in place of the valve on a powder cutting attachment, the powder tube which connects the valve to the powder nozzle must be cut and hose connection (10Z30 - purchased separately) silver soldered to it. The ACV-4 valve is then connected as described in A-1 above.

**MAINTENANCE**

**A. To Disassemble the Valve Stem Assembly**

1. Remove the valve lever. The pin (38Z34) can be pushed out after the clip (81W53) is removed.
2. Remove the cam-riding washer (53Z61) by pulling it over the top of the stem.
3. Loosen the hex guide (49Z30) with a wrench; then unscrew it by hand. The complete valve stem assembly (32Y16) will come out as one unit.
4. To remove the parts from the stem, drive out the pin (38Z36) which locks the bushing (39Z51) in place. Slide the parts off the valve stem.
5. Remove the six packing washers from the sleeve (39Z48). Any of the packing washers which are corroded, damaged or worn should be replaced.

**B. To Reassemble the Valve Stem Assembly**

1. Replace any corroded, damaged or worn parts.
2. In reassembling the packing washers in the sleeve, use this sequence:
   (a) 1 Light Washer (53Z62)
   (b) 1 Dark Washer (53Z60)
   (c) 1 Leather Washer (53Z63)
   (d) 2 Light Washers (53Z62)
   (e) 1 Leather Washer (53Z63)
3. Assemble the sleeve and washers on the valve stem with the light washer (53Z62) bearing against the spring (28Z54).
4. After screwing the complete valve unit into the valve body, assemble the lever before tightening the guide (49Z30).

Be sure this information reaches the operator. You can get extra copies through your supplier.
C. To Replace Rubber Passage Tube

1. Loosen the guide (49Z30) and screw it out about two turns, then raise the lever to the open position.
2. Unscrew the nuts (37Z71) which lock the nipples in place.
3. Remove the nipples (11Z24).
4. Remove the hose and replace with a piece of similar hose of the same length. If the hose does not slide through easily, screw the valve stem assembly out a little further.
5. Push the nipples into place and reassemble the nuts.
6. Drop the lever down into the closed position, screw the guide down into place and tighten.
7. If the valve stem is not long enough to completely close the powder tube (68Z14) because of variations in the size of the tube or wall thickness, add one or more washers between screw (6110-5852) and seat (32Y07) to increase the overall length of the valve stem assembly.

**ACV-4 Powder-Pinch Valve - Part No. 16X36**

**HARDWARE**

- 6110-5852 No. 6–32 x 1/2-in. Binding-Head Brass Machine Screw
- 6420-4860 No. 6 S.A.E. Steel Plain Washer