

# O-RING KIT

## INSTRUCTIONS

### MIDLAND 1" ANGLE VALVE

(713 Series Kits)

SCOPE: These instructions are specific to installation of new O-rings. For more extensive maintenance instructions refer to Midland's pamphlet Installation, Operating, Maintenance and Inspection Instructions for 1" angle valves.

#### PREPARATION

- Exercise normal safety precautions for commodity involved.
- Disassemble valve completely.
- Discard all soft parts being replaced.
- Inspect all parts thoroughly. Steam clean metallic parts.

#### RE-ASSEMBLY

- Grease the orifice of the body, particularly in the o-ring groove area. From the bottom insert the lower o-ring first, then the upper o-ring (#23).
- Grease the cavity in the base and insert the gasket (#24).
- Grease the exterior of the insert (#9) and insert into the body, slowly rotating.
- Grease the ACME thread of the stem (#2) and screw it into the bonnet (#5), running it up and down the full length of the thread. Then remove the stem.
- If old style packing screw (with black o-ring in it), obtain a new one. Put it and PTFE wiper in hot/boiling water to soften. Insert the wiper into the groove.
- Apply a light film of grease to the inside and outside surfaces of the packing screw as well as the inside threads, the bore and the bottom flange face of the bonnet (#5).
- Put the packing screw into the bonnet yoke (a few threads only).
- Apply grease to the entire length of the stem and carefully screw it up into the bonnet.
- Assemble five teflon V-rings (#11) in a stack and apply grease to the inside and outside of the packing.
- Put the packing on the stem.
- Apply a little grease on the metal male packing adapter (#21). Install it on the stem, with pointed end nesting into the V of the packing, and then put on the lightly greased wave spring (which has no top or bottom).
- Apply grease to the two o-ring grooves recessed in the top of the body. Then position the top o-ring, then the lower one.

- Grease the top of the body flange and put the bonnet on, inserting the valve stem through the two o-rings of the body.
- Grease the top flange studs and wrench down the nuts. Put on handwheel and run the stem up and down, checking for free movement.
- Tighten the packing screw to 30 +10/-0 foot-pounds to seat the packing rings. Prevailing drag on the stem due to packing will be about 3 foot-pounds.
- Install seat retainer/U-bolt. Tighten U-bolt nuts.
- Grease the three side port studs, the flange face (#7) and the o-ring groove. Put the outlet flange gasket (#22) on the flange and put on the O-rings (#13). Apply light grease to the exterior of the O-rings and press the outlet flange into the side port.
- Install the handwheel and pipe plug. On the test stand, the valve should securely close with about 20 foot-pounds of torque.
- Test the valve for leaks.

ITEM	QTY	PART NAME
1	1	HANDWHEEL
2	1	STEM
3	1	SEAL RETAINER
4	1	BODY
5	1	BONNET
6	-	-
7	1	OUTLET FLANGE
8	1	PACKING SCREW
9	1	BODY INSERT
10	1	SEAT SEAL
11	5	PACKING RING
12	2	STEM O-RING
13	2	OUTLET O-RING
14	1	NYLON INSERT LOCKNUT
15	7	STUD, NUT AND LOCK WASHER
16	1	PIPE PLUG&CHAIN
17	1	PACKING SPRING
18	1	U-BOLT, 2NUTS
19	1	RETAINER PIN
20	1	RETAINER NUT
21	1	MALE PACKING ADAPTER
22	1	OUTLET FLANGE GASKET
23	2	BODY O-RING
24	1	INSERT GASKET
25	1	NAMEPLATE
26	1	INSTRUCTION PLATE
27	1	WIPER
28	1	FLAT WASHER

