

# Kwik-Draw Sampling Pump Operation and Maintenance

## Deluxe Model with End-of-Stroke Indicator Part No. 487500

The Kwik-Draw pump is designed to measure concentrations of gases and vapours when used with KWIKDRAW detector tubes (Formerly tubes of MSA).

### Description

The Kwik-Draw pump is a one-handed, manually-operated bellows pump of 100 cc capacity.

### Tube Holder

This part permits mounting of detector tubes, remote sampling lines or other detectors.

### Filter Disc

This porous plastic disc mounted in the rubber Tube Holder protects the pump from dirt and dust particles which may alter the flow or damage the pump.

### Exhaust Valve

Located under the valve cover, this valve closes as the bellows re-inflates, and readily opens on the exhaust stroke so blow-back through the tubes holder is negligible.

### Stroke Counter

For convenience, a stroke counter is incorporated into the Pump handle.

### End-of-Stroke Indicator

As the bellows begins to re-inflate, and the knob is released, the indicator eyeball turns high visibility green. As the vacuum decreases, the eye begins to roll back to black. The stroke is over when the eye is all black.

### Operation

1. Using the tip breaker on the pump, break off both tips of the Detector Tube.
2. Using a twisting motion, insert the Detector Tube into the rubber Tube Holder. The arrow on the tube should point towards the pump.
3. Reset the stroke counter to read zero.

4. With all four fingers on the handle, depress the knob with your palm.

NOTE: Watch the stroke counter; to ensure proper sample volume, the counter will only advance if a full pump stroke is taken.

5. Release the knob.
6. As the pump re-inflates, the end-of stroke indicator turns to high-visibility green. The stroke is over when the eye returns to the all black state.
7. To evaluate the stain, follow the instructions provided with the Detector Tubes.

NOTE: Remote sampling is accomplished by putting the pump, connecting tube, remote sampling line and Detector tube together, in that order.

### Maintenance

Under conditions of normal use, the pump should require little maintenance. Depending on the frequency of use, periodic cleaning and checks for performance are recommended.

### Tube Holder

Replace the Tube Holder when it shows signs of wear or loss of elasticity. If filter is not clogged or cracked, save the Filter Disc for re-use in the new Tube Holder.

### Filter Disc

Periodically remove the Filter Disc for cleaning or replacement.

1. Remove the Filter Disc from the Tube Holder by rolling the flange part of the Tube Holder down and away from the Disc.
2. Gently tap or blow on the surface to remove any foreign matter.
3. Replace Disc so previously exposed surface is once again facing away from pump.

### Shaft

If the Shaft is dirty or the bellow inflation is jerky, remove the shaft by unscrewing; then clean with auto wax.

## Valves

1. With the valve cover removed, check the valves for dirt or debris.
2. Remove dirt with gentle puff of air or by using a soft brush.
3. Replace valves if necessary.

NOTE: Apply a very thin film of lubricant to the valve and sealing surface of the valve before installing (see FIGURE).

## Pump Performance Test

After extended idleness and periodically during use, check the Pump for proper performance with the following test:

## Field Leakage Test

1. Plug the pump inlet by inserting unbroken Detector Tube into the Tube Holder.
2. Deflate the pump fully, release, and wait 10 minutes. The Pump is leak-free if the distance from the bellows to the frame is 1/2-inch or greater after 10 minutes. If the Pump leaks, check the Tube Holder and, if necessary, the valves (see "Maintenance"). After repair, re-test for leakage.

## CAUTION

Use of a Pump that leaks may result in the under-estimation of a hazard and could result in property damage, injury or death.

If Pump performance is inadequate and cannot be corrected by these measures, return the pump to UNIPHOS for repair.

ITEM NO.	DESCRIPTION	PART NO.
1	Elbow Fitting	634181
2	Plug, 10-32	630019
3	Screw, 6-32 x 5/8	634373
4	Tubing	603278
5	Screw, 4-40 x 1/2	634372
6	Screw, 4-40 x 5/16	634371
7	Tube Holder	463801
8	Filter Disc	463799
9	Valve with item 31	627409
10	Cover Assembly	489006
11	Front Cap	487501
12	Bellows Replacement Kit	
	Bellows with Rings	488940
	Belt, 2 each (Item 23)	
13	Spring	487490
14	Back Cap	487520
15	Wrist Strap	488034
16	Roll Pin	627587
17	Screw, 10-32 x 3/8 self tapping	634374
18	Knob	487074
19	Shaft	487487
20	Screw, 4 x 3/8 self tapping	628515
21	Counter	487833
22	Frame with Bushings	487601
23	Belt	634542
26	End-of-Stroke Indicator Assembly	
	Indicator	
	Screw, 2 each (item 5)	488835
	Tubing (Item 4)	
	Elbow Fitting (Item 1)	
* 27	Pouch	488394
* 28	Instructions	488781
31	Lubricant	28317

\* Listed but not shown

