



## INSTRUCTIONS FOR ADJUSTING PROPORTIONAL BAND, STEM LENGTH AND BALANCING OUT SENSING DIAPHRAGMS.

# LEVEL CONTROL PILOTS

## LAP AND LAPB ADJUSTABLE PROPORTIONAL BAND TYPES

### ADJUSTMENT PROCEDURE – STEM LENGTH

Supply 20-22 psig operating pressure to the pilot controller. Turn adjusting nut to compress adjusting spring to set upper diaphragm against its top limit stop. If possible remove fluid pressure from diaphragms, if not compress spring sufficiently to overcome fluid pressure and move diaphragm to stop.

Adjust sliders 13/16" apart as shown in sketch. Move proportional band nut upward on adjusting pin threads sufficiently to keep nut from touching blade spring during stem length adjustment. Hold stem with rod through stem hole to prevent upper stem from turning. Loosen adjusting pin set screw and move pin either up or down on stem threads until pilot air output is 1/2 psig. Next turn adjusting pin upward away from pilot body ONE FULL TURN and lock set screw.

### PROPORTIONAL BAND ADJUSTMENT

Remove all compression from adjusting spring. Turn proportional band nut downward against blade spring until pilot air output is approximately 12 psig.

### BALANCING OF SENSING DIAPHRAGMS

Static pressure changes in a closed vessel (e.g. change in steam pressure but not level) should not affect pilot air output pressure. If they do, readjust adjusting pin as shown below until air output pressure is not affected by static pressure changes.

Move adjusting pin in very small increments (1/16" or less). Never turn pin indiscriminately either way to a point where pilot will not respond to level changes.

First move proportional band nut upward on adjusting pin threads sufficiently to keep nut from touching blade spring during balancing of diaphragms.

1. If an increase in static pressure causes an increase in air output pressure, screw adjusting pin toward diaphragm large and away from pilot body.

2. If an increase in static pressure causes a decrease in air output pressure, screw adjusting pin away from diaphragm large and toward pilot body.

After completing adjustment, readjust proportional band.

### ADJUSTABLE PROPORTIONAL BAND RANGE

Level Pilot Type	Level change required for 3 psig to 15 psig air output change
LAP, LAPB	Min. 2" Max. 20"

REMEMBER TO: bleed all air from diaphragm chambers and to fill reference leg before cutting in system.

VACUUM SYSTEMS: both variable and reference leg piping MUST be vacuum tight.

