

# DIFFERENTIAL PRESSURE PILOT CONTROLLERS

## STEM LENGTH AND SENSITIVITY ADJUSTMENT

### DDD PRESSURE RATIO CONTROL PILOTS

#### ADJUSTMENT PROCEDURE

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

#### ADJUSTING RESPONSE SENSITIVITY

Remove extension pin, pilot cover and diaphragm nozzle disc.

For Normal Response Sensitivity Adjust pilot controller for very minor or no leak off. To do this, relieve pressure of blade spring on nozzle stop by pressing lightly downward on it with finger. Then screw nozzle stop downward until it is felt to barely seat on nozzle nut.

For Supersensitive Response Adjust pilot controller for continuous leak off. To do this, slowly screw nozzle stop further downward until operating pressure flow is just detectable through nozzle bleed port. To check amount of leak off, place finger lightly over nozzle bleed port to seal air (do not press down on nozzle). Air pressure in output line to diaphragm control valve should not build up any faster than 3-5 psig in 20-30 seconds. Lock nozzle stop with blade spring.

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Variation in output: controlled pressure for 3-15  
PSI output:

2:1 Ratio	-	1.0	-	2.0	PSI
1.6:1 Ratio	-	.8	-	1.6	PSI
1.5:1 Ratio	-	.75	-	1.5	PSI
1.4:1 Ratio	-	.70	-	1.4	PSI
1.3:1 Ratio	-	.65	-	1.3	PSI
1.2:1 Ratio	-	.60	-	1.2	PSI
3:1 Ratio	-	1.5	-	2.5	PSI

Maximum Static Pressure - Reference or Control  
Signals 300 PSI.

Inverse Rate Action - Adjustable to Unit System  
Requirements.

Variation in pneumatic signal to change output  
from 3 PSI to 15 PSI is 1/2 - 1 PSI. Range 15 to  
75 psig.

