

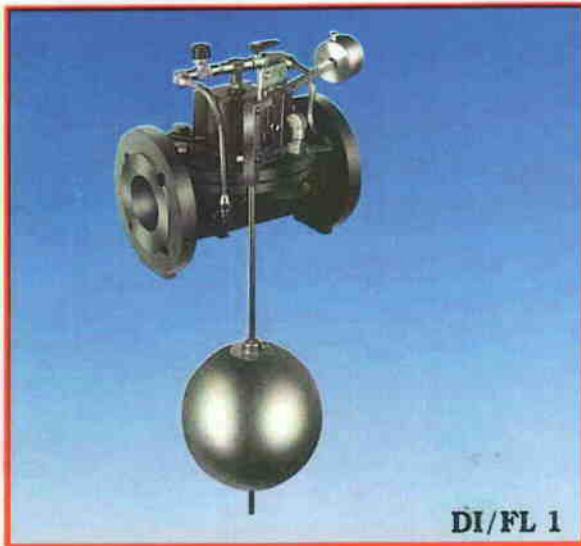
DOROT

CONTROL VALVES



DIFFERENTIAL FLOAT CONTROLLED VALVE

100 SERIES MODEL 77



DI/FL 1



DI/FL 2

DESCRIPTION

DOROT "DI/FL" Valve is a direct-sealing, diaphragm valve, activated automatically by a Differential Float Pilot Valve.

The valve provides accurate control of the maximal and minimal water levels in tanks and reservoirs. It is a non-modulating valve, i.e. it is either in "open" or "closed" position when the water reaches its maximal or minimal level, respectively, but it will not alter its position at any level between the extreme points. The user may select the "high level closure, low level opening" connection, or the "low level closure, high level opening" connection of the pilot valve. The differential between maximal and minimal levels is easily adjustable.

- Two pilots are supplied to control this valve:
- ⇒ Model 70-500, for large differential of levels (up to 1.6 m).
 - Model 70-600, allowing limited differential (0.1 - 0.4 m only).
- The code of valves equipped with the 70-500 pilot is "DI/FL1".
- The code of valves equipped with the 70-600 pilot is "DI/FL2".
- The pilot may be assembled on the valve itself or separated (if external location of the main valve is favoured). Manual over-ride of the automatic control and a self-flushing filter for the activation water are integral parts of the valve.

OPERATION PRINCIPLE

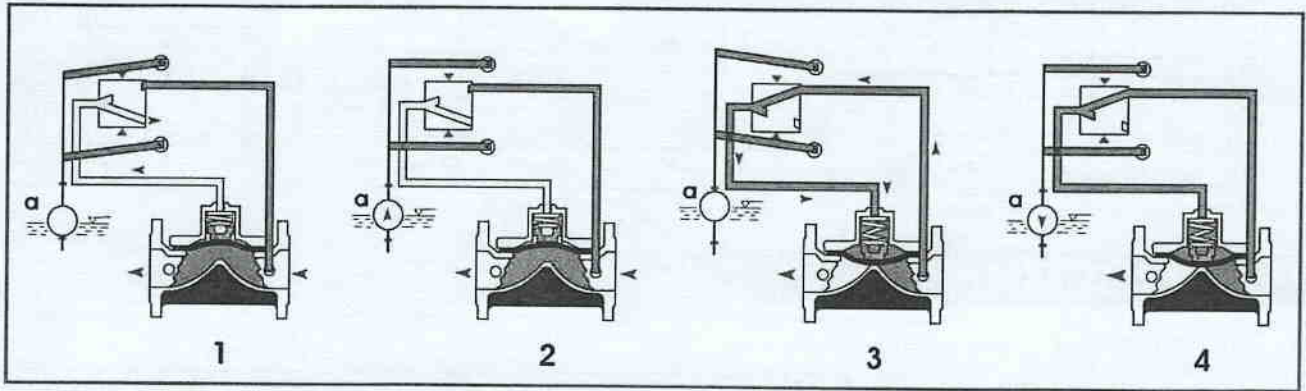
(HIGH-LEVEL CLOSURE, LOW LEVEL OPENING)

1. Water level at the low point: the float (a) reaches the lower stopper on the pilot's rod, pulling it down by its weight. The pilot allows drainage of the main valve's control chamber, and the valve opens.

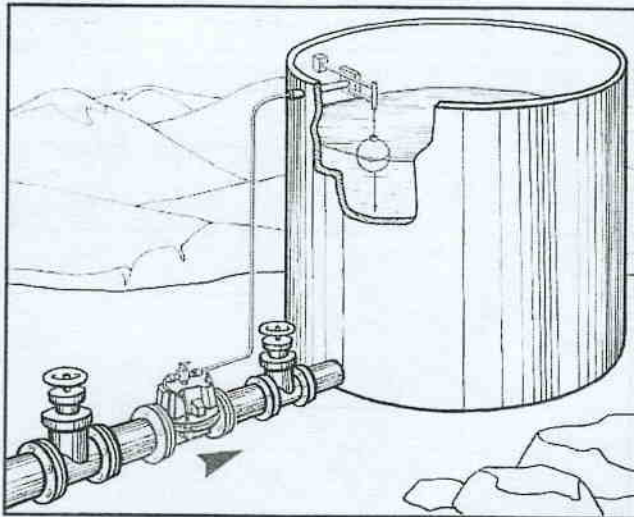
2. Water level rises: the float moves up on the rod. The pilot remains in "open" position.

3. Water level reaches maximal point: the float pushes the upper stopper on the pilot's rod upwards, forcing the pilot to alter its position. Water flowing from the valve's upstream into the control chamber closing the valve.

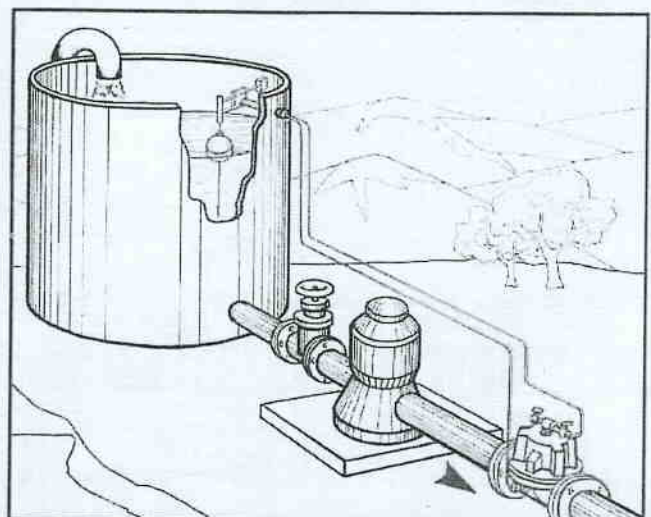
4. Water level falls: the float moves down, but the pilot remains in "close" position.



TYPICAL APPLICATION



HIGH LEVEL SHUT-OFF: DOROT "DI/FL" VALVE PREVENTS TANK OVERFLOW, OPENS AT PRESET LOWER LEVEL.



LOW LEVEL SHUT-OFF: DOROT "DI/FL" VALVE - CLOSES WHEN WATER LEVEL DROPS BELOW THE SAFE LEVEL, PROTECTING THE PUMP.

DESIGN CONSIDERATIONS

► The float pilot's operation is not affected by a turbulent surface. However, fast streams may cause potentially damaging mechanical stress on the levers. It is therefore recommended that the pilot be assembled in a still part of the reservoir.

► If the pilot is located much higher than the valve, and the supply pressure is relatively low, the static pressure of the connecting command tube may limit the valve's opening and the reservoir's filling pace.

BASIC MODELS

DOTS INDICATE AVAILABLE SIZES IN EACH MODEL

| MODEL | 44 | 45 | 47 | 53 | *67 | 77 | 82 | 87 | 91 | *94 |
|-----------------|-----------|----------|-----------|-----------|--------------|--------------|-----------|---------|----------|--------------|
| PATTERN | | | | | | | | | | |
| CONNECTION | THREADED | THREADED | FLANGED | VICTAULIC | FLANGED | FLANGED | FLANGED | FLANGED | THREADED | THREADED |
| MATERIAL | CAST IRON | BRONZE | CAST IRON | CAST IRON | DUCTILE IRON | DUCTILE IRON | CAST IRON | BRONZE | BRONZE | DUCTILE IRON |
| AVAILABLE SIZES | mm | Inch | | | | | | | | |
| | 20 | 3/4 | | | | | | | | |
| | 25 | 1 | | | | | | | | |
| | 32 | 1 1/4 | | | | | | | | |
| | 40 | 1 1/2 | • | | • | | | | • | |
| | 50 | 2 | • | • | • | • | | | • | • |
| | 65 | 2 1/2 | • | • | • | • | | | • | |
| | 80 | 3 1/4 | • | • | • | • | | | • | |
| | 80 | 3 | • | • | • | • | • | | • | |
| | 100 | 4 | | • | • | • | • | • | • | |
| | 150 | 6 | | • | • | • | • | • | • | |
| | 200 | 8 1/4 | | • | • | • | • | • | • | |
| 200 | 8 | | • | • | • | • | • | • | | |
| 250 | 10 | | • | • | • | • | • | • | | |
| 300 | 12 | | • | • | • | • | • | • | | |
| 400 | 16 | | | • | • | • | | | | |

* HIGH PRESSURE MODELS (PN 25)

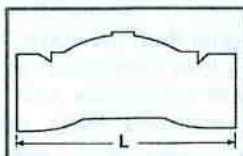
SPECIFICATIONS

| | | |
|------------------------|---|---|
| End Connection | Flanges Threads | ISO, JIS, ANSI, BS ISO, ANSI |
| Pressure Rating | High pressure models 67, 94 Medium pressure models | 250 m / 350 psi 160 m / 230 psi |
| Temp. Range | | 0-80°C / 32-112°F |
| MATERIALS | BODY AND BONNET | Cast Iron Ductile Iron Cast Bronze ISO 185 Grade 200 / 250 ISO 1083 Grade 450-10 / 500-7 BS 1400 LG2 |
| | DIAPHRAGMS | Natural Rubber (NR) (standard) Synthetic Rubbers Polyisoprene (NR) NBR, EPDM |
| | SPRING | SST 302 |
| | PILOT VALVES | Brass Cast Bronze Plastics ISO 426 BS 1400 LG2 Glass-Reinforced Polyamide |
| | COATING | Electrostatically applied, oven baked Polyester |

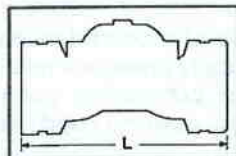
NON-STANDARD SPECIFICATIONS AVAILABLE ON REQUEST

FACE-TO-FACE DIMENSIONS (mm)

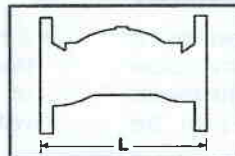
| MODEL | SIZE | 20 | 25 | 40 | 50 | 65 | 80 | 80 | 100 | 150 | 200 | 200 | 250 | 300 | 400 |
|------------|------|-----|-----|-------|-----|-------|-------|-----|-----|-----|-------|-----|-----|-----|-----|
| | mm | 20 | 25 | 40 | 50 | 65 | 80 | 80 | 100 | 150 | 200 | 200 | 250 | 300 | 400 |
| | inch | 3/4 | 1 | 1 1/2 | 2 | 2 1/2 | 3 1/4 | 3 | 4 | 6 | 8 1/4 | 8 | 10 | 12 | 16 |
| 44, 45 | | 112 | 116 | 150 | 180 | 212 | 215 | 213 | | | | | | | |
| 53 | | | | 177 | 190 | 286 | 317 | 392 | | | | | | | |
| 47, 77, 87 | | | | | 200 | | 200 | 285 | 302 | 390 | 385 | 460 | 535 | 580 | |
| 67 | | | | | 228 | | | 310 | 356 | 436 | | 530 | 636 | | 755 |
| 82, 91 | | | 75 | 90 | | 114 | 174 | | | | | | | | |
| 94 | | | | 251 | | | | | | | | | | | |



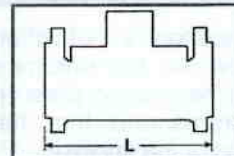
MODELS 44, 45, 94



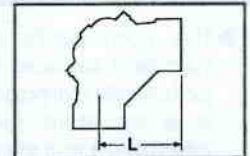
MODEL 53



MODELS 47, 77, 87



MODEL 67



MODELS 82, 91