

# Techtrol Air Operated Diaphragm Switch - ADS

Is especially designed for high-viscosity liquids, sewage, dirty oil and similar applications under atmospheric conditions. The switch gives trouble free operation with minimal maintenance when installed properly.

## Salient Features

- Easy to install, maintenance free, no moving parts.
- Very economical.
- Most suited for highly viscous liquid where conventional switch is not suitable.

## Construction & Operation Fig 1

It consists of an air pipe connected to diaphragm, which is held between the retainer and enclosure through a set of screws. The enclosure contains microswitch, which can be actuated through the vertical motion of the diaphragm. The rising liquid level reaching the air pipe enters it through its lower open end and in the process compresses the captive air column within the air pipe, which in turn initiates an upward movement of the diaphragm to operate the microswitch. Conversely, during falling liquid level, the microswitch is set-off. The length of liquid head (mm) above the air pipe open end at which the switch operates, is defined as "Actuation Point" and liquid level (mm) at which the switch is set-off, is defined as "Release Point" and the difference between the two gives the "Switch Differential".



# Specifications

Enclosure	: Cast Al, WP IP 66
Cable Gland	: Polyamide, PG 9
Contact type	: Micro switch (1SPDT)
Contact rating	: 5A, 250VAC
Terminals	: To suit 1.5 cm <sup>2</sup> conductor
Actuating Diaphragm	: Neoprene
Process Conn.	: Screwed, 1" BSP(M) with internal 1/2" BSP(F) to hold air pipe
Max Temp	: 0 - 60°C
Max Pressure	: Atmospheric
Air Pipe	: PP or SS316, 1/2" NB
Actuation Point	: 40±10mm from the bottom of air pipe
Release Point	: 15±10mm from the bottom of air pipe
Differential Range	: 25±5mm : 200~2000mm

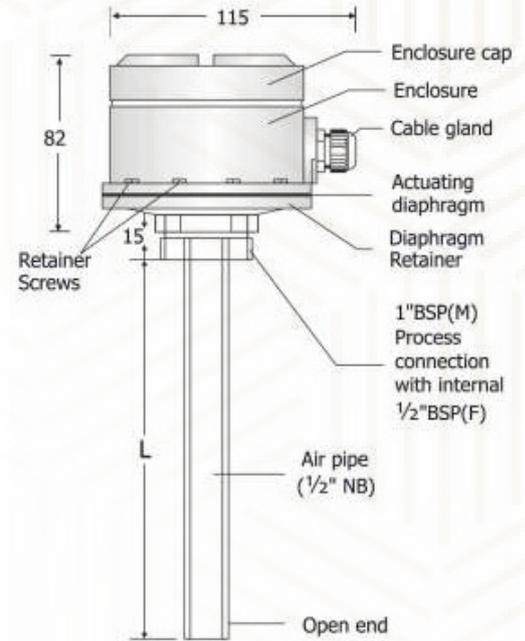


Fig 1

## Termination



## Service

Highly viscous liquids, sewage, slurry, wastewater, heavy oil lubricant

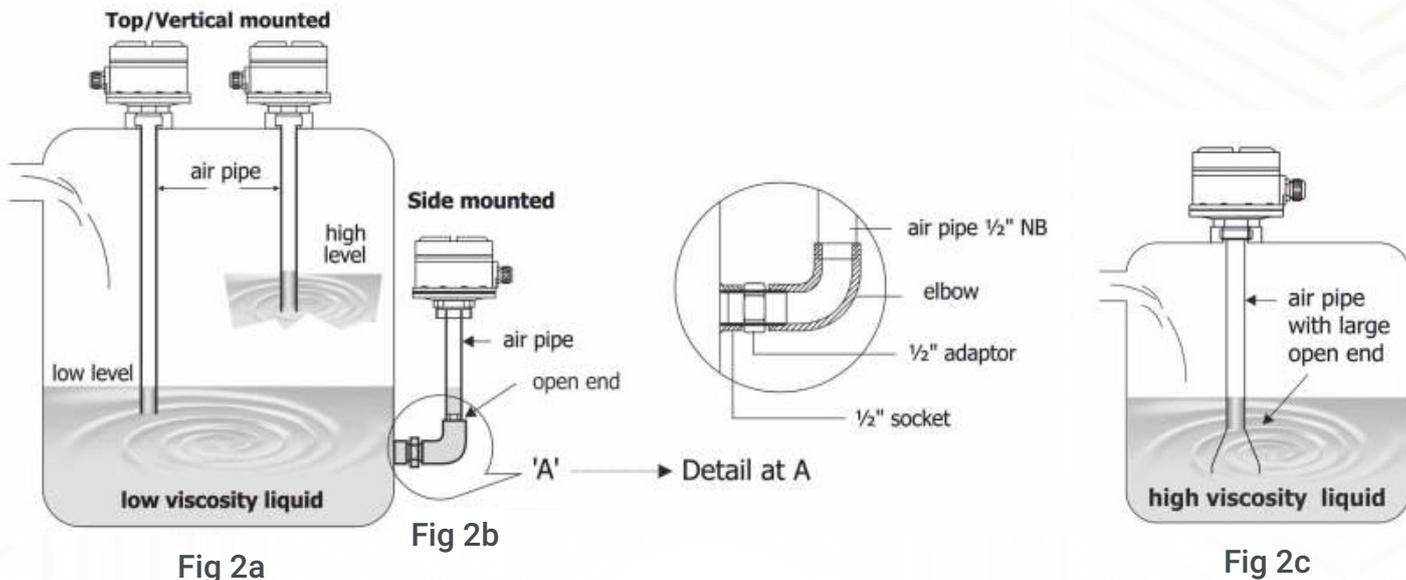
## Applications

Air conditioning, transportation, bilge switch in ships, chemicals equipments

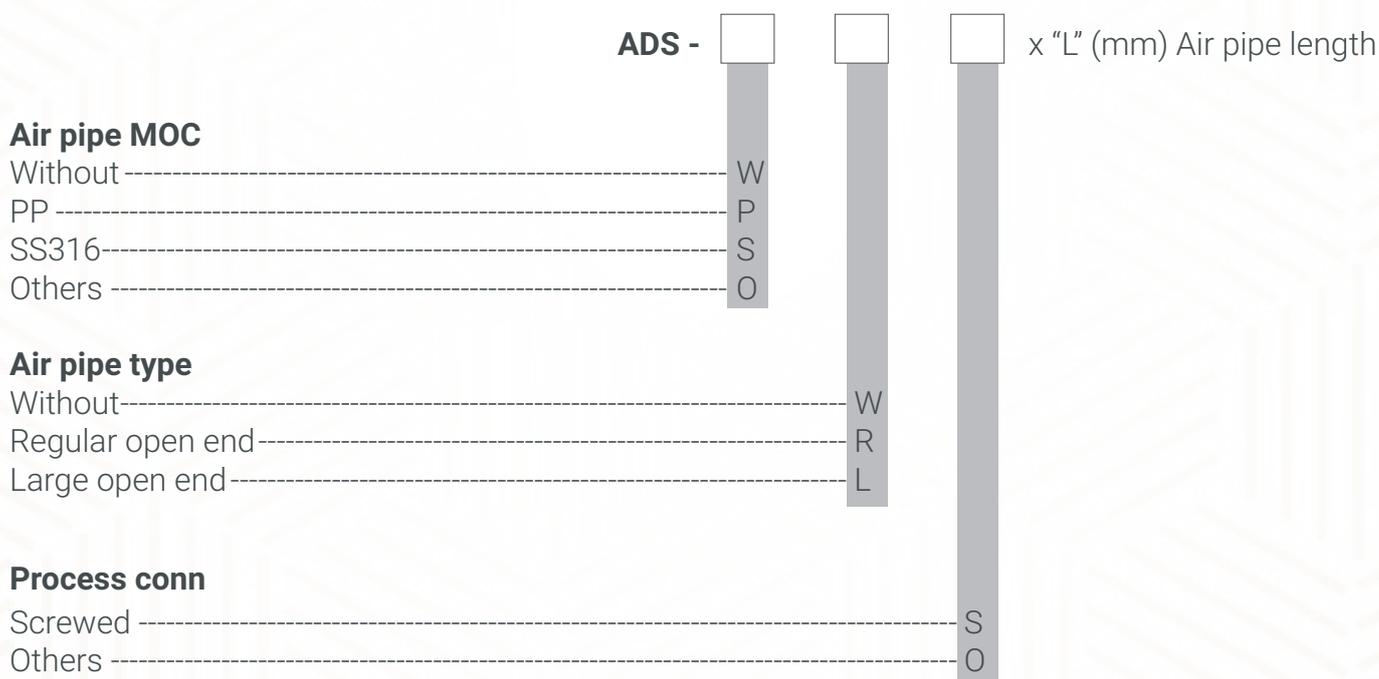
## Installation Fig 2a, 2b, & 2c

Can be directly installed vertically (Fig 2a) or through an elbow (Fig 2b), when side installation is desired. Standard pipe bore is suitable for low viscosity liquids, however for highly viscous liquids the air pipe should be enlarged at the lower open end (Fig 2c). During installation, ensure that switch is mounted in plumb and there are no kinks in the air pipe. Moreover, ensure that there is zero leakage in the "Captive Air Column" which actuates the diaphragm i.e.

no leakage through the threads joining air pipe to enclosure. Also ensure that, the air pipe does not have any surface pinholes, which may cause air leakage. Incase of leakage, the switch may not operate / malfunction.



## Model Identification



## Ordering Information

Specify Model No. x Process liquid x Viscosity x Optg. Temp.

All dimensions in mm except specified

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