



INTRODUCTION

Pneumatically air operated full bore pinch valves are probably the simplest form of on/off or flow control valves available. They are suitable for handling a wide range of solids, sludges and liquids. The valves are of simple construction with only two major components - a reinforced flexible elastomeric sleeve contained within a body assembly. This sleeve can be easily replaced once the valve is removed from the pipeline.

OPERATION

ON/OFF OR CONTROL MODE: When compressed air is introduced into the annular casing, the sleeve is closed together. The moulded in fabric laminations of the sleeve enable it to close in a very controlled manner about the valve centre line. This serves the double purpose of providing both predictable control and a large sealing area for a drip tight shut off, even with trapped solids. The degree of sleeve closure can be controlled by adjusting the control air pressure providing either open-shut or modulating operation. When open the valve becomes part of the pipework, produces minimal pressure loss and eliminates pockets that induce build up or choking. When partially closed, the sleeve presents a streamlined flow path generating minimum turbulence and erosion.

PRESSURE RELIEF MODE: By precharging the annular chamber it is possible to use the pinch valve as pressure relief (or pressure loading) valve. The valve is equipped with a precharge manifold incorporating a gauge and charging valve (Schrader type) with the option of adding a pressure switch for alarm purposes. The valve is charged to a pre-determined level above the necessary pressure to close the sleeve and remains closed until such a time the line pressure approaches the preset pressure within the valve chamber allowing fluid to pass. When the line pressure drops below the preset pressure the sleeve will close shutting the off flow.

The valves can be fitted with automatic solenoid valves with a compressed air supply for On/Off operation.

APPLICATIONS

Pneumatic conveying system control. Pneumatic powder diverter valves. Air locks for powder handling systems. Water & sewage treatment plant fluid handling. Pressure relief on positive displacement sludge pumps i.e. raw/ treated sewage. Pressure loading on lime slurry dosing systems. On/Off control or pressure relief/loading duties with abrasive or corrosive fluids. Anti-syphoning.

SIZES & CONNECTIONS

Size DN (mm)	10	15	20	25	32	40	50	65	80	100	125	150	200
Screwed BSP	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	-	-	-
Flanged PN/ANSI	-	-	-	16	16	16/150	16/150	16/150	16/150	16/150	16/150	16/150	10
Air connection BSP	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	3/8"

HOW TO SPECIFY YOUR PINCH VALVE:

PINCH VALVE SIZE DN (mm)

PINCH VALVE TYPE

VM = PVC screwed BSP female
VMC = Stainless/Aluminum Screwed/Flanged
VF = Flanged Aluminum - Stainless/Steel bushing

BODY - FLANGE/BUSH OR END CAP MATERIAL

0 - PVC
1 - ALUMINUM
2 - ALUMINUM/MILD STEEL
3 - STAINLESS STEEL
4 - ALUMINUM/STAINLESS STEEL

SLEEVE MATERIAL

0 - EPDM
1 - NATURAL RUBBER (ANTI ABRASIVE)
2 - FPM
3 - NBR (nitrile)

OPTIONS

0 = NONE
1 = WITH VALVE & PRESSURE GAUGE
2 = WITH VALVE, PRESSURE GAUGE & SWITCH

DRY GAUGE RANGE (DIAMETER 50mm)

2 = 0 - 2 BARG
4 = 0 - 4 BARG
7 = 0 - 7 BARG
11 = 0 - 11 BARG

SWITCH DETAILS

NC = NORMALLY CLOSED WITH RUBBER BOOT
NO = NORMALLY OPEN WITH RUBBER BOOT
DIN = NC/NO WITH DIN 43650 PLUG

CONNECTION OPTIONS

F = FLANGED TO DIN EN 1092-1, PN10/16
FA = FLANGED TO ANSI B16.5 - 150 lbs
G = SCREWED FEMALE BSP TO DIN EN ISO 228 (G)
N = SCREWED FEMALE NPT TO ANSI/ASME B1.20.1

DN - X - X X X - X X - X

EXAMPLE PINCH VALVES:

DN100-VF-111-4-PN16-F DN100 PN16 FLANGED PINCH VALVE ALUMINUM BODY AND STEEL BUSHING WITH 4 BAR GAUGE AND VALVE ASSEMBLY. NATURAL RUBBER SLEEVE.

DN15-VM-012-7NC-G DN15 SCREWED 1/2" BSP FEMALE PINCH VALVE PVC BODY WITH 7 BAR GAUGE, VALVE AND NORMALLY CLOSED PRESSURE SWITCH. NATURAL RUBBER SLEEVE.

DN32-VMC-310-G DN32 SCREWED 1 1/4" BSP FEMALE PINCH VALVE STAINLESS STEEL BODY. NATURAL RUBBER SLEEVE.



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