Pinch Valves

FEATURES & BENEFITS

- FULL UNOBSTRUCTED FLOW - 6 BODY SIZES UP TO 50mm BORE
- NO INTERNAL MECHANISMS - LOW PRESSURE DROP
- RAPID SHUT OFF - VALVE NORMALLY OPEN
- COMPATIBLE FOR USE WITH MOST LIQUIDS AND DRY FLOWABLES
- LOW MAINTENANCE - LONG LIFE EXPECTANCY
- INEXPENSIVE - LIGHTWEIGHT - CORROSION RESISTANT - SUBMERSIBLE

SUITABLE FOR USE WITH

ACIDS, SANDS, ADHESIVE, INKS, FUELS, CHEMICALS, OILS, SLURRIES, PAINTS, WASTE WATER, POWDERS, FERTILISERS, GASES, LUBRICANTS, DAIRY AND FOOD PRODUCTS, BEVERAGES, ALCOHOL, STEAM

PLUS MANY MORE

The West Group has been established as a leading manufacturer and supplier of fluid power equipment for over thirty five years.

The companies reputation has grown from the many innovative products designed and manufactured to satisfy a worldwide customer base from a variety of industries.

This catalogue features our versatile pinch valves which provide an inexpensive solution to the control of liquids, steam, acids, foodstuffs and dry flowables.

These normally open, lightweight, corrosion resistant valves provide an unobstructed turbulent free flow passage.

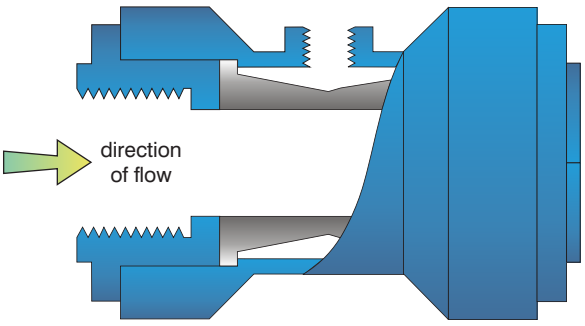
Positive shut-off is achieved by applying an air or liquid pressure to the threaded pilot connection of these normally open valves.

Five body materials are available as standard, each capable of being fitted with six differing sleeve materials compatible with the media being used (see rear page).

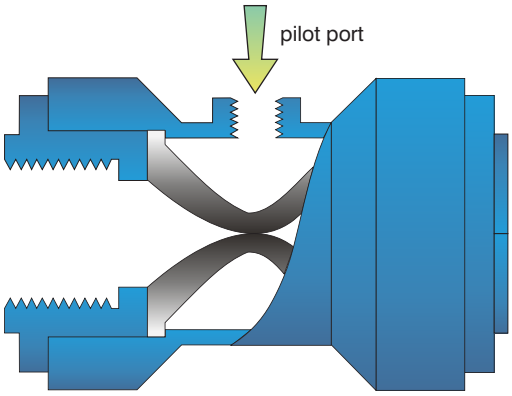
How They Work

Pinch valves provide immediate, positive shut-off for liquids and dry flowing products. Their unique flow-through design provides rapid operation, full flow and positive closure. Valve bodies are available in moulded polypropylene, clear polycarbonate, glass filled nylon, stainless steel and aluminium in order to attain high strength, light weight, excellent quality and low cost. They are designed for easy installation into threaded BSPT and NPT pipe applications. The standard valves have removable female pipe thread end caps for easy sleeve replacement.

Handled Medias	:	Almost any with the diverse range of sleeve and body materials available.
Operating temperature	:	-55 to 230°C
Max frequency	:	100 cycles per minute
Operating life	:	Dependent on media
Pilot Port	:	1/8" to 3/8" BSPT or NPT
Main Ports	:	1/4" to 2" BSPT or NPT
Sleeve materials	:	Nitrile (Buna-N), EPDM, Silicone, Neoprene, Viton, FDA Approved available.



Valve without pilot signal normally open

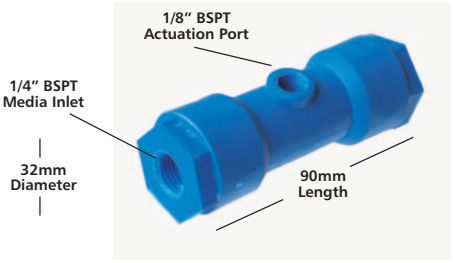


Valve with pilot signal is normally closed

1/4" Pinch Valves

Maximum Flow 30 Litres Per Minute

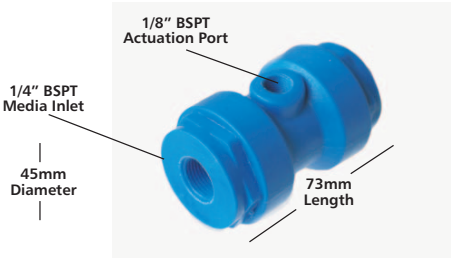
Part Number	BSPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6331	1/4	1/8	6.3mm	Nylon	Buna-N
AP 6335	1/4	1/8	6.3mm	Nylon	EPDM
AP 6372	1/4	1/8	6.3mm	Polypropylene	Buna-N
AP 6376	1/4	1/8	6.3mm	Polypropylene	EPDM



3/8" Pinch Valves

Maximum Flow 80 Litres Per Minute

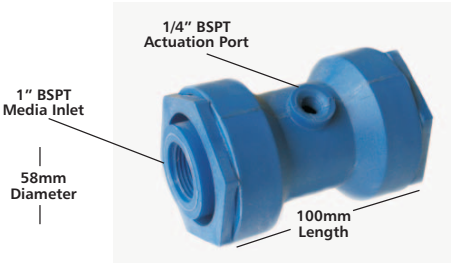
Part Number	BSPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6291	3/8	1/8	9.5mm	Nylon	Buna-N
AP 6295	3/8	1/8	9.5mm	Nylon	EPDM
AP 6304	3/8	1/8	9.5mm	Polypropylene	Buna-N
AP 6308	3/8	1/8	9.5mm	Polypropylene	EPDM



5/8" Pinch Valves

Maximum Flow 250 Litres Per Minute

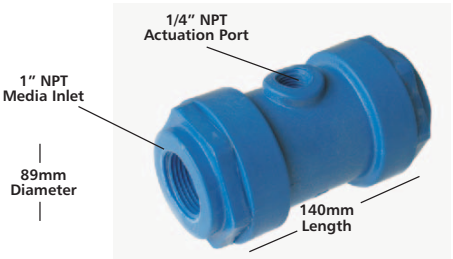
Part Number	BSPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6222	3/4	1/4	15.9mm	Nylon	Buna-N
AP 6224	3/4	1/4	15.9mm	Nylon	EPDM
AP 6252	3/4	1/4	15.9mm	Polypropylene	Buna-N
AP 6254	3/4	1/4	15.9mm	Polypropylene	EPDM



1" Pinch Valves

Maximum Flow 930 Litres Per Minute

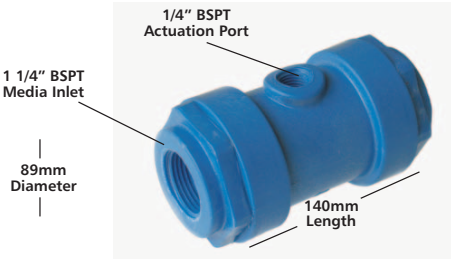
Part Number	NPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6123	1"	1/4	25.4mm	Nylon	Buna-N
AP 6124	1"	1/4	25.4mm	Nylon	EPDM
AP 6131	1"	1/4	25.4mm	Polypropylene	Buna-N
AP 6132	1"	1/4	25.4mm	Polypropylene	EPDM



1 1/4" Pinch Valves

Maximum Flow 1440 Litres Per Minute

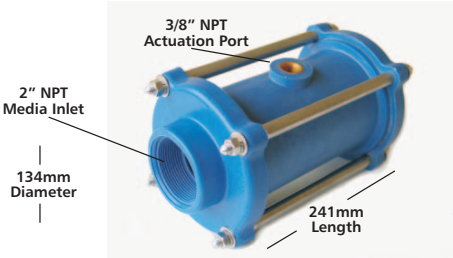
Part Number	BSPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6206	1 1/4	1/4	31.8mm	Nylon	Buna-N
AP 6208	1 1/4	1/4	31.8mm	Nylon	EPDM
AP 6214	1 1/4	1/4	31.8mm	Polypropylene	Buna-N
AP 6216	1 1/4	1/4	31.8mm	Polypropylene	EPDM



2" Pinch Valves

Maximum Flow 3700 Litres Per Minute

Part Number	NPT Ports	Pilot Ports	Flow Bore	Material Housing	Sleeve
AP 6603	2"	3/8	50.8mm	Polypropylene	Buna-N
AP 6605	2"	3/8	50.8mm	Polypropylene	EPDM
AP 6607	2"	3/8	50.8mm	Polypropylene	Neoprene
AP 6606	2"	3/8	50.8mm	Polypropylene	Silicone



A full range of body and sleeve material options can be found overleaf.

Note: Flow rates will change with the specific gravity of media selected.

VALVE ACTUATION PRESSURE GUIDE (MEDIA & PILOT PORT)

Pinch Valves

1/4" Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	42	53	64	76	82	90
3/8" Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	32	41	53	64	76	88
5/8" Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	40	48	57	68	79	88
1" Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	46	53	60	72	81	90
1¼ " Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	46	53	60	72	81	90
2 " Valve	Media psi	10	20	30	40	50	60
	Pilot port psi	25	36	48	57	70	80

Test results based on air to pilot port and water as the media.
NOTE: Maximum valve media pressure is 60psi.
Maximum valve pilot port pressure 90psi.

VALVE BODY MATERIAL OPTIONS

Polypropylene - Glass Filled Nylon - Stainless Steel - Aluminium - Clear Polycarbonate

RUBBER SLEEVE SELECTION AND OPTIONS

Factors to consider when selecting rubber sleeves:

- Will the sleeve be exposed to fluids, oil, water, solvents or chemical solutions?
- Will the sleeve be exposed to gases or liquid vapors, ozone, high or low temperatures?
- Will the sleeve be involved in food or drug processing?
- When working with oils, inks and solvents, determine in details the brand, type and grade of the fluid.
- Give consideration to the fact that lubricating oils may be present in compressed air systems.

SLEEVE OPTIONS

Buna-N Rubber

Common Name: Buna N, Nitrile, NBR
Temperature Usage: -17°/C to 87°/C

Buna-N is a general purpose oil resistant polymer. Inherently resistant to hydraulic fluids, lubricating oils and transmission fluid. Good compression set, abrasion resistance and tensile strength. Nitriles should not be used with Acetone and MEK.

EPDM Rubber

Common Name: EPDM
Temperature Usage: -34°/C to 135°/C

EPDM is a polymer with outstanding properties. Excellent resistance to water, acids, alkalis and steam. Excellent resistance to gas permeability and ozone. Fairly good in ketones and alcohols.

Viton

Common Name: Viton
Temperature Usage: -30°/C to 232°/C

Viton can often be the elastomer of choice for applications in severe environments due to their long useful service life with oil, gasoline, hydraulic fluids and hydrocarbon solvents.

Neoprene Rubber

Common Name: Neoprene, CR
Temperature Usage: -23°/C to 107°/C

Neoprene is an all purpose polymer with great characteristics, many of which are similar to those of Nitrile (Buna-N). Excellent flex fatigue with low compression set Flame resistance. Suitable for petroleum based oils, animal/vegetable fats and greases.

Silicone Rubber

Common Name: Silicone
Temperature Usage: -56°/C to 218°/C

Silicone offers extreme temperature range stability, is suitable for many food and medical applications as it does not impart odour or taste. Excellent at low temperature. High resistance to oxidation and ozone attack.

Natural Rubber

Common Name: Natural Rubber, NR
Temperature Usage: -40°/C to 65°/C

Natural Rubber has many good characteristics. Good low temperature properties. Usable for ketones and alcohols.