

# Automatic pinch valves "PIC" range cast iron/aluminium and PVC

With more than 50 years of experience in the development and supply of pinch valves, Milton Roy Europe can offer a complete range of full bore valves suitable for many applications.



# Automatic pinch valve cast iron/aluminium

## Main used

With their characteristics, cast iron/aluminium pinch valves are ideal for many applications including liquids, slurries, granules and pastes.

## Operation

The valve is closed by applying pressure between the body (A) and the sleeve (B) via connection (C). Usually pressure is applied by air but the air can be replaced by water. When the pressure is applied the sleeve deforms to close the valve. Careful use of fibre reinforcement in the construction of the sleeve ensures that total shut off is achieved.

## Advantages

- Full bore:
  - No pressure drop,
  - No risk of blockage.
- Total sealing with solid particles present, gas, powders and slurries, ...
- Sleeve life:
  - Three grades of rubber are available as standard (other materials on request),
  - Sleeves fibre reinforced.
- Leak free due to absence of glands.
- Protection of installation:
  - Water hammer avoided on opening and closing.
- Ease of installation:
  - Flanged connections (except DN 20: which is threaded).

## Technical details

### Service conditions:

	DN 20 to DN 200	DN 250 and 300
Max. service pressure (barg)	4	3
Max. control fluid pressure (barg)	2 to 6	1.5 to 4.5
Max. differential pressure (barg)	2	1.5

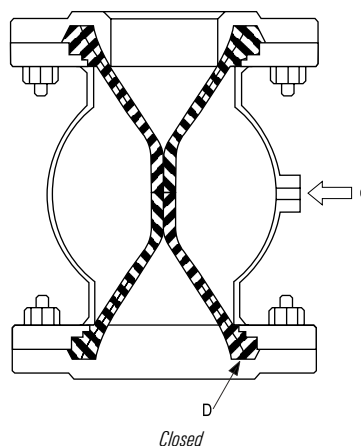
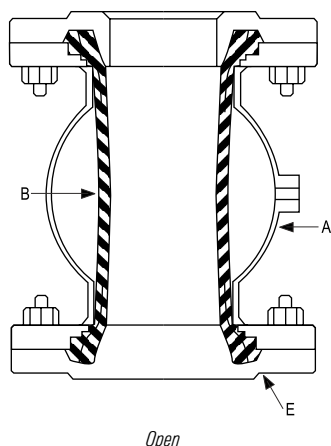
### Materials of construction:

- Body
  - Cast Iron: DN 20 to DN 80
  - Aluminium: DN 100 to DN 300
- Connections
  - Threaded
  - Stainless steel: DN 20
  - Flanged\*
  - Cast iron: DN 40 to DN 300
  - Stainless steel: DN 40 to DN 200
- Sleeve\*
  - Abrasion resistant natural rubber: DN 20 to DN 300
  - Neoprene: DN 20 to DN 200
  - Non toxic rubber: DN 20 to DN 200
- Temperature range
  - Abrasion resistant natural rubber: -5 °C to 80 °C
  - Neoprene: -5 °C to 80 °C
  - Non toxic rubber: -5 °C to 80 °C

\* Other materials on request

## Principle

The automatic pinch valve comprises valve body (A), a cylindrical sleeve made from natural or synthetic rubber (B) and two flanges (E).



## Dimensions

		DN 20 (1)	DN 40 (2)	DN 50 (2)	DN 65 (2)	DN 80 (2)	DN 100 (2)	DN 125 (2)	DN 150 (2)(4)	DN 200 (2)(4)	DN 250 (2)(4)	DN 300 (2)(4)
<b>A</b>	Cast iron or 316 L SS flanges (mm)		150	180	180	220	276	345	414	550	680 <sup>(3)</sup>	820 <sup>(3)</sup>
<b>J</b>	Cast iron or 316 L SS flanges (mm)		26 27.2	27 28.2	28 29.2	30 31.2	36 37.2	48 49.2	52 53.2	65 66.2	88.5 -	104 -
<b>Ø C</b>			Rp3/8"	Rp3/8"	Rp3/8"	Rp3/8"	Rp3/8"	Rp3/8"	Rp3/8"	Rp3/8"	Rp3/4"	Rp3/4"
<b>Ø H</b>	(mm)		150	165	185	200	220	250	285	340	405	485
<b>L</b>	(mm)		54.5	73	76.5	90	110	134	160	223	254	321
	Volume of control fluid (litres)		0.2	1	1	2	3.5	7	12.5	29	37	67
	Connecting flanges	Standard	PN 10 DN 40	PN 10 DN 50	PN 10 DN 65	PN 10 DN 80	PN 10 DN 100	PN 10 DN 125 or 5"-ANSI 150	PN 10 DN 150 or 6"-ANSI 150	PN 10 DN 200 or 8"-ANSI 150	PN 10 DN 250 or 10"-ANSI 150	PN 16 DN 300 or 12"-ANSI 150
		Optional	2" ANSI 150	2" ANSI 300	2 1/2" ANSI 150	3" ANSI 150	4" ANSI 150	-	-	-	-	-

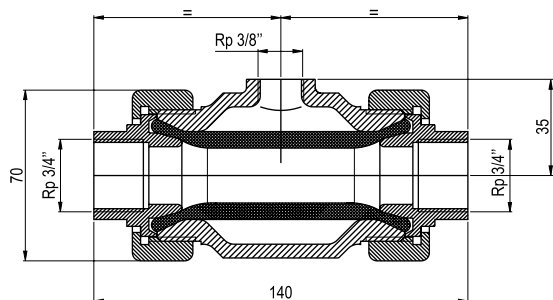
<sup>(1)</sup> See Fig. 1

<sup>(2)</sup> See Fig. 2

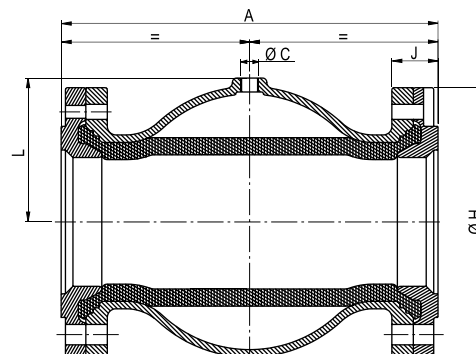
<sup>(3)</sup> Cast iron flange only

<sup>(4)</sup> Valves in accordance with the European under pressure devices directive 97/23/CE

**Threaded version**  
Valve DN 20 (Fig. 1)  
Volume of control fluid: 0.05 l



**Flanged version**  
Valves DN 40 to DN 300 (Fig. 2)



## Weight and packing

DN	Net weight (kg)	Packing (mm)
20	1.5	260 x 160 x 150
40	6	200 x 200 x 200
50	8	200 x 200 x 200
65	10.5	200 x 200 x 200
80	13	280 x 280 x 370
100	12	280 x 280 x 370
125	17	280 x 280 x 370
150	25	355 x 355 x 575
200	53	515 x 465 x 720
250	85	515 x 465 x 720
300	147	800 x 600 x 900

## Protection

The valves receive a 65 microns Ameron polyurethane paint colour yellow RAL 1018.

# Automatic pinch valve PVC

## Main uses

Benefiting from lightness and resistance to corrosive atmosphere, Milton Roy Europe pinch valves are suitable for many varied applications: transmission and automatic control of clean liquids or slurries (suspensions, sludges, ...), viscous liquids or pastes, granules, powders, etc.

## Function

The valve is closed by applying pressure between the body and the sleeve. Usually pressure is applied by air but the air can be replaced by water. When the pressure is applied the sleeve deforms to close the valve. Careful use of fibre reinforcement in the construction of the sleeve ensures that total shut off is achieved.

## Advantages

- Full bore:
  - No pressure drop
  - No risk of blockage
- Chemical resistance:
  - Suitable for use in corrosive atmospheres
- Lightness:
  - Cost of installation reduced (no support required)
- Ease of installation:
  - Threaded connections
- Total sealing:
  - Gas, liquids or powders.

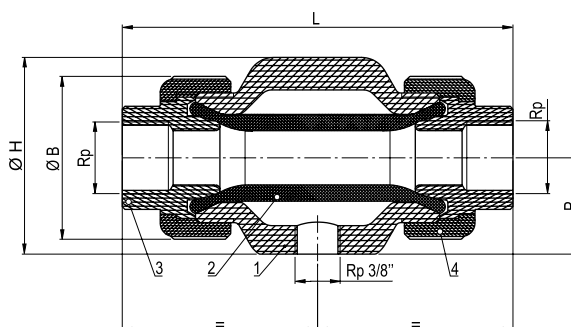
## Principle

The automatic pinch valve comprises, valve body (1), a cylindrical sleeve (2) made from natural or synthetic rubber, two connections (3) and 2 nuts (4).

The sleeve is clamped at each end between the body and the connections and assembled using the nuts.

## Dimensions

	DN 20	DN 25	DN 32	DN 40
L (mm)	144	144	170	200
Ø B (mm)	60	74	83	103
Ø H (mm)	69	79	89	99
P (mm)	32.5	37.5	43	48
Rp	3/4"	1"	1 1/4"	1 1/2"
Net weight (kg)	0.5	0.7	0.8	1



## Technical details

- Sizes: DN 20, DN 25, DN 32 and DN 40
- Materials of construction:
  - Body, connectors and nuts: PVC
  - Sleeve: abrasion resistant natural rubber, non toxic rubber or neoprene (others available on request)
- Connections: threaded gas (BSP)
- Service conditions:
  - Service pressure: 4 barg max.
  - Control fluid pressure: 6 barg max.
  - Differential pressure: around 2 barg subject to sleeve and application
  - Temperature range: -5°C to 60°C (for other temp., consult us)



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