

Catalogue No.

**APL / 1011**

**3/2 - 2/2 Way Pneumatic Cylinder Operated  
Straight Type Mixing And / Diverting  
High Pressure On/Off "3CV" Control Valve**



"aira" offers ON/OFF control valve in compact design for mixing and / or diverting three way applications.

Types : 1. Normally "A" Port Close 2. Normally "B" Port Close

Size Range : 1/2" To 4" Screwed / Flanged

Actuator Technical Specifications :

|                    |   |
|--------------------|---|
| Body               | S.S. AISI 304 (deep drawn)  |
| Cover Flange       | Aluminium Pressure Die Cast   |
| Spring             | Spring Steel (IS 4454 Gr II)  |
| Port Connection    | 1/4" BSP [ NPT On Request ]   |
| Operating Pressure | 3.5 To 7 Bar  |
| Position Indicator | Naylon  |
| Operating Cycles   | 350 To 650 Cycles / Hr.   |
| Media              | Dry Lubricated Air / Inert Gases Hydrant Moisture Separators are advised to use in line |
| Piston Packing     | Buna Nitrile  |

Valve

|                      |   |
|----------------------|---|
| Size                 | 1/2" to 4" Screwed / Flanged  |
| Body & Bonnet        | ASTM A351 Gr. CF8 / CF8M / CF3M   |
| Stem Packing         | Self Adjusting, Spring Loaded Teflon Packing  |
| Trim / Spindle       | Stainless Steel 304 / 316 / 316L  |
| Seat                 | Soft Seated Teflon backed by EPDM. Optional - VITON / EPDM, Buna Nitrile  |
| Gland Packing        | Teflon "V" seals backed by graphite wiper seal (self compensating)  |
| Body Test Pressure   | 42 Bar Maximum  |
| Working Fluid Press. | Refer to table  |
| Leakage              | As per ANSI B 16.104 - 1976 Teflon seating Class IV For Other Soft Seating Class VI Drop Tight / Bubble Tight       |
| Working Temp.        | On Steam - Continuous 155°C, Intermittent 180°C., with Teflon seating, Buna Nitrile 80°C, EPDM 135°C., VITON 180°C. |



**Technical Specification Table**

| Valve Model | Valve Size |        | Orifice mm | Max. Op. Press Bar | Flow Factor Kv M3/hr | Actuator Bore mm | Air Consumption Lit./Cycle | Weight (Approx.) |        |
|-------------|------------|--------|------------|--------------------|----------------------|------------------|----------------------------|------------------|--------|
|             | MM         | Inch   |            |                    |                      |                  |                            | S/E              | F/E    |
| 3CV - 15    | 15         | 1/2"   | 15         | 10                 | 3.3                  | 70               | 0.151                      | 1.760            | 3.000  |
| 3CV - 20    | 20         | 3/4"   | 18         | 10                 | 4.7                  | 70               | 0.151                      | 2.220            | 3.560  |
| 3CV - 25    | 25         | 1"     | 23         | 10                 | 8.5                  | 70               | 0.162                      | 3.000            | 4.900  |
| 3CV - 40    | 40         | 1.1/2" | 36         | 10                 | 22.5                 | 100              | 0.309                      | 7.320            | 10.240 |
| 3CV - 50    | 50         | 2"     | 45         | -                  | 35                   | 100              | 0.325                      | 10.440           | 14.560 |
| 3CV - 65    | 65         | 2.1/2" | 59.5       | -                  | -                    | 120              | -                          | -                | -      |
| 3CV - 80    | 80         | 3"     | -          | -                  | -                    | -                | -                          | -                | -      |
| 3CV - 100   | 100        | 4"     | -          | -                  | -                    | -                | -                          | -                | -      |

For Any Different Technical Requirement - Available On Request

**Dimensions :**

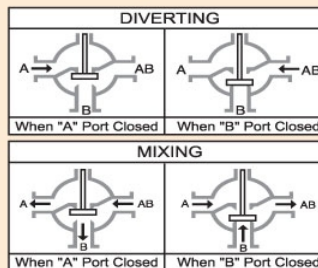
(All Dimensions are in mm)

| Valve Model | Valve Size |        | A   | A1      | B   | B1         | C          | ED  |
|-------------|------------|--------|-----|---------|-----|------------|------------|-----|
|             | MM         | Inch   |     |         |     |            |            |     |
| 3CV - 15    | 15         | 1/2"   | 85  | 151     | 50  | 83         | 185        | 102 |
| 3CV - 20    | 20         | 3/4"   | 110 | 185     | 66  | 130.5      | 194        | 102 |
| 3CV - 25    | 25         | 1"     | 120 | 189     | 72  | 106.5      | 204        | 102 |
| 3CV - 40    | 40         | 1.1/2" | 150 | 232     | 91  | 132        | 285        | 134 |
| 3CV - 50    | 50         | 2"     | 190 | 283     | 100 | 146.5      | 292        | 134 |
| 3CV - 65    | 65         | 2.1/2" | 243 | On Req. | 108 | On Request | On Request | 164 |
| 3CV - 80    | 80         | 3"     | -   | -       | -   | -          | -          | -   |
| 3CV - 100   | 100        | 4"     | -   | -       | -   | -          | -          | -   |

**OPERATIONAL & INSTALLATION GUIDELINE**

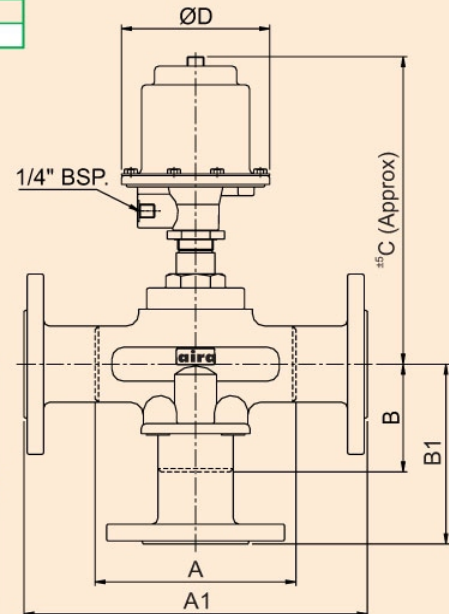
In Normal condition "A" port is closed. In such condition "AB" port is connected to "B" port. When the actuator is energised, the "B" port is closed and "AB" port is connected to "A" port. This way the "Diverting" action AB TO B and AB TO A can be achieved.

In Normal condition "B" port is closed. In such condition "A" port is connected to "AB" port. When the actuator is energised, the "A" port is closed and "B" port is connected to "AB" port. This way the "Mixing" action A TO AB and B TO AB can be achieved.



**Accessories :**

- ▶▶ 3/2 Way Solenoid Valve
- ▶▶ Pilot Valve
- ▶▶ On/Off type limit switch
- ▶▶ Combination (Filter + Regulator)
- ▶▶ Moisture Separator
- ▶▶ Quick Exhaust Valve



Note : Since, constant worldwide advancement in technology, we keep our rights reserved to make changes time to time in Technical specifications and Dimensions without prior notice.  
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