

Multiple Port Rotary Valve (Patented)

Methods of Actuation

■ **Manual operation** – the external actuator may be a knob or hand wheel attached to valve shaft.

■ **Remote operation** – an air or hydraulic cylinder or solenoid can index the valve via a ratchet mechanism attached to the valve shaft.

■ **Mechanical operation** – a cam on the main machine actuates the ratchet mechanism on the valve shaft.

How it works

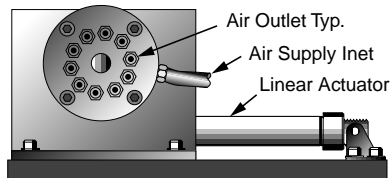
Rotating the external actuator one position (clockwise or counterclockwise) directs air pressure to the next outlet port at the front of the unit. All other outlet ports are open to atmosphere. Thus, in the illustration above, a single acting cylinder can be actuated by connecting its port to any of the valve outlet ports. A double acting cylinder can be operated by connecting its ports to any two of the valve outlets. If connected to two adjacent outlets, the cylinder will open and close immediately on the next advancement of the actuator; if connected to nonadjacent outlets, the cylinder's extend/retract cycle can be sequenced with other operations controlled by the valve.

Manual Operation

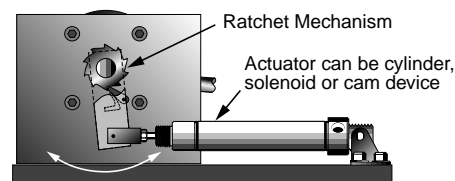
Side view panel mounted– rotary valve is shown with knob attached to valve shaft. Valve is indexed by hand through 10 or 20 outlet ports depending on valve model.

Remote Operation

Front view base mounted



Rear view base mounted



General Use

■ As a panel mounted selector valve for remote control of pneumatic cylinders, valves or other devices.

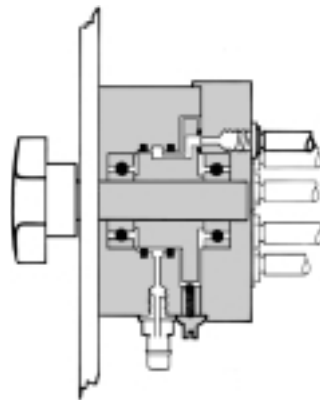
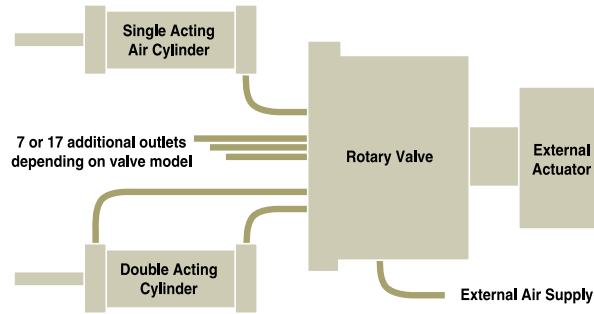
■ As a programmer for automatic machinery, (lathes, drilling machines, winders, etc.).

■ As an "IMPLANT" in a large machine to supply sequential control where indexing is accomplished by some moving part of the machine.

■ As a sampling device whereby a vacuum is employed to draw a sample of air from a controlled atmosphere area to a central analyzing station, and/or to check atmospheric pressure.

■ Units may be coupled in tandem (requires special shaft), or in series; i.e. a port on first unit is connected to actuator

device on second unit and a port on second unit is connected to actuator on third unit, etc., etc. In this fashion an infinite number of counts may be obtained.



MODEL GV2-10 with 10 outlet ports is shown mounted on an angle bracket attached to machine base.

An air or hydraulic cylinder, a solenoid, or a cam on the main machine can index the valve via a ratchet mechanism attached to the valve shaft.

General Specifications

Model GV2-10/Model GV20

Number of outlet ports –

GV2-10 (10 outlets)

GV2-20 (20 outlets)

Outlet & Supply Ports – 10-32 thread

Air flow – 8.1 CFM at 100 psi to atmosphere

Detent – Spring loaded ball plunger

Rotation – left or right

Operating pressure range – 0 to 125 psi

Shut-off occurs between any two ports
(18° from detent)

Materials

Body – Aluminum

Rotor – Steel

Port cap – Steel

Shaft – 3/8" diameter steel

Bearings – Ball

Seals – Standard Buna N 'O' Ring

General valve dimensions

GV2-10: 2-3/8" dia. x 1-7/16" long

Shaft extension – 1"

Mounting – Four 8/32" tapped holes
on 1.950" bolt centers

GV2-20:

3-1/8" dia. x 1-7/16" long

Shaft extension – 1"

Mounting – Four 8/32" tapped holes
on 2.700" bolt centers

Servicing

One 9/64 hex wrench field strips valve for servicing.

Available Options

1. Basic valve (no actuator parts)

2. Basic valve with ratchet mechanism

3. Basic valve mounted to 3" x 8" aluminum base plate with ratchet mechanism and air cylinder

4. Basic valve with knob

Model Number 6 Outlets
GV2-6/6

Model Number 10 Outlets
GV2-10/10

Model Number 20 Outlets
GV2-20/20