piloted axial valve
principle of the Legris axial valve

operation

Depending upon the operational requirement, air is passed into the actuation chamber, as shown below, in order to open or close the valve.

rest state (valve closed)        piloted state (valve open)

Normally closed axial valve in closed position

Normally closed axial valve in open (actuated) position

Designed to overcome the limitations of traditional actuators, the Legris axial valve offers the functions of a valve fitted with an actuator. A pneumatic automation device is fitted directly into the valve.

Its operation is not affected by the up/downstream pressures of the transported fluids, which guarantees the user total safety and a vastly simplified choice. This innovative concept is a logical extension of the Legris hand actuated ball valve range.

The range consists of the following models to suit different applications:
- normally closed axial valves
- normally open axial valves (on special request)
- double acting axial valves (on special request)
- all are available with FKM (EPDM seals on special request).

technical characteristics

<table>
<thead>
<tr>
<th>transported fluid</th>
<th>- all fluids compatible with:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• FKM: water, air, oils, greases...</td>
</tr>
<tr>
<td>maximum working pressure</td>
<td>150 psi</td>
</tr>
<tr>
<td>maximum temperature</td>
<td>with FKM seal +275°F</td>
</tr>
<tr>
<td>minimum temperature</td>
<td>-4°F</td>
</tr>
<tr>
<td>vacuum capability</td>
<td>740mm Hg (97.4% vacuum)</td>
</tr>
<tr>
<td>pilot fluid</td>
<td>filtered compressed air</td>
</tr>
<tr>
<td>pilot pressure</td>
<td>NC: 60 to 115 psi</td>
</tr>
</tbody>
</table>
principal advantages of the axial valve

compactness
- the axial valve is extremely compact and needs up to 50% less space than an actuated valve.
- no external moving parts

costs less than an actuated valve
- a single unit which controls the following two functions at the same time:
  - opening/closing of circuit.
  - actuation of this function.
- reduced air consumption

high performance
- full flow
- compatible with numerous industrial fluids
- operates independently of the up/downstream pressures of the fluids transported.

straightforward reliable installation
- ready to fit and does away with the valve + connector + actuator fitting time
- easy to assemble, in any position
- designed for use with Legris LF3000 instant fittings when piping up
which control method?
The Legris axial valve offers three different control methods dependent on the type of installation:

pneumatic control
example: 4222 axial valve, double acting
- on-site control
- for repetitive on/off cycles
- remote control in case of difficulty of access to the machine

electro-pneumatic control
example:
4202 axial valve, normally closed
+ 4298 mini-solenoid valve and subbase
- for industrial automation requiring remote control

pneumatic/electro-pneumatic dual control
example:
4212 axial valve, normally open
+ 4298 mini-solenoid valve and subbase
+ 4299 switch
- dual control structure
- for increased safety:
  prevents all localized operating errors
the complete range of axial valves
Upon special request, we can supply
- normally open and double acting valves
- replacement seal kits (all types i.e. FKM, EPDM, Nitrile)
- axial valves equipped with magnetic sensors to indicate their state (open and/or closed)
- chemically nickel-plated axial valves
**4298 subbase for solenoid pilot valve — M5**

Subbase conforms to NAMUR specifications.

The subbase is fitted directly to the axial valve and permits the mounting of a mini solenoid valve.

Supplied with 2 fixing bolts and silencer.

<table>
<thead>
<tr>
<th>type of coil</th>
<th>voltage</th>
<th>power class</th>
<th>insulation degree</th>
<th>protection</th>
<th>cable entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>size 15</td>
<td>~</td>
<td>24-110-220V - 50/60 Hz</td>
<td>2W</td>
<td>F</td>
<td>IP 65</td>
</tr>
<tr>
<td></td>
<td>=</td>
<td>24V</td>
<td>1W</td>
<td></td>
<td>plug size 15 rotatable through 90° - CM 6</td>
</tr>
</tbody>
</table>

**4298 mini-solenoid valve 1W/1.2VA**

Voltage options include:
- 24V DC 4298 01 01
- 24V AC 4298 01 02
- 110V AC 4298 02 01
- 220V AC 4298 02 02

**4299 pneumatic button/electro-pneumatic**

1 pneumatic contact
- standard 4299 01 01
- with key 4299 01 02

1 electro-pneumatic contact
- standard 4299 02 01
- with key 4299 02 02

Bulkhead fixing hole diameter: 22mm