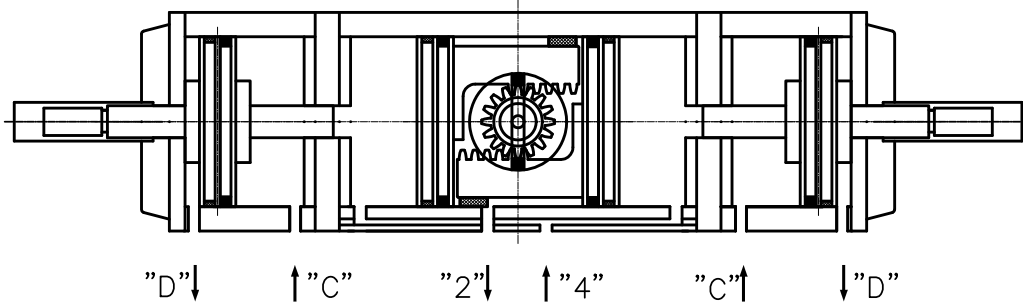


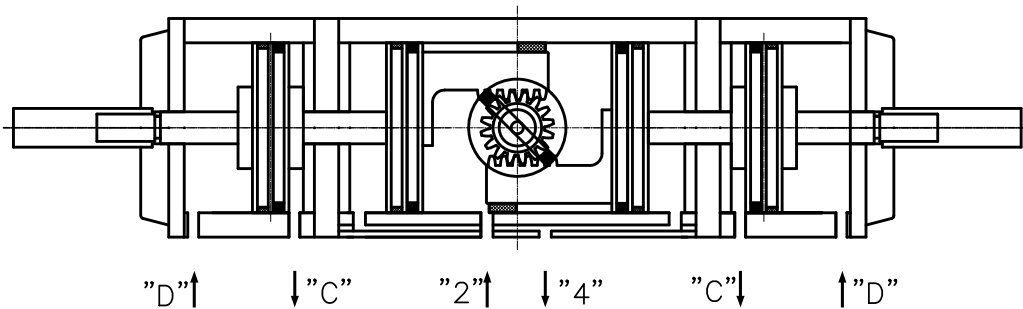
Operating Principle Of Three Position Actuator

Three position ALPHA actuator provide an operation of 0° , 45° , 90° or 0° , 90° , 180° , The midway position is achieved by a mechanical stop of movement on the 2 auxiliary pistons. This midway stop positions adjustable. Example: 90° actuator can provide 20° , 30° , 40° , 50° , 70° etc. Following is the principle of operation:



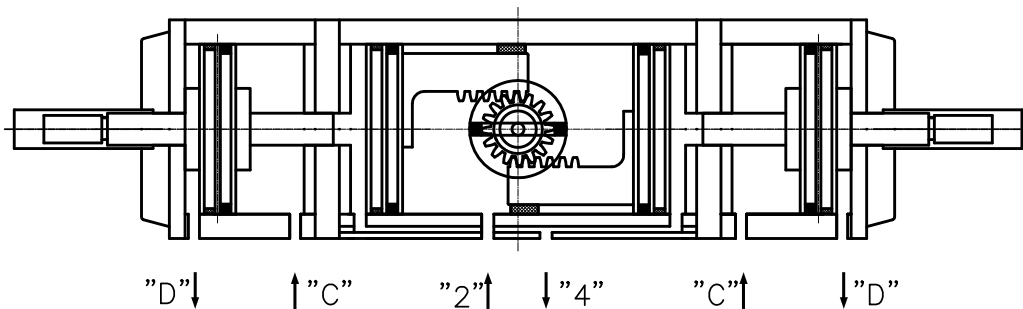
Fully Closed Position

From chart 1 we can see that this position is obtained when air is supplied to port 4 and port 2 is in the state of exhaust air.



Midway Position

From chart 2 we can see that this position is obtained when air is supplied to port 2 and port D, meantime, port 4 and port C are in the state of exhaust air. In fact that the midway position is achieved by a mechanical stop of movement on the two auxiliary pistons.



Fully Open Position

From chart 2 we can see that this position is obtained when air is supplied to port 2 and port C, meantime, port 4 and port D are in the state of exhaust air.