ASSEMBLY OF THE ACTUADOR

VERY IMPORTANT: before beginning the assembly to check always that all the O'rings and gaskets are properly housed in its lodgings and that all the components are greased correctly.

1.- To place the axis (10) in the body of the actuator (6)

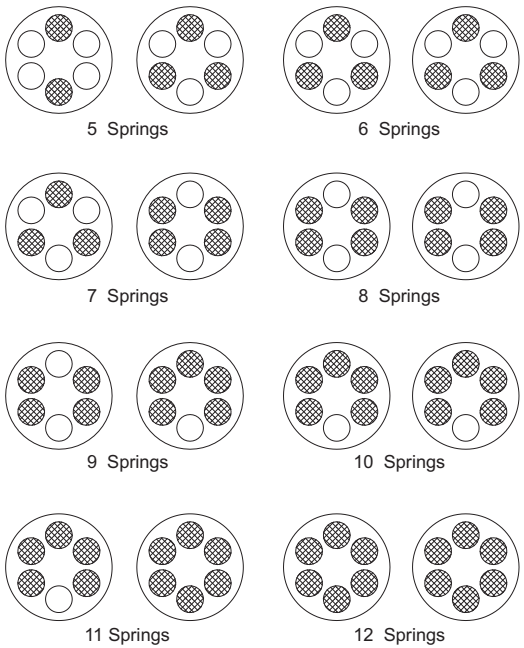
2.- To mount the washers (5) and (4) following way more the circlip (3) in the top part of the axis.

3.- To house the pistons (14) in the body (6) keeping in mind that both should gear at the same time when rotating the body in the sense of the needles of the clock until the end of the run .

Notice: to obtain a correct alignment could be necessary more than one intent.

4.- To mount the end cap (23) in the body and to press the screws (24) distributing correctly the one presses of the same ones.

In the actuators of Simple effect it will be necessary to insert the spring cartridges appropriately in the lodgings of the end caps according to the quantity of the springs you use (to see detail).



RECOMMENDED REPLACEMENTS

O'RING UPPER AXIS (7)	PINION UPPER BEARING (8)
O'RING LOWER AXIS (12)	END CAP O'RING (22)
WASHER AXIS (5)	PISTON O'RING (15)
PINION LOWER BEARING (11)	PISTON BEARING (16)

REGULATION TO THE OPENING (External

- To slacken nut of security on the external screw stroke adjust (26).
- To press or to slacken screw external stroke adjust (25) until reaching the wanted regulation.
- To press again the nut of security on the external screw stroke adjust (26).

STORAGE

To store the B Series pneumatic actuators the following cautions they are recommended:

-Set dry.

-To maintain the entrances of air blocked with those cork original.

-To maintain the origin packing

ALL THE B SERIES PNEUMATIC ACTUATORS HAVE BEEN TESTED IN OPERATION AND WATERTIGHTNESS TO 100% AND THEY HAVE INDIVIDUAL CONTROL.

VERY IMPORTANT

A. - Before carrying out any manipulation in the actuator to make sure that the nets of feeding of air have been disconnected and electric.

B. - To make work an actuator surpassing the one limits of pointed out temperature it can damage to the interns and externally. To put special attention in the Spring return pneumatic actuators.

C. - To never try to work manually, with a lever, the actuator when it is operating or when the actuators is Spring return.

D. - Not to surpass in any case the maximum pressure of work.

E. - Never forget that for the correct operation of a pneumatic actuator, this it should be adequated for the valve to automate.

PNEUMATIC ACTUATORS

INSTRUCTIONS OF ASSEMBLY AND MAINTENANCE

ACTUATORS SERIES "B"

The B Series Aluminum pneumatic actuators 90^{o} Double acting and Spring return rack and pinion system has been designed for the working of all type of 1/4 turn valves .

The special finish of the interior surface of the body of the actuator (Ra 0,4 - 0,6 um) together to the use of antifriction pads manufactured in material of very low coefficient of friction (LAT LUB) mounted in the pistons that avoid the contact metal-metal, they make that the actuators enjoys a long life without maintenance.

OPERATION

FEEDING

Clean, dry or lubricated compressed air
Light hydraulic oil
Inert and not corrosive gas (to consult)

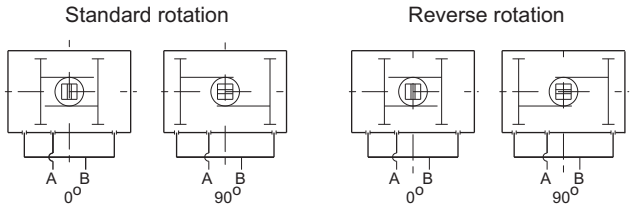
The B Series pneumatic actuators are properly lubricated ex warehouse.

PRESSURE OF WORK

Minimum: 1 bar
Maxim: 10 bar (150 psig)

PRINCIPLE OF WORK

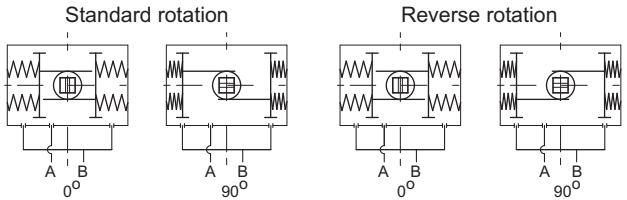
Double acting actuator



Standard rotation:
Air to port A forces the pistons outwards, causing the pinion to turn counterclockwise while the air is being exhausted from port B. Air to port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from port A.

Reverse rotation:
Air to port A forces the pistons outwards, causing the pinion to turn clockwise while the air is being exhausted from port B. Air to port B forces the pistons inwards, causing the pinion to turn counterclockwise while the air is being exhausted from port A.

Spring return actuator



Standard rotation:
Air to port A forces the pistons outwards, causing the springs to compress, the pinion turns counterclockwise while air is being exhausted from port B. Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted from port A.

Reverse rotation:
Air to port A forces the pistons outwards, causing the springs to compress, the pinion turns clockwise while air is being exhausted from port B. Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns counterclockwise while air is being exhausted from port A.

It can be changed the turn sense easily reversing the position of the pistons.

TEMPERATURE OF WORK

Actuator standard construction -20^{o}C to + 80^{o}C

INSTALLATION

The B Series pneumatic actuators can be installed in it lines with the pipe or in angle of 90^{o} above, under or of side in the same one without the position affects to its operation.
Following should be noted:

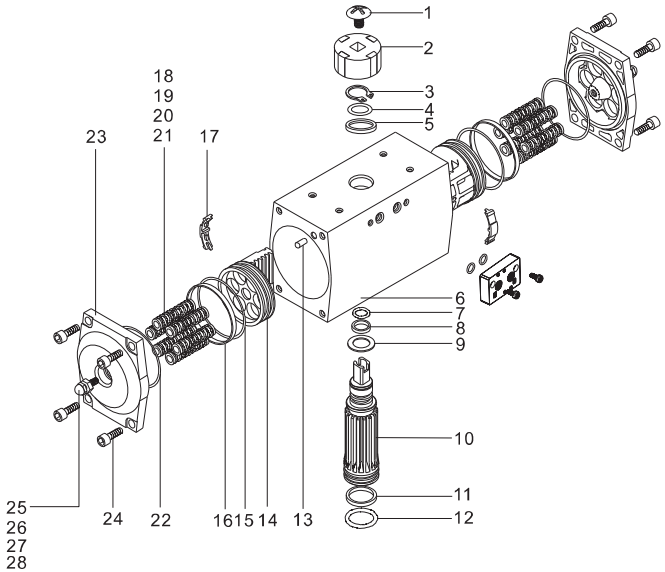
1.- To determine the way of operation of the usually closed valve NC or usually open NO.

2.- To check that valve and actuator are in the same position (open or closed).

3.- To check the correct positioning (alignment) of all the elements of the group, valve, connection piece, bracket and actuator.

4.- To press the joining screws correctly distributing the effort in proportional form.

DISASSEMBLY OF THE ACTUATOR



1.- To disconnect the nets of feeding of air and electric energy of the actuator and their accessories.
2.- To disassemble all the accessories of the actuator (solenoid, limit switch box, extra.)
3.- To disassemble the actuator of the valve.
4.- To unscrew the end caps screw (24)
5.- To remove the end caps (23)
6.- To rotate the axis (10) in the sense of the counterclockwise so that the pistons (14) will be leaved the body (6)
7.- To retire the circlip (3) and the washers (4) and (5)
8.- To press the axis (10) for the superior part toward the inferior part of the body until it is free.
9.- To clean the components of the actuator perfectly and it stops their maintenance to replace:

In the axis: Circlip (3) O'ring (7) and (12)
Washer (5)
Pinion lower bearing (11)
Pinion upper bearing (8)

In the end caps: End cap O'ring(22)

In the pistons: O'ring (15)
Piston guides (17)
Bearing (16)

THIS MAINTENANCE WILL BE CARRIED OUT EACH 500.000 COMPLETE CYCLES.