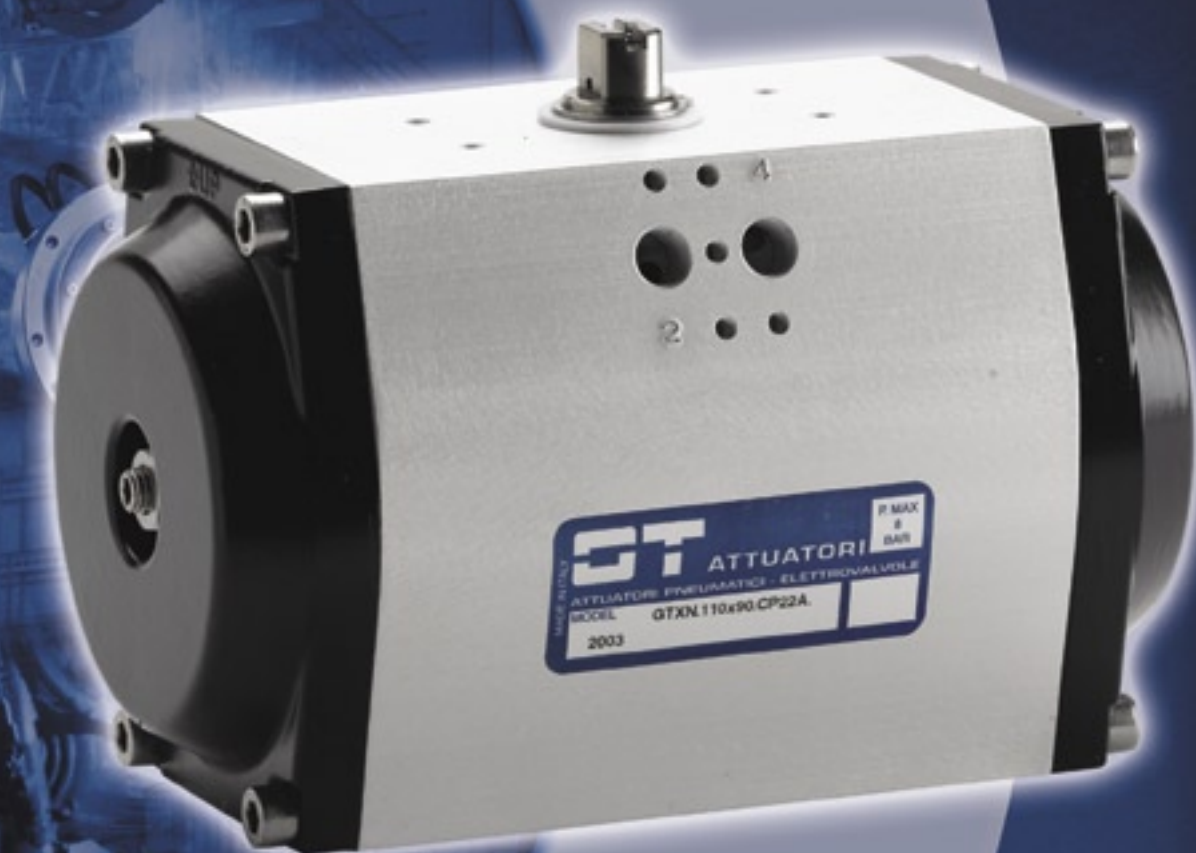


GT

Pneumatic Actuators



General Features

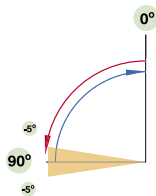
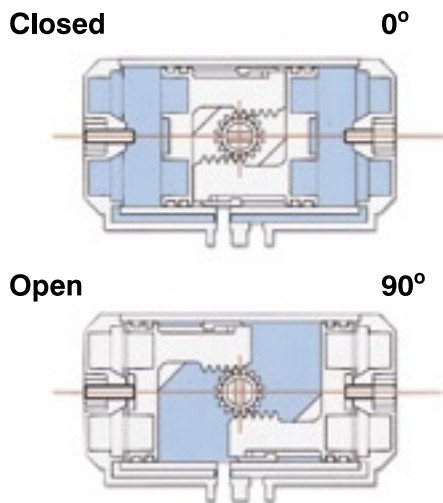


Rack and pinion working system which assures constant torque, strength and reduced overall dimensions. All G.T. Attuatori Actuators can be easily field converted from double acting to spring return type by inserting the correct number of spring cartridges to the Double Acting unit, thus eliminating bulky housing extensions, saving weight and space. Specially designed and patented preloaded self-containing spring cartridges are completely contained before end caps screws release, ensuring the safest installation and removal.

- *Air Supply: filtered, better if lubricated, max pressure 10 Bar (142 PSI).*
- *Lubrication: factory lubricated, guaranteed for 500,000 strokes minimum.*
- *Internal sliding surface lapped and anodized (Ra 0.8-1-2 um. on cut off 12.5mm), minimum friction and very long life of actuator.*
- *Guiding bearings made by low friction material, to avoid metal to metal contact, easily replaceable for maintenance. G.TREVISAN del 1982 patent.*
- *Double bottom drilling, for actuator to valve assembling and centering as ISO 5211 / DIN3337 standard.*
- *Bottom shaft female key, as ISO 5211 / DIN 3337 standard, double square hole for assembling on valves with square key stem in line or turned 45°.*
- *Air supply ports drilling as NAMUR standard or with interface plate as NAMUR standard.*
- *Top drilling for accessories assembling and shaft top end as NAMUR standard.*
- *Position indicator on request.*
- *Standard execution temperature range: -20°C (4°F) to +90°C (194°F)*
Special execution (on request) range: -40°C (40°F) to +160°C (320°F)
- *External protection: corrosion strength to 500 hours in salted fog, as ASTM B117-73.*
- *Each actuator is branded with a progressive serial number for easy identification and traceability.*
- *100% of actuators are working and sealing tested.*

BODY	Extruded aluminium alloy ASTM 6063, anodized UNI 4522 (on request hard anodized + PTFE, or Electroless Nickel Plated, powder polyester painted).
CAPS	Die-cast aluminium alloy UNI 5076, powder polyester painted.
PISTONS	Die-cast aluminium alloy UNI 5076.
SHAFT	Steel AISI SAE 11L37, Electroless Nickel Plated ASTM B656.
GUIDES	Low friction acetalic resin.
BOLTS	Stainless steel AISI 304.
SPRINGS	Preloaded spring cartridges, PATENTED ALL AROUND THE WORLD since 1986, powder epoxy painted.
SEALING	Nitrilic rubber BUNA N (on request VITON or EPDM).

Double Acting



OPERATION

Give pressure to the port "A" to open pistons with consequent shaft rotation. Remove pressure from port "A" and give it to the port "B" to close the pistons with consequent shaft counter-rotation.

In the GTV and GTX models there is the possibility to adjust the pistons opening end position, thus adjusting the valve opening at $90^\circ \pm$ about 5° , while the pistons closing end position is fixed at 0° . Both the adjustments are easily possible from the outside of the actuator by simply loosening the nut and rotating clockwise or counterclockwise the adjusting screw, then tightening same nut very well.

The system for central closing pistons position adjustment from the outside of the actuator is Patent Pending in Europe #9812029.7, then with North America and Far East extension.

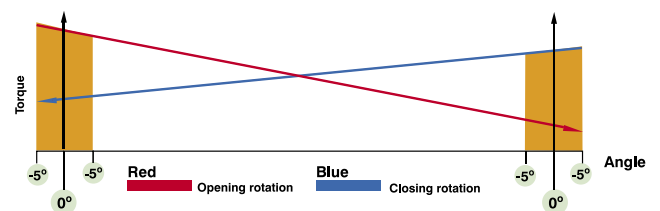
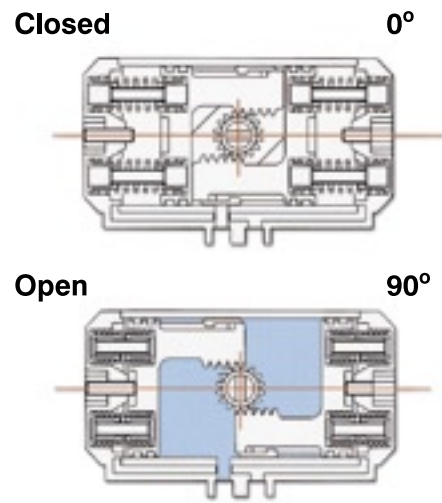
TORQUE

The double acting actuators have a constant torque during all the rotation, directly proportional to supply air pressure. To get exact torque values please contact our office.

PERFORMANCE RANGE

Double acting actuators are made in 15 sizes and cover a range of torque from 13.8 Nm. through to 4,690 Nm. with pressure of 6 bar.

Spring Return



OPERATION

Give pressure to the port "A" to open pistons with consequent shaft rotation. Remove pressure from port "A" to close the pistons with consequent shaft counter-rotation, thanks to the thrust cartridges placed inside the actuator.

The port "B" may be free or has to be connected to the exhaust. The end positions pistons adjustments possibilities are exactly the same as the double acting models.

The spring return actuators have a decreasing torque as shown in the above indicated graph. This is due to the compression and the distension of the spring cartridges during the pistons stroke. To get exact torque values please contact our office.

PERFORMANCE RANGE

Spring return actuators are made in 15 sizes and cover a range of torque from 8 Nm. through to 1,450 Nm. at 0° and 15 Nm. through 2,800 Nm. at 90° always with pressure of 6 bar.

Options

BODY

The body may be hard anodized + PTFE or polyester powder coated instead of standard anodization.

END CAPS

The end caps are available in different colours such as Blue, Green, Orange or Yellow on request.



DRIVE SHAFT

The shaft is available in stainless steel and with special dimensions on request.



SPECIAL ACTUATORS

Special order actuators such as 3 piston double acting and spring return models are available on request.



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