

# Specification

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## Pneumatic Actuator

Compact pneumatic actuator of Scotch Yoke design.

Actuator shall consist of cylinder in extruded aluminium. Anodized or Hard anodized (PTFE sealed) surface.

Valve connection according to ISO 5211/ DIN 3337, Solenoid Valve mounting face according to NAMUR, Accessory mounting face according to VDI/VDE 3845.

The linear piston movement shall be transmitted to a 90° turn movement via a Scotch Yoke mechanism. The Scotch Yoke slot shall be 10° canted for maximum power utilization. Transmission from piston to Scotch Yoke shall be over life time lubricated roller bearings.

Details exposed to high surface loads shall be hardened.

Spring return unit shall consist of colour coded, epoxy painted springs and shall be calibrated and pre-tensioned with the spring guided against the piston. Spring pressure shall be clearly marked. Surface treated insides of spring housings, end plates and cylinder.

The piston shall have a low friction treated O-ring seal, snap mounted guiding element.

Integrated manual override when required. Gear box or other unit between actuator and valve is not to be used. The normal operation shall not be affected in auto position mode. Neutral / Auto position shall be clearly marked. Hand wheel mechanism shall not add friction to the actuator.

Drive shaft shall have double square drives, 45° offset from each other, to allow mounting according to ISO5211 and DIN 79. Upper shaft end according to VDI/VDE 3845.

The cylinder shall have shaft bearings. Contact forces between shaft, piston and cylinder shall be carried by bearings.

The actuator shall be adaptable to suit different ambient temperature ranges.

Design life shall be minimum 1 000 000 full cycles.