Specification

Electric Actuator with Spring Return

The unit shall include a low pressure hydraulic spring return actuator with manual operation unit, electric motor, oil container with strainer, gear pump, blocking valve and end limit indication.

Compact hydraulic piston actuator of Scotch Yoke design.

The actuator shall consist of cylinder in extruded aluminium. Anodized or hard anodized (PTFE sealed) surface.

The function shall be such that the linear movement of the piston / pistons is transmitted over a Scotch Yoke to 90° shaft movement. The Scotch Yoke gap shall be at an angle of 10° for maximum efficiency. The power transmission between Scotch Yoke and piston shall take place through roll bearings.

Details exposed to high surface loads shall be hardened.

The 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 must have a sealing O-ring and Snap-On mounted support bands.

Integrated manual override unit when required. A gear or other unit between actuator and valve must not be used. Normal operation should not be affected in automatic position. Neutral / Auto position shall be clearly marked. Hand wheel mechanism shall not add friction to the actuator.

The shaft shall have double squares, offset 45° to eachother, in order to enable mounting according to ISO 5211 and DIN79. The upper side according to VDI/VDE 3845.

Bearing of shaft in the cylinder. The contact force between shaft, piston and cylinder shall be absorbed by bearing.

The operation time for the “fail safe” function shall be adjustable.

Indication equipment shall be at least IP67. Ex-proof designed components according to ATEX for application in explosive environment.

The actuator shall be adaptable for different ambient temperatures. In standard design -25 °C to +80 °C. In Ex design -20 °C to +40 °C.