

# Manöverdon (Electrical Actuator type ITQ 600 - 900)



## Product Overview

- Self locking - Provided by double worm gearing to keep position of valve unchanged against reverse torque from valve.
- Motor - Specially designed induction motor to generate high starting torque and high efficiency equipped with thermal protector to prevent damage from over heating.
- Torque switches - Protects actuator from damage caused by overload from the driven valve over the whole travel. 1 for each open/close.
- Manual override - Auto / Manual switchable lever and hand wheel engagement for emergency manual operation.  
Drive force automatically resorted by motor start, unless lever padlocked to prevent this occurring.
- External mechanical stopper - Prevents over run of travel angle when limit switch fails.
- Removable drive bushing and ISO5211 mounting base - (F07~F16) for easy mounting on valve.

## STANDARD SPECIFICATION

<b>Enclosure</b>	Weatherproof IP67, NEMA 4X and 6, O-ring sealed
<b>Main power supply</b>	110 / 220 VAC / 1 phase / 50/60 Hz, 380 / 440 VAC / 3 phases / 50/60 Hz $\pm$ 10%, 24 VDC
<b>Duty cycle ON/OFF</b>	S2: 10 – 30 min
<b>Duty cycle modulating</b>	S4: 30-50%, 300-1200 start/hour
<b>Motor</b>	Induction motor
<b>Limit switches</b>	4 pcs. Adjustable travel switches (SPDT 250VAC/10A rating)
<b>Torque switches</b>	2 pcs. 1 for open and 1 for closing (SPDT 250VAC/10A rating except for ITQ 010)
<b>Stall protection/ set. Temp.</b>	Built in thermal protection, open 150°C $\pm$ 5°C, 97°C $\pm$ 15°C
<b>Travel angle</b>	90° $\pm$ 5° (0° - 100°)
<b>Position indicator</b>	Continuous mechanical indicator with arrow
<b>Manual override</b>	De-clutchable
<b>Self locking</b>	Provided by double worm gearing (no brake)
<b>Mechanical stopper</b>	1 each for each travel end (open and close), external and adjustable
<b>Space heater</b>	5W (110/220VAC) for anti-condensation
<b>Cable entries</b>	2 – PF x 3/4" TAP
<b>Terminal block</b>	Screw and lever push type (spring loaded)
<b>Ambient temperature</b>	Basic actuator: -20°C – +70°C, c/w control options: -10°C – +60°C
<b>Ambient humidity</b>	90% RH max. (non-condensing)
<b>Anti vibration</b>	XYZ 10g. 02-34Hz. 30 minutes
<b>Housing</b>	Hard anodized aluminum casting
<b>External coating</b>	Dry powder polyester



## OPTIONS

REMOTE MONITORING AND CONTROL	
PK	Potentiometer kit (output signal: 0-1 kΩ) High resolution potentiometer and precisely machined gearing are directly engaged with drive shaft to feed back continuous position of valve
CT	Current transmitter (output signal: 4-20 mA) Zero / span adjustment Convertible DIP switch (4 wire to 2 wire)
RPC	Remote position controller (by input and output signal) Input: 4-20 mA, 0-10VDC, 2-10VDC, 1-5VDC, 0-5VDC Output: 4-20 mA Auto-calibration Reverse operating direction
Local control unit	
Fail safe unit	

MECHANICAL	
EX	Explosion proof (Ex d II B T4)
ALS	Auxiliary limit switches (max. 2 for each travel end)
ATS	Auxiliary torque switches (max. 2 for each travel end)