Beaver Compact Quarter-Turn Electric Valve Actuator

A compact electric actuator used to automate quarter-turn valves.





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Beaver T41 Compact Quarter-Turn Electric Valve Actuator

The Beaver T41 Quarter-Turn Electric Actuator is designed to provide high operating torque with full load at any position.

This small and lightweight electric actuator has an encapsulated control servo unit which provides protection from heat, moisture, and dust.

This electric actuator is available with a visual position indicator, torque switch, handwheel, local control unit, or junction box.

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KEY FEATURES

- Heat-treated steel alloy gear driving unit is durable and resists wear and long-term load impact.
- Stainless steel cam mechanism allows stroke adjustments of from 0° to 90°.
- Detachable crank handle helps keep the actuator compact.
- Integrally built worm-gear and drive shaft ensure dependability with high output torque.
- Position indicator is enclosed in tempered glass for temperature resistance.

Need technical advice? Our friendly specialists are here to help.



Tables 1–2. T41 Specifications

| Technical Specifications | | | | | | | | | |
|----------------------------|---|--|--|--|--|--|--|--|--|
| Brand | Beaver | | | | | | | | |
| Model | T41 (Compact) | | | | | | | | |
| Output torque | 30-6000Nm | | | | | | | | |
| Duty cycle (on/off) | S2:35%, 10–30min | | | | | | | | |
| Duty cycle (modulating) | S4:30–50%, 300~1200 start/hour | | | | | | | | |
| Temperature range | -23°C to +80°C | | | | | | | | |
| Power supply | 1 phase: 110/220VAC ±10% @ 50/60Hz | | | | | | | | |
| | 3 phase: 380/440VAC ±10% @ 50/60Hz | | | | | | | | |
| | 12 VDC.24VDC/VAC | | | | | | | | |
| Stall protection | Standard accessory, built-in, auto- reset type | | | | | | | | |
| Anti-vibration | XYZ 10 g, 0.2–34 Hz, 10 minutes | | | | | | | | |
| Ambient humidity | 90% RH Max (non-condensing) | | | | | | | | |
| Ambient temperature | -30°C to +60°C | | | | | | | | |
| Enclosure rating | IP67 (standard), IP68 (option) | | | | | | | | |
| Mounting direction | All directions | | | | | | | | |
| Electrical conduit | M20 x 1.5 with cable gland (standard type) | | | | | | | | |
| | 2 - M20 x 1.5 with cable gland (modulating type) | | | | | | | | |
| Manual operation | Detachable crank allen key | | | | | | | | |
| Stopper | In operation: limit switches at full and closed position | | | | | | | | |
| | Manual operation: mechanical stopper | | | | | | | | |
| Options | Type A standard | | | | | | | | |
| | Type B additional limit switches (2xSPST) | | | | | | | | |
| | Type B1 additional limit switches (2xSPDT) | | | | | | | | |
| | Type C potentiometer unit (1K Ω or 5K Ω) | | | | | | | | |
| | Type D potentiometer unit (1K Ω or 5K Ω) with additional limit switches (2xSPST) | | | | | | | | |
| | Type E modulating controller (input signal: 4–20mA or 1–5VDC. Output signal: 4–20mA) | | | | | | | | |
| | Type F current position transmitter (Output signal: 4–20mA) | | | | | | | | |
| | Type H space heater | | | | | | | | |
| | Torque switches (2 units) | | | | | | | | |
| | Various mounting brackets | | | | | | | | |

| Material Specifications | | | | | | | |
|-------------------------|-----------------|--|--|--|--|--|--|
| Top cover | ADC12 | | | | | | |
| Body | ADC12 | | | | | | |
| Handle lever hole | 4 mm | | | | | | |
| Worm-wheel shaft | 303 | | | | | | |
| Cable | 0.3x7 cable 1 m | | | | | | |
| Cable entry | 45# | | | | | | |
| Name plate | Stainless steel | | | | | | |
| Hex socket screw | M5x18 | | | | | | |
| Indicator | 0-90° | | | | | | |
| Mechanical limit | M5x25 | | | | | | |
| screw | | | | | | | |
| Mechanical | Alloy | | | | | | |
| stopper | | | | | | | |



T41 Compact Quarter-Turn Electric Valve Actuator

Diagram 1. T41 Parts

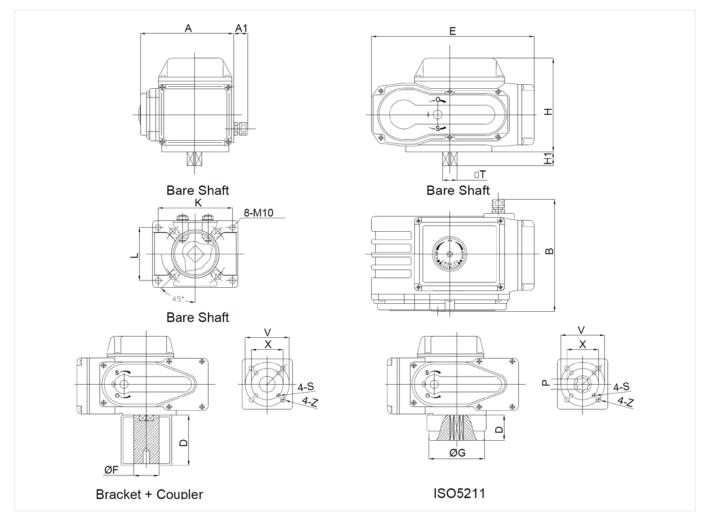
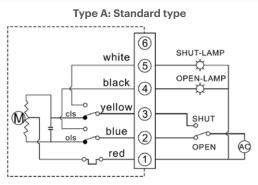


Table 3. T41 Dimensions

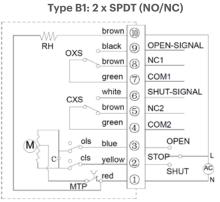
| Product Dimensions (mm) | | | | | | | | | | | | | | | | |
|-------------------------|-----|------|-----|-----|----|-------|-----|-----|-----|-----|-----|---------|------|-------|-----|----|
| Model | Α | A1 | Е | Н | H1 | Т | К | L | В | Х | V | Р | S | Z | G | F |
| T41-03 | 115 | 22 | 160 | 103 | 12 | 12*12 | 68 | 60 | 138 | 36 | 50 | 9/11/14 | 4-M5 | 4-M6 | 70 | 28 |
| T41-05 | 115 | 22 | 160 | 103 | 12 | 12*12 | 68 | 60 | 138 | 36 | 50 | 9/11/14 | 4-M5 | 4-M6 | 70 | 28 |
| T41-10 | 123 | 22 | 208 | 124 | 19 | 15*15 | 82 | 70 | 105 | 50 | 70 | 9/11/14 | 4-M6 | 4-M8 | 90 | 35 |
| T41-20 | 148 | 22 | 258 | 148 | 22 | 23*23 | 118 | 84 | 178 | 70 | 102 | 14/17 | 4-M8 | 4-M10 | 125 | 48 |
| T41-40 | 148 | 22 | 258 | 148 | 22 | 23*23 | 118 | 84 | 178 | 70 | 102 | 17/22 | 4-M8 | 4-M10 | 125 | 48 |
| T41-60 | 148 | 22 | 258 | 148 | 22 | 23*23 | 118 | 84 | 178 | 70 | 102 | 17/22 | 4-M8 | 4-M10 | 125 | 48 |
| T41-100 | 156 | 27.5 | 280 | 159 | 25 | 30*30 | 148 | 84 | 187 | 102 | 125 | 22/27 | | 4-M10 | 135 | 65 |
| T41-160 | 156 | 27.5 | 280 | 159 | 25 | 30*30 | 148 | 84 | 187 | 102 | 125 | 22/27 | | 4-M10 | 135 | 65 |
| T41-200 | 156 | 27.5 | 280 | 159 | 25 | 30*30 | 148 | 84 | 487 | 140 | 165 | 36 | | 4-M16 | 175 | 65 |
| T41-400 | 266 | | 439 | 179 | 48 | 52*52 | 180 | 180 | 266 | 159 | 254 | 52 | | 4-M18 | | |
| T41-600 | 266 | | 439 | 179 | 48 | 52*52 | 180 | 180 | 266 | 159 | 254 | 52 | | 4-M18 | | |



Diagram 2. T41 Control Functions

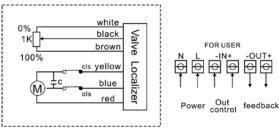


Output signal: 2 x SPST (NO) with line power switch



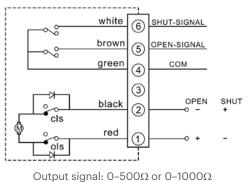
Output signal: 1 x SPST (NO) micro-switch each at open and close position

Type E: Modulating control



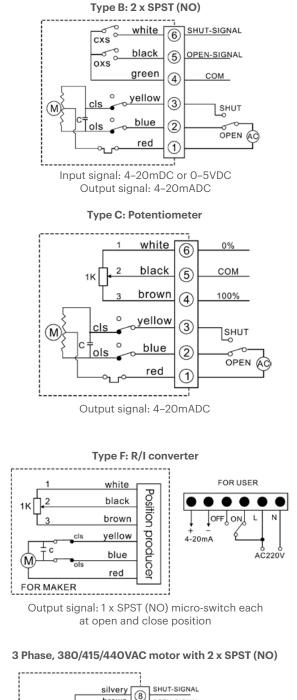
Output signal: 1 x SPDT (NC/NO) micro-switch each at open and close position

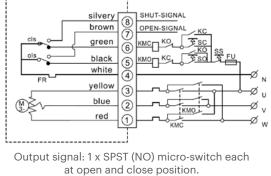






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1. Tell us what you need.

Tell us about your project. What do you want to achieve? What problems do you need to overcome? Let's work back from there.

2. Choose the right solution.

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3. Get the job done.

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B | **E** | **A** | **V** | **E** | **R**

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