

Beaver Premium Quarter-Turn Electric Valve Actuator

A high-performance electric actuator used to automate quarter-turn valves.

T42



Beaver T42 Premium Quarter-Turn Electric Valve Actuator



T42 Premium Electric Valve

The Beaver T42 Quarter-Turn Electric Actuator is a premium actuator robustly designed for on/off and modulating applications in industrial environments.

The actuator has a squirrel cage induction motor capable of producing a high starting torque. Its torque output range is 60–6000Nm.

This actuator has a manual override function, which automatically disengages once it's electrically operated.

This premium electric actuator is available with a visual position indicator, local control unit with LED indicator or LCD display, fail-safe function battery pack, and Profibus/Modbus/CAN bus function.

KEY FEATURES

- Hard-anodised aluminium housing and external epoxy coating ensure durability in rigorous environments
- Thermal protection prevents damage from overheating.
- Built-in torque and limit switches allow for remote indication.
- Mounting base is compliant with ISO 5211.
- Permanently lubricated for easy maintenance.
- Self-locking gear mechanism prevents reverse movement from the valve.

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

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Tables 1–2. T42 Specifications

Standard Specifications	
Brand	Beaver
Model	T42 (Premium)
Output torque	60–6000Nm
Duty cycle (on/off)	S2: 10–30 min S4: 20–50%
Duty cycle (modulating)	S4:30–50%, 300~1200 start/hour
Main power supply	Standard: 1 phase/220 VAC and 3 phase/380 VAC Optional: 1 phase/110 VAC, 3 phase/220 VAC or 440 VAC, 24 VAC/24 VDC
Control power supply	110/220 VAC or 24 VDC
Stall protection/ set temperature	Built-in thermal protection Open: 150°C Close: 97°C
Anti-vibration	XYZ 10 g, 0.2–34 Hz, 30 minutes
Ambient humidity	90% RH Max (non-condensing)
Ambient temperature	-20°C to +70°C
Motor	Squirrel caged induction motor

Standard Specifications	
Limit switches	2 x SPDT, 10A@250VAC at open/closed position Except NTQ-060/100: 1 x SPDT, 10A@250VAC at open/closed position
Torque switches	1 x SPDT 10A@250VAC at open/closed position (except NTQ-060/100)
Mechanical stopper	1 for each travel end (open and closed), external and adjustable
Position indicator	Continuous mechanical indicator with arrow
Self-locking	Provided by double worm gear (no brake)
Manual override	De-clutchable
Space heater	5W (110/220 VAC) for anti-condensation
Cable entry	2 x PF ¾"
Lubrication	EP type grease
Terminal block	Screw and lever push type (spring loaded)
Enclosure	Standard: Weather-proof IP67 (standard), NEMA 4 & 6 Option: IP68 or EExdIIBT6

Table 3. T42 Properties

Standard Properties													
Model	Valve connection ISO 5211	Output torque (Nm)	Duty cycle IEC34-1 S2-%	Operating time (sec) 50–60Hz	Max bore square	Max bore key	Rated current (A)					No. of handle turn	Weight (kg)
							1Ph 230 VAC	1Ph 110 VAC	3Ph 380 VAC	3Ph 440 VAC	24 VDC		
T42-060	F05/F07	60	35%	21/18	20	22	0.45					9	8
T42-100	F05/F07	100	35%	26/22	20	22	0.5	1.0	0.22	0.26	1.7	10	8
T42-160	F07/F10	160	35%	28/23	25	32	0.6	1.45	0.25	0.30	2.0	12	14
T42-240	F07/F10	240	35%	28/23	25	32	0.7	1.6	0.35	0.39	2.8	12	14
T42-350	F10/F12	350	35%	32/27	25	32	0.9	1.8	0.38	0.42	4.0	13	18
T42-500	F10/F12	500	35%	32/27	25	32	1.3	3.2	0.8	0.86	6.9	13	19
T42-800	F12/F14	800	35%	36/30	38	42	1.5	3.9	1.1	1.2	9.8	15	24
T42-1100	F12/F14	1100	35%	36/30	38	42	2.2	4.2	1.5	1.6	12.5	15	26
T42-1500	F14/F16	1500	35%	55/46	50	60	1.5	3.9	1.1	1.2	9.8	46	50
T42-2000	F14/F16	2000	35%	55/46	50	60	1.5	3.9	1.1	1.2	9.8	46	50
T42-2500	F14/F16	2500	35%	55/46	50	60	2.2	4.2	1.5	1.6	12.5	46	52
T42-4000	F16/F25/F30	4000	35%	90/75	50	60	1.5	3.9	1.1	1.2	9.8	73	200
T42-6000	F16/F25/F30	6000	35%	90/75	60	70	2.2	4.2	1.5	1.6	12.5	73	202

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Diagram 1. T42-060 to T42-1100 with Local Control Unit Parts

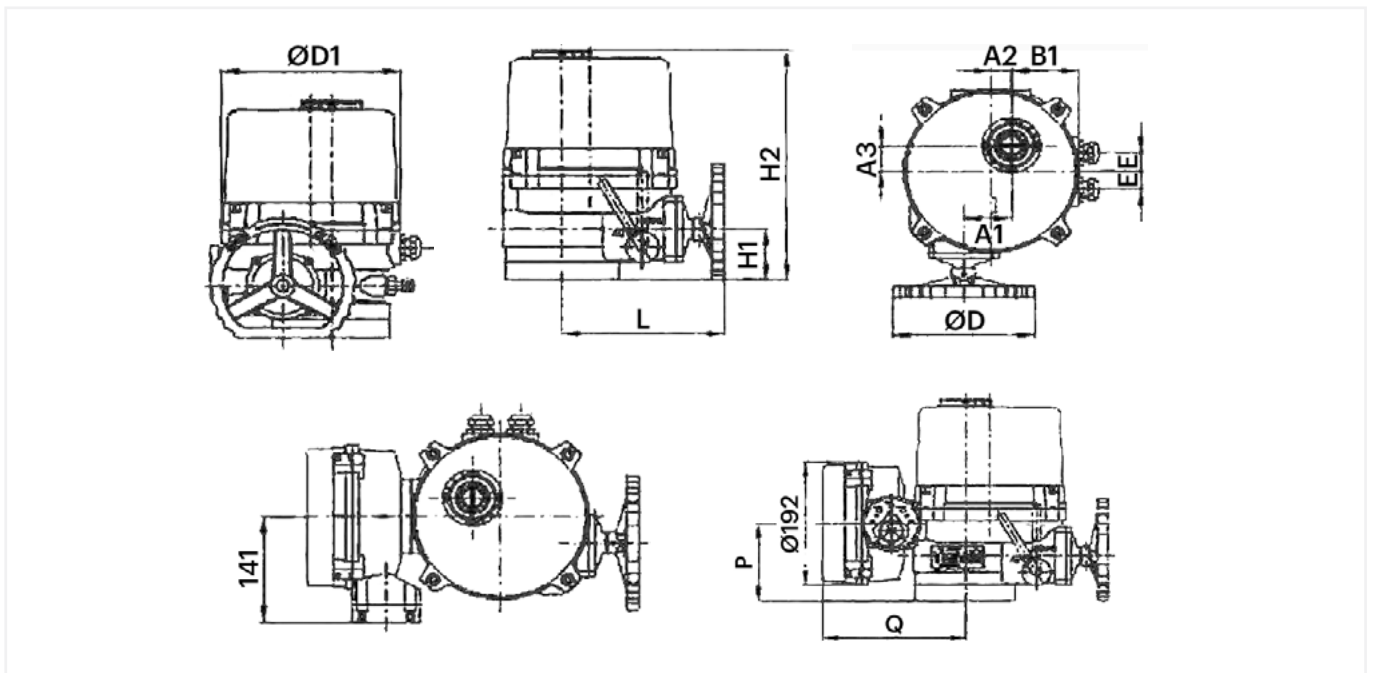


Diagram 2. T42-1500 to T42-2500

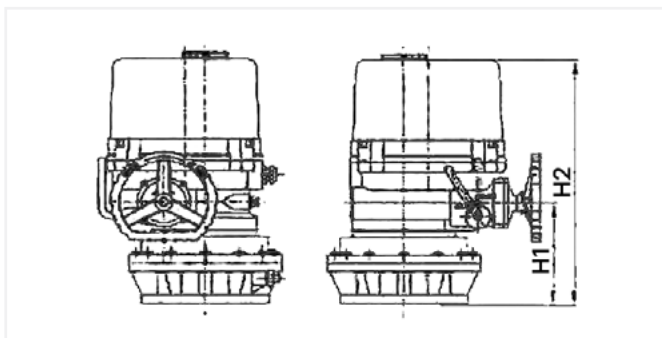


Diagram 3. T42-4000 to T42-6000

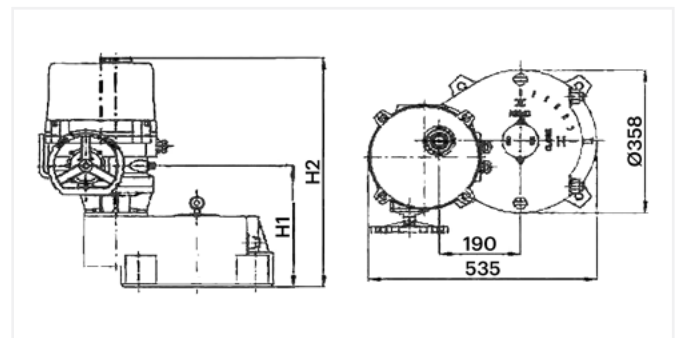


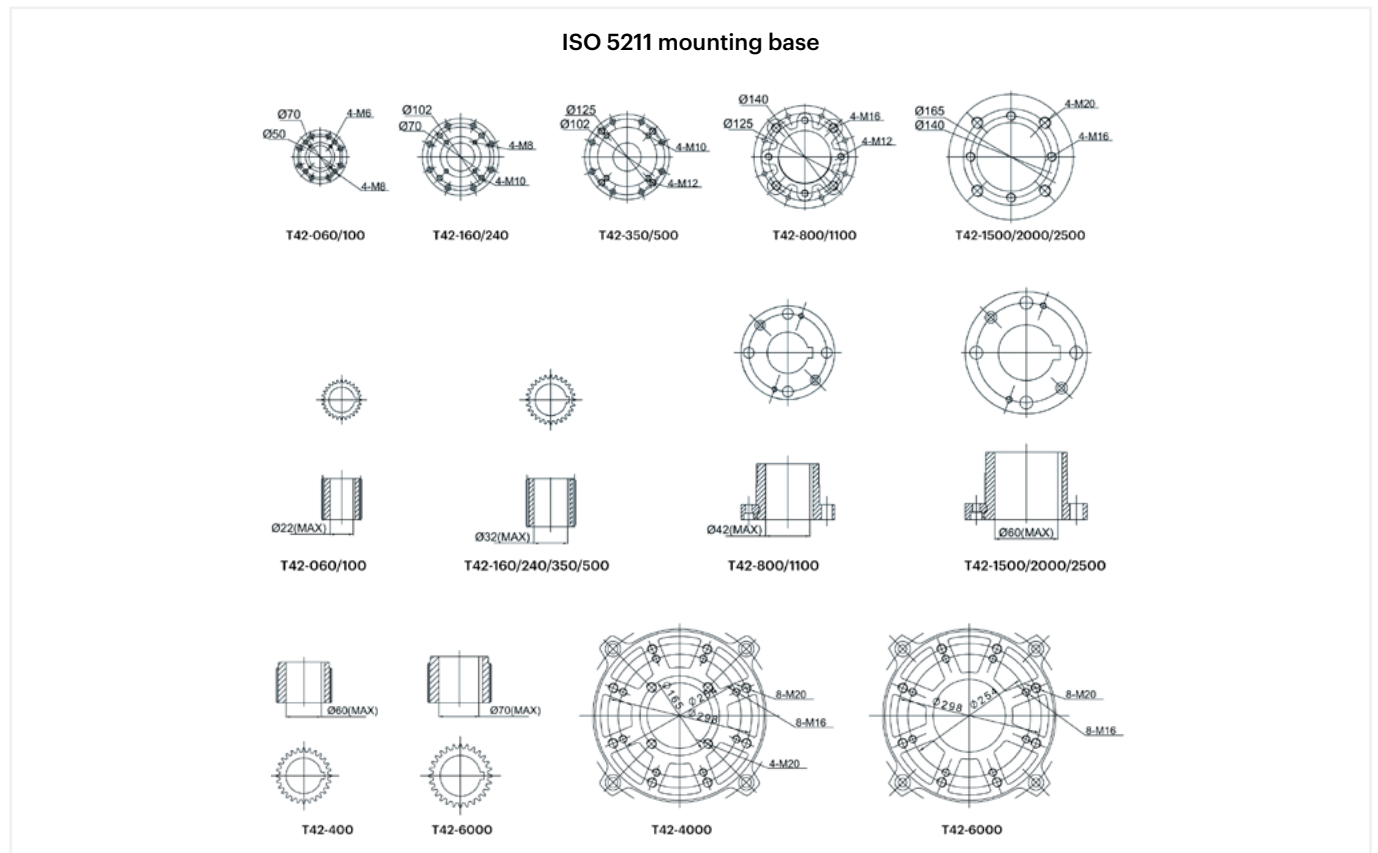
Table 4. T42 Dimensions

Product Dimensions (mm)												
Model	A1	A2	A3	B1	D	D1	E	H1	H2	L	P	Q
T42-060/100	41	12	31	67	100	157	23	55	223	167	96	179
T42-160/240	57.5	235	27	80.5	180	206	25	67	261	197	112	207
T42-350/500	60.5	25.5	35	85.5	180	222	25	70	315	208	121	207
T42-800/1100	70	35	40	96	180	262	25	81	352	230	132	222
T42-1500/2000	70	35	40	96	180	262	25	185	456	230	236	222
T42-2500/4000/6000	70	35	40	96	180	262	25	303	574			

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Diagram 4. T42 Mounting Dimension





We're here to help

We know it's important for you to talk to someone who knows their stuff. So if you have technical questions or need help choosing the right products, talk to our team. We'll walk you through our proven problem solving process.

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.

Weigh up the options. We'll do the analysis, discuss the options with you, and make a recommendation—the choice we'd make in your shoes.

3. Get the job done.

Complete your project, with the right products, on time and to spec. We've got your back all the way, with support during installation and commissioning.

Tap into our expertise and talk to our friendly, expert team.

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