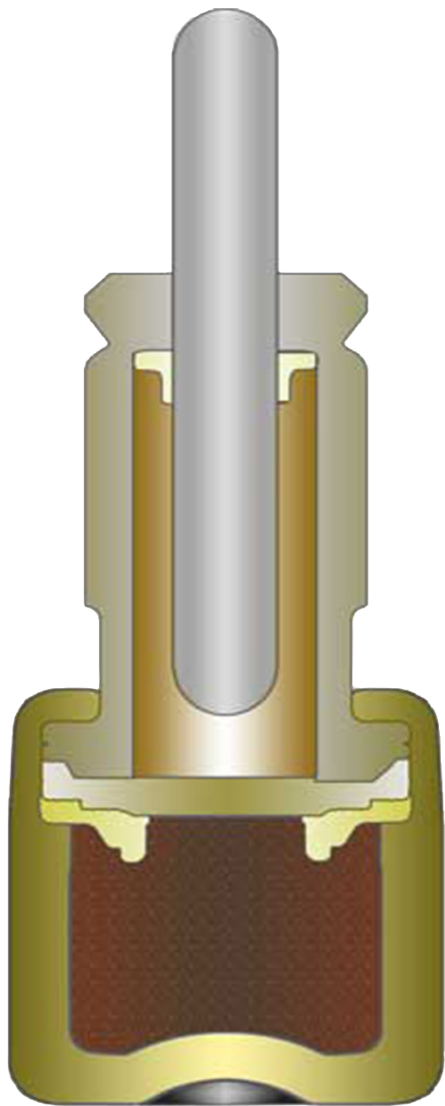


ThermoStatic Actuator

**UNITED
FLEXIBLE**

The United Flexible thermostatic actuator is a compact, rugged and dependable power source. It can quickly transform changes in temperature into mechanical piston driven energy. United Flexible manufactures these devices in many configurations, sizes and materials with one common purpose: **RELIABLE PERFORMANCE!**



Compact



- Rapid Actuation
- Only reliable switch solution for harsh temperatures and environment - Excellent Redundancy
- Allows for system miniaturization

Built to Last



- Survives severe conditions of pressure, temperature, and vibration
- Reliable and stable operation

Efficient Design



- Superior resistance to wear and corrosion
- Dependable power source
- Variety of materials allows for excellent chemical resistance

Custom Configured



- Diverse applications- ground, sea, and air
- Designed to meet specific application requirements
- Dedicated & Experienced engineering support

BELLOWS CENTER OF EXCELLENCE

Diverse Applications

The wax motor, as it is sometimes called, uses a very simple approach to linearly actuate a device when precise temperature changes requires it. They can operate switches on appliances, control position dampers, and regulate pneumatic pressure and liquid flow. The Thermostatic Actuators have been proven very effective when used to actuate safety switches and shutdown devices when temperature change crosses a critically determined boundary. Many markets such as aerospace, commercial/residential HVAC, chemical process control, automotive and others currently enjoy the benefits of this small and reliable device.



Efficiency and Endurance

The Thermostatic Actuator can withstand severe vibration and is practically impervious to higher pressures or vacuum conditions. It is able to operate up to 270° Fahrenheit or at very low temperatures. The Thermostatic Actuators are fabricated from copper or brass, as well as stainless steel to provide endurance from differing cooling fluids and environmental conditions.

Unique Design

United Flexible has a proprietary process to suspend heat transfer media in the sealed wax charge, thus eliminating the separation between the two materials and ensuring the response will not deteriorate over time. During operation, the heat transfer media rapidly heats the wax. As the charge heats up, the wax expands, pushing a diaphragm against an elastomer stem seat and driving the piston. The diaphragm/stem seat combination is also an important engineered feature in the Thermostatic Actuator. It eliminates piston wear on the diaphragm. It will operate even if the piston seat wears out.

Operating temperature may be specified by each individual application, and our engineering staff can tailor the thermostatic actuator for the desired performance parameters. Staggering multiple actuators in series could also increase the linear motion required on an application if a single actuator cannot stroke to the desired length.



Highest Quality

The Thermostatic Actuators are designed for long, reliable performance. Thermostatic Actuators can be fabricated to the highest quality, manufactured to offer superior resistance to wear and corrosion.

- + The devices have a unique lubricating sealer to keep contaminants out. Therefore, response will remain fast and accurate every time, over a long lifetime.

Engineering Know How

United Flexible's' engineering staff will either find a way to apply an existing Thermostatic Actuator design into your application or design a new configuration based on your strict requirements. The Thermostatic Actuators available from United Flexible operate normally within 50°F - 275°F with standard materials and above 400°F with specialty elastomers. Likewise, Thermostatic Actuators could be designed to operate below 50°F with specialty processing if needed. Typical working stroke is 1/8" with the shorter cups or 1/4" with the longer cups and can be obtained with a temperature range from 10°F to 100°F. A return load must be provided for proper operation. The load must conform to the type of device and varies with configuration. Each Thermostatic Actuator is perfectly calibrated at the factory to have a particular linear displacement at a given temperature. Also, it operates within the required temperature range, regardless of the environmental pressure. Response times are typically calculated in seconds.