

Temperature control: dual piston hydraulic actuator

- We needed a long stroke actuator for a two way valve
- A dual piston actuator was constructed and tested:
 - A coil with oil is positioned in the oil to be temperature controlled.
 - The coil is attached to an actuator with pistons moving as the oil expands with increasing temperature.
 - A large diameter piston takes the expansion from ambient to close to the set temperature, adjustable with a stop screw
 - A small diameter piston then takes the long stroke movement with a few degrees further temperature change
 - The actuator is kept at a distance from the valve, in order to be at ambient temperature.
 - A return spring was needed during the contraction of the oil (temperature reduction) as the oil in the actuator would rather lead to evaporation than to piston movement.

