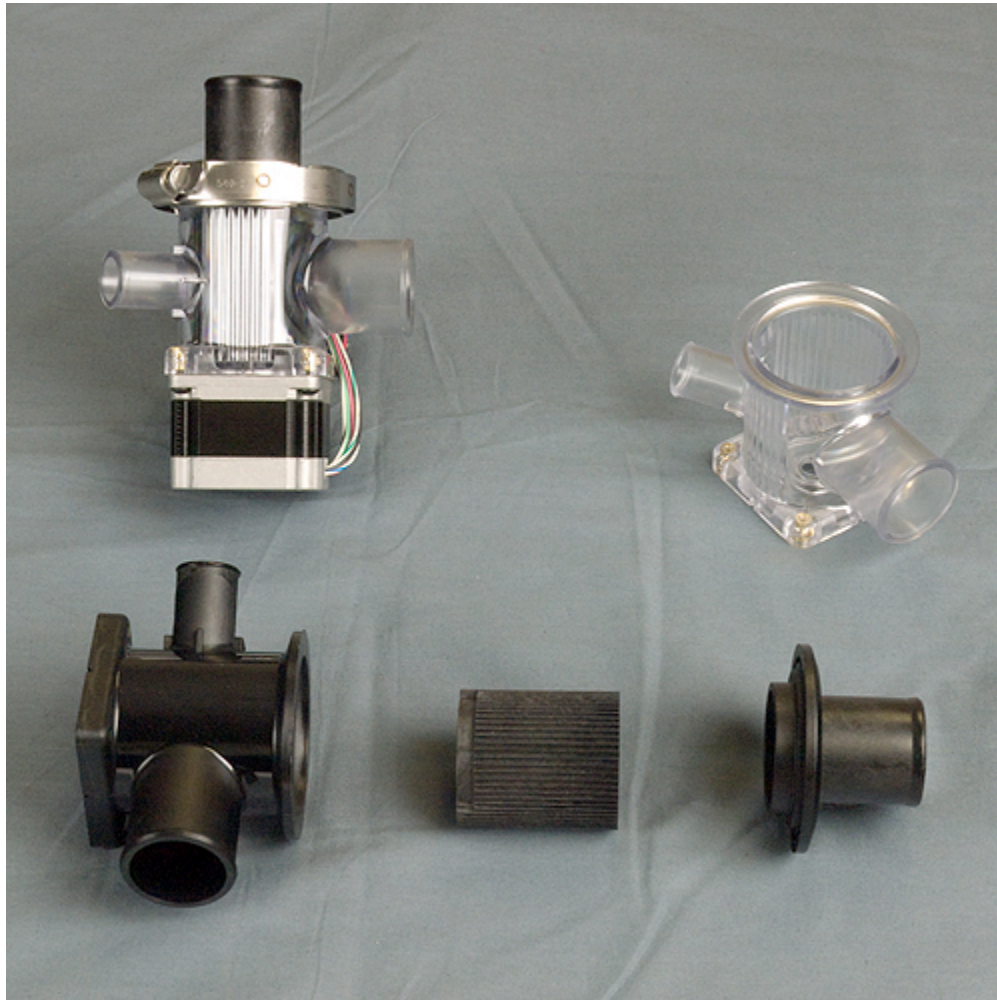


## Digital Rotary Control Valve (DRCV)



**Molder:** All Service Plastic Molding, Inc.

**Moldmaker:** Minco Tool and Mold, Inc.

**Material Supplier:** Dupont Engineering Polymers

**Designer:** Tom Hollis

**OEM:** MileageMatrix, Inc.

**Product Description**



# international plastics design competition



We have developed a new proven "digital" thermostat replacement true powertrain thermal management system that, after mapping, will always allow the engine/transmission to function at their "known" optimum operating temperatures, under all driving conditions. The DRCV System Benefits: improve fuel economy, reduced engine emissions, reduced engine wear, reduced oil change frequency, adaptable to all IC engines, and especially ideal for hybrid engines.

## **Why is the product innovative?**

Since 1914, basically all automotive engines have utilized an "analog" thermostat to control the interaction of the engine with the radiator system. This system, while always incorrect, was inexpensive and provided adequate engine function. However, years ago the OEM's were not faced with today's Global Warming conditions, ever increasing exhaust emission standards, new fuel economy standards, and higher fuel costs. We have developed a new proven "digital" thermostat replacement true powertrain thermal management system that, after mapping, will always allow the engine/transmission to function at their "known" optimum operating temperatures, under all driving conditions. Every BTU that exits through the radiator provides "ZERO" heat energy value! The DRCV System Benefits: improve fuel economy, reduced engine emissions, reduced engine wear, reduced oil change frequency, adaptable to all IC engines, and especially ideal for hybrid engines. The new NYLON materials are capable of meeting harsh under-hood environmental conditions; and have allowed the new DRCV design to provide unique features: small size, minimal pressure drop, positive seal, complete pressure balance, all surfaces "always wet" to provide a "fluid bearing" to prevent sticking, designed to provide a total powertrain thermal management system to include the transmission.