

# **Timothy Keim, Mechanical Engineering**

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## **Metered poppet valve**

In recent years, the poppet valve has begun to serve more versatile purposes. Before now, the poppet valve was mainly used for emergency release valves while the spool valve was more widely used. The poppet valve has several advantages over the spool valve. The poppet valve forms a tighter seal with the housing to prevent leakage of the hydraulic fluid flowing through the system. The poppet valve is smaller and weighs less than the spool valve and will be able to give a faster response time. The problem with the poppet valve is that it is under high pressure that needs to be equalized to keep the poppets in balance. Our goal is to build the poppet valve so it works as well as the spool valve and can be used in a wider range of applications.