

# **Reduce Pressure Drop!**

## **McCartney RPD Check Valve**

### **High Flow Springless Check Valve for Initiator Pumps**



*The engineers, designers and technicians at KMT Waterjet & McCartney Products have the experience and resources to develop innovative solutions to address your specific process equipment issues.*

Since KMT Waterjet & McCartney Products are located at the same facility, we are able to leverage these resources and apply knowledge gained from the latest developments in ultra high pressure technology (up to 100,000 PSI!).

The McCartney RPD High Flow Check Valve was developed to address specific LDPE equipment issues communicated to us by our customers.

#### **RPD High Flow Springless Check Valve for Initiator Pumps**

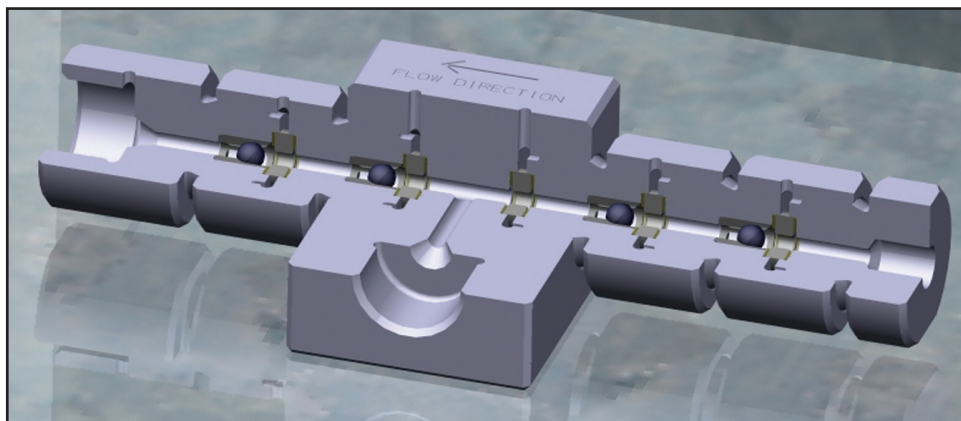
Traditional initiator pump check valve designs have been characterized by significant pressure drop across the inlet checks. This pressure drop generally requires about 50 PSI of "suction pressure" to prevent cavitation of the pump with typical initiator fluids.

In recent years, LDPE process changes have led to the use of initiator fluids with significantly higher vapor pressure. In order to keep the process fluids in the liquid phase, high suction pressures and cooling jackets have been utilized. Even with these actions there have still been concerns about potential pump cavitation while operating in high flow rate conditions.

To address these concerns the new McCartney RPD initiator check valve design has been developed to dramatically reduce the pressure drop across the valve.

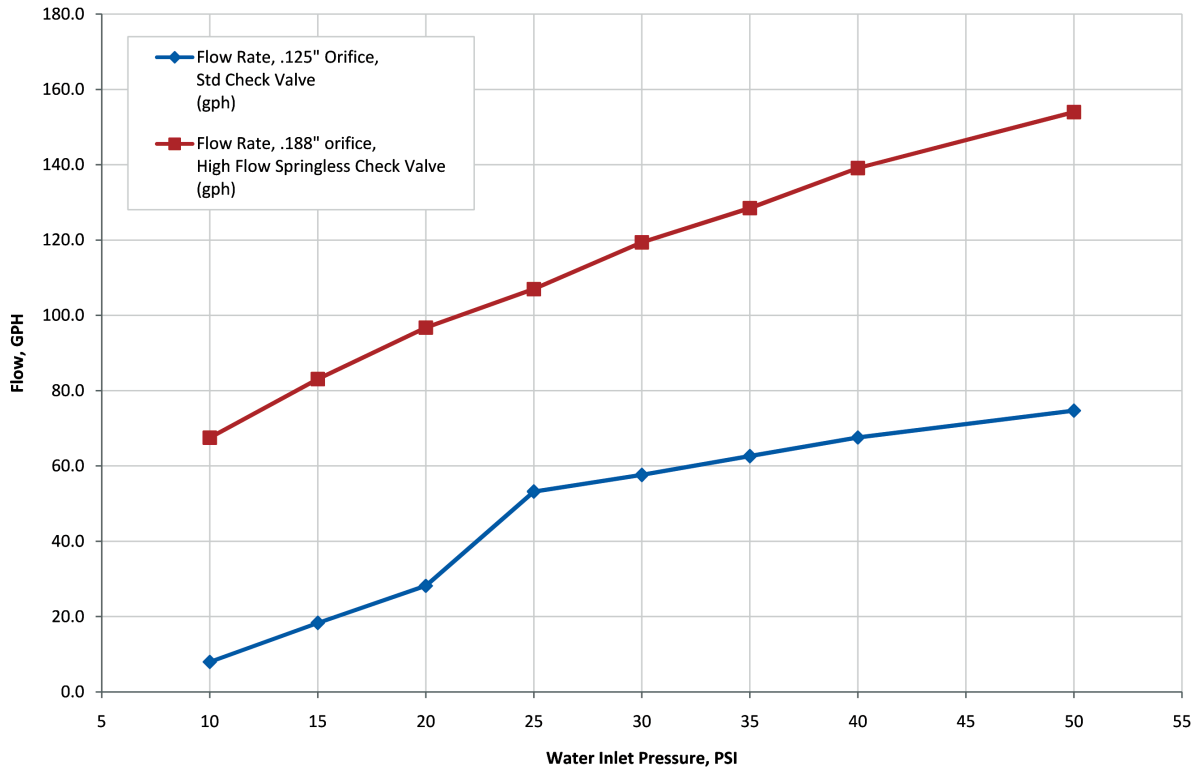
#### **Key Design Features:**

- 0.188" ball seat orifice diameter
- High flow ball cage design
- Lightweight ceramic check balls
- All stainless steel components (except check balls)
- Ball return springs not required
- Will run in either horizontal or vertical orientation
- Direct replacement for previous McCartney designs (no piping modifications required)



*Cut-away View of the McCartney RPD High Flow Springless Check Valve*

## Flow Comparison, Standard versus High Flow Check Valve (water flow rate through inlet checks)



### McCartney Equipment & Service Solutions For The LDPE Pellets Production Industry

KMT Waterjet Systems' McCartney Products brand has been a leader in high-pressure equipment design and manufacture for over fifty years. We recognize the need for specialized, close-tolerance machining and have developed equipment and procedures to meet this demand.

Supplied materials go along with international and specific standards, such as European standard EN10204. McCartney does meet latest pressure and explosion safety standards, so PED and ATEX certifications are available for every McCartney product (where applicable).

McCartney's extensive experience in the LDPE industry is available to you. We welcome your inquiry for special problems you may have handling extreme pressures, whether you need a single part or complete system.



McCartney PMH Single & Dual Peroxide Injection Pumps - The McCartney PMH hydraulic-driven reciprocating metering pump has long been the *industry Workhorse* for initiator injection.



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