



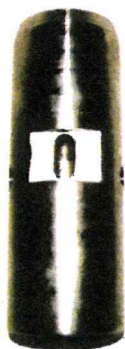
UNIBODY BOTTOM DISCHARGE VALVE (PATENTED)

This patented product was designed for maximum flow with minimal non-compressible free space to eliminate gas lock. One of many advantages of using the Unibody Bottom Discharge Valve on **any** Rod Insert Pump is that it allows the plunger and rod string to fall easier on the downward stroke of the pump, which helps the rod string to fall in **tension** and reduce **rod buckle**, which also helps reduce **tubing wear**. This is done through the discharge of fluid and gas on the downward cycle of the pump through the Unibody Bottom Discharge Valve.

The Unibody Bottom Discharge Valve was designed to use a small 1/2" ball. By design, the small ball will come off the seat before the travel valve ball because it has a smaller surface area than the travel valve ball. This design allows for a **burping** effect when gas has entered the pump chamber allowing the gas to escape through the Unibody Bottom Discharge Valve and helping to eliminate gas lock. Remember, the valve was designed with minimal noncompressible free space which also eliminates gas lock.

Another advantage of using the Unibody Bottom Discharge Valve on rod insert pumps is, it will also help keep solids from settling around the outside of the pump and the inside of the tubing. This build up of solids on the outside of a pump can sometimes cause the pump to become stuck in the tubing. When this happens, the rod and tubing strings have to be stripped out of the well increasing the time a rig must be over the well bore. **Rig Time** is increased work over cost.

The Tomcat Unibody Bottom Discharge Valve is designed with minimal non-compressible free space to eliminate gas locking of Rod Insert Pumps. It has proven to be the best Bottom Discharge Valve on the market today. While enhancing fluid production and reducing rod buckling it will also reduce the chance of the pump getting stuck in the tubing due to solids building up in the tubing around the pump. This will help eliminate stripping jobs when trying to pull the pump.



UNIBODY
BOTTOM
DISCHARGE
VALVE



END and FLOW
PASSAGE
VIEW



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