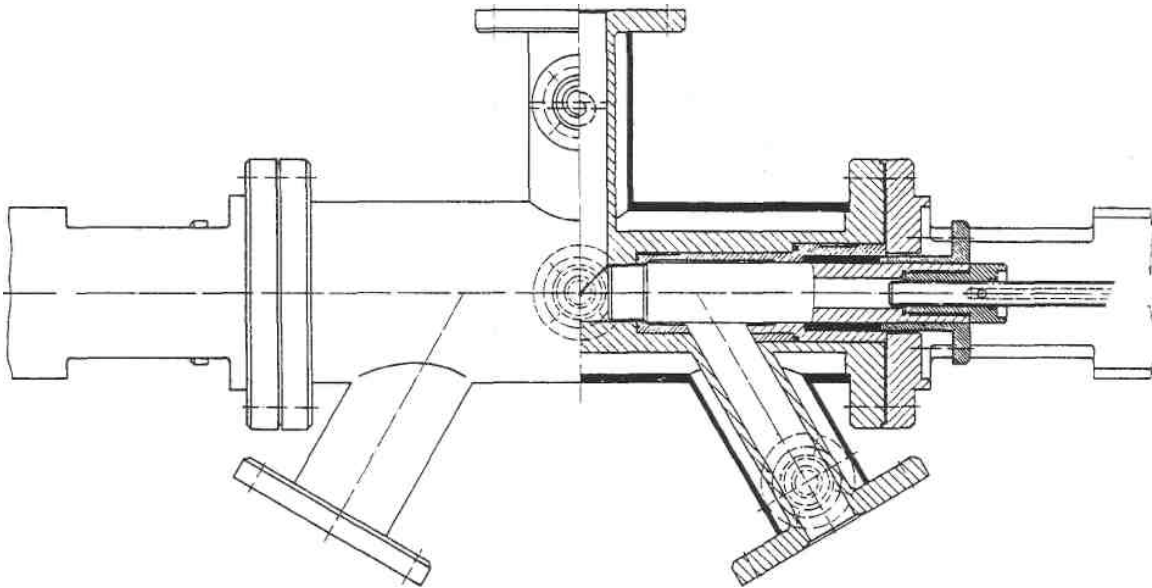


DIVERTER VALVES AND BOTTOM OUTLET VALVE COMBINATIONS

The main purpose of any Bottom Outlet Valve design is to avoid cavities or "Dead Spaces" at the bottom of reactors, vessels or pipework where product is drained or media are injected. You can combine a number of Bottom Outlet Valves to create "Dead Space-Free" Diverter Valves. Diverter Valves split the flow to guide the medium to alternative pieces of process equipment such as back-up pumps, filters or complete pipelines.

The selection of Bottom Outlet Valve types to create these valve combinations is based on the same criteria which you would use to choose traditional single Drain Valves. Medium, Size of Valve, Operating pressure and type of operation are all important reasons.

Sketch 1 shows a Diverter Valve based on a Ram Type Bottom Outlet Valve. You would choose a valve like this when you want to allow an easy flow through a small size valve for highly viscous media. The metal to metal replaceable seat makes it suitable for high pressures and temperatures. The disadvantage of a valve like this is the long travel it needs to open fully.



Sketch 2 illustrates a valve based on a Disc-Type Bottom Outlet Valve. The Nominal Bore of the valve is very large; therefore, flow deviation is not such an important issue. Subsequently, the travel remains short and the valve size manageable. Our example shows a manual valve for a vacuum application.

