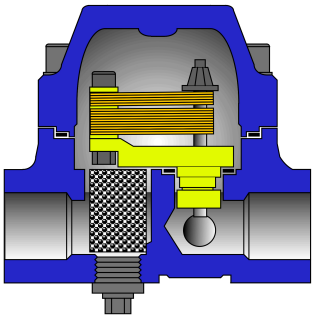
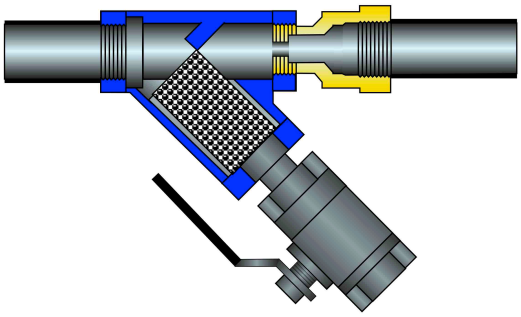
COMPARISON SHEET

VELAN STEAM TRAP VS. ORIFICE DESIGN

 Velan Steam Trap	 Orifice Steam Trap
RAPID AIR VENTING At startup, the Velan steam trap is fully open, venting air quickly and efficiently. This results in a faster startup with fewer plant personnel required to supervise venting of main lines during warm-up. There is no external blow down needed to start up the steam line.	POOR AIR VENTING The orifice steam trap has poor air handling characteristics. Due to the fact that the orifice diameter is sized for the hot running load of condensate, it has difficulty passing the tremendous amount of air on start up. An external blow down is needed to start up the steam line.
STELLITE 6 TRIM STANDARD All Velan steam traps are fitted with Stellite 6® seat facings to resist wear by high velocity flow, dirt and scale. Stellite 6® has 3 times the wear resistance of induction hardened stainless steel.	NO ALLOY TRIM AVAILABLE Orifice steam traps are not available with cobalt based alloy trim.
EASY PLANT STANDARDIZATION The Velan steam trap will operate from its maximum pressure to atmospheric during its operation. This can allow a customer to buy one model for all its drip leg and tracer applications.	MANY SIZES – MANY MODELS The orifice steam trap is sized for each individual application. A customer will have to buy many different orifices for every application based upon line length, pipe diameter and ambient conditions.
ABILITY TO HANDLE VARIABLE LOADS The Velan steam trap opens its orifice larger as more condensate is sent to the steam trap. If the load is low, it will only pass the amount of condensate formed at the trap.	CAN NOT HANDLE VARIABLE LOADS The orifice steam trap discharges a fixed amount of condensate based upon its orifice diameter. If the load increases, the trap backs up water. If the load decreases it blows live steam.
INTEGRAL CHECK VALVE The discharge valve in the trap acts as a check valve providing full back flow control.	NO CHECK VALVE AVAILABLE The orifice steam trap cannot prevent back flow. You MUST install a check valve.
NO PLUGGING The valve on the Velan steam trap is in the downstream position. All flashing of condensate occurs after it has passed through the orifice. Copper oxides and Iron oxides will not foul or plug the orifice in the Velan steam trap.	PLUGS DUE TO DIRT AND COPPER OXIDES Condensate must flash through a restricted orifice before it enters the condensate return system. Dirt and copper oxides chemically bond to the inside of the orifice, eventually closing the flow path. This leads to plugging, water-logging and freezing.
OPERATES FINE IN SUPERHEAT Velan steam traps shut off tight when superheat is present.	SUPERHEAT PROBLEMS Orifice steam traps blow live steam continuously when exposed to superheat.