



MUELLER ENVIRONMENTAL DESIGNS INC.

MED MODEL VTS



Reciprocating engine driven compressors, separable or integral, require lubrication for efficient operation. Lubrication is forced into the cylinder and rod packing. When rod packing is new, gas vents at about a rate of 6 to 10 SCFH carrying with it a small amount of oil. As rod packing wears, additional gas and lubricating fluid vent to the atmosphere. Most dog house vents are located on the compressor building upper side wall near the roof, subsequently the roof, side wall and surrounding area on the ground below become coated with an unsightly oil film.

The MED Model VTS- 8 Dog House Vent Mist Extractor is designed to remove entrained lubricating fluids from venting natural gas over a wide range of discharge exhaust flows. Its principle of operation is simple and has no moving parts. As natural gas and lubricating fluid enter the VTS via the inlet nozzle, flow impinges on two stages of separation removing the entrained lubricating fluid and ultimately venting clean gas to the atmosphere.

When rod packing has been newly replaced and is venting between 6 to 10 SCFH, the 1st stage separating element acts as a coalescer. A coalescer works on the principle of direction change. As gas and lubricating fluid flow through the coalescer element, it changes direction several times. The lubricating fluid is caught on the knitted wire of the mesh pad

and flows down to the bottom of the element where it is held in place by surface tension. Eventually the coalesced lubricating fluid becomes a large enough droplet to overcome the surface tension and upflowing gas velocity to fall into the lubricating fluid holding sump.

When rod packing begins to wear, flow increases proportional to the wear area. In this instance, the 1st stage separating element acts as an agglomerator. As gas and lubricating fluid flow through the coalescer element, it changes direction several times. The lubricating fluid is caught on the knitted wire of the mesh pad and flows to the top of the element due to the upflowing gas velocity. As packing wear worsens, flow again increases. This increased flow velocity carries the agglomerated lubricating fluid to the 2nd stage centrifugal separator. The centrifugal separator slings the liquid particles to an inner shell wall where, due to sheeting action, lubricating fluid flows into side wall traps. Once the lubricating fluid is between the inner and outer shell, it falls, due to gravity forces, into the lubricating fluid holding sump.