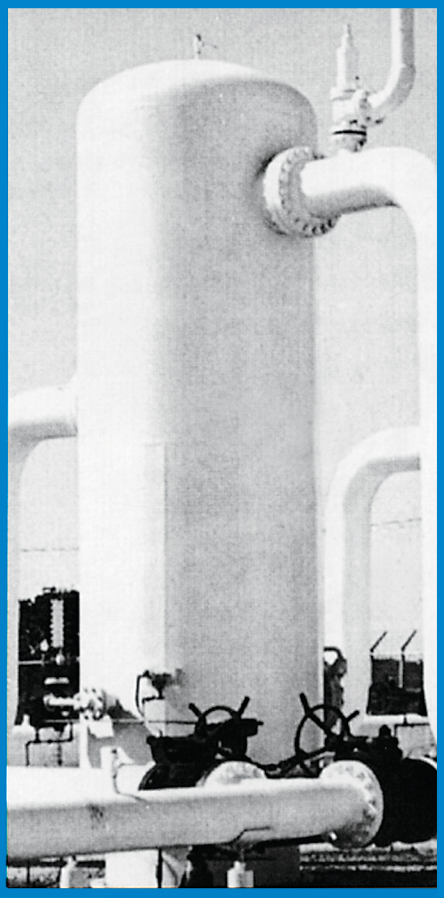
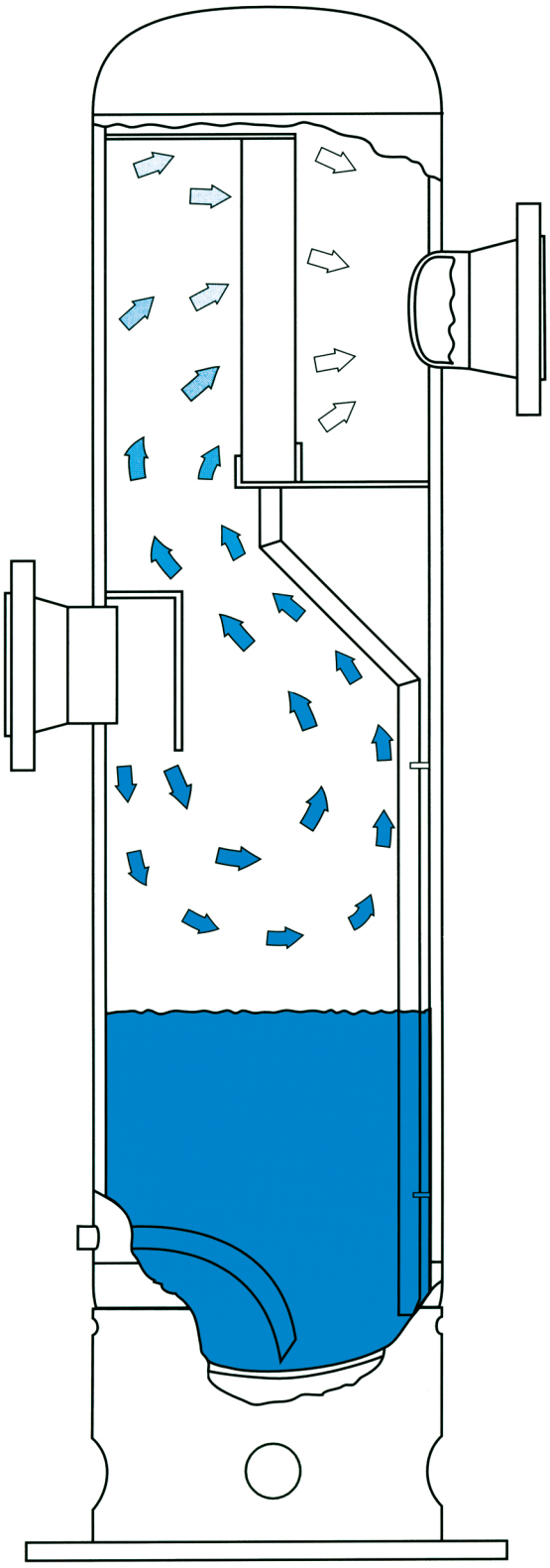
KingTool COMPANY

GAS SEPARATORS

VERTICAL

HORIZONTAL





King Tool Vertical Separator Description of Operation

The liquid laden gas enters the separator via a side-mounted inlet nozzle. The gas immediately comes in contact with an inlet deflection baffle. At this point, free liquids usually flow to the bottom of the unit.
If the separator is sized for slugs by King Tool Company, proprietary design techniques are used in conjunction with a slug interceptor instead of the deflection baffle to remove slugs of the design liquid.

As the gas stream leaves the entrance baffling, it is released into a quieting zone where many of the larger liquid droplets are removed simply by the pull of gravity. This occurs when the weight of a drop is sufficient to overcome the upward velocity and drag of the gas stream.

Next, the gas enters horizontally into the King Mist Extractor where the finer mist particles are removed. Maximum efficiency, with a minimum pressure drop, is assured by the controlled use of our uniquely designed vane mist extractor. The liquid removed by the mist extractor drains to the bottom of the vessel via the drip leg which is sealed in the liquid level to prevent gas from by-passing part of the mist extractor. The clean gas leaves the unit via the outlet plenum chamber and outlet nozzle.

King Tool Horizontal Separator
Description of Operation

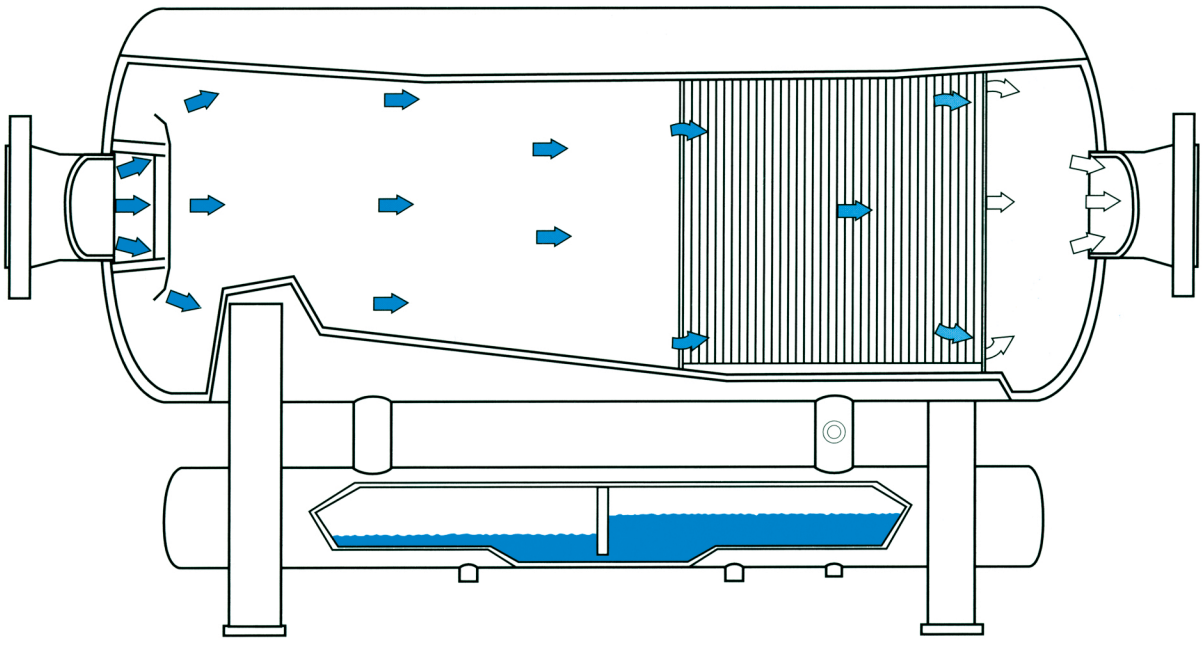
The flow of gas in the horizontal unit is similar to that of the vertical unit. Initial liquid separation is achieved through the use of an inlet baffle. Additional separation occurs in the quieting zone between the inlet baffle and mist extractor section. Final clean-up is then accomplished by the King Mist Extractor.

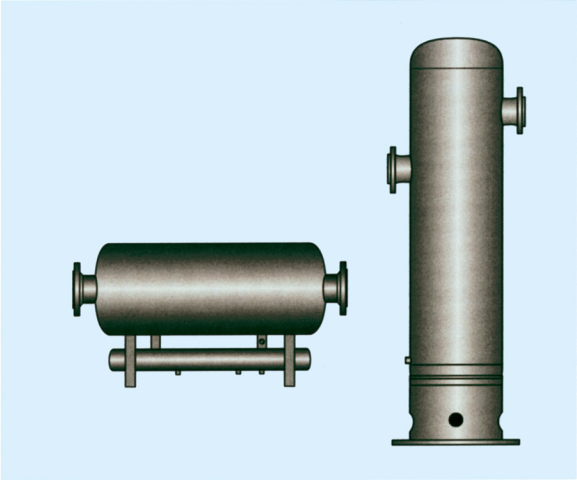
The horizontal unit has a liquid barrel, or horizontal sump, beneath the main separator for the retention of separated liquids. Liquid removed by the inlet baffle (or slug arrestor) and quieting zone drains into the barrel via a downcomer on the inlet end of the vessel. The liquid from the King Mist Extractor drains into the sump through a second downcomer.

A partial baffle in the liquid sump forms a liquid seal to prevent gas from by-passing part of the mist extractor.

The possibility of re-entrainment of liquids into the gas stream is greatly reduced by using the lower liquid barrel design because the gas is not impinging the liquid. It also makes possible the installation of larger separator elements.

As with our vertical separator, the King Tool horizontal separator can be sized for slugs and equipped with an inlet slug interceptor when large slugs of liquid are anticipated.



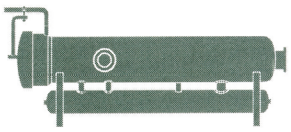


King Tool Vertical and Horizontal Gas Separators can be used in applications where bulk liquid removal is required.

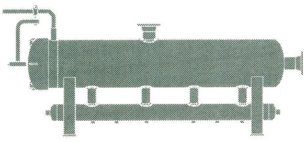
Standard units can be built on a fast-track basis. Special units are also available.

In addition to the Vertical and Horizontal Gas Separators described in this publication, King Tool manufactures and supplies the complete range of gas processing equipment, including:

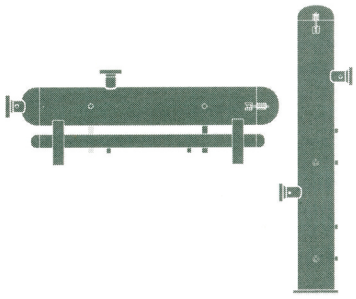
SELF-CLEANING REVERSE FLOW MIST COALESCERS, FILTER-SEPARATORS, & DRY FILTERS



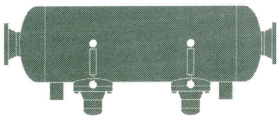
NON-SELF-CLEANING FILTERS & FILTER-SEPARATORS



HORIZONTAL & VERTICAL UTILITY GAS FILTERS & FILTER SEPARATORS

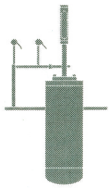


OIL BATH GAS SEPARATOR-SCRUBBERS



LINE SEPARATORS & FILTERS

NATURAL GAS ODORIZERS



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