

# MERLIN Cyclonic Separator for gas applications



The MERLIN Cyclone Separator is an **innovative and patented multistage separation technology** that protects on-line gas analyzers by preventing arrival of liquids and solid particulates.

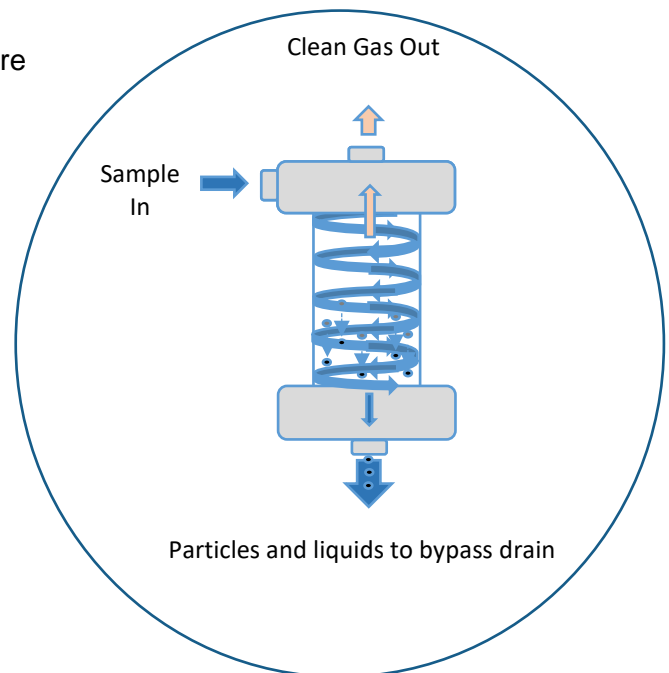
The MERLIN design offers **optimal separation even at very low gas flow rate (1 liter / min)**.

With 5 years of intense research and development, the **ultra-smooth geometry** prevents **splashing of droplets** which create mist that can be carried-over into the existing gas flow to analyzer.

By not using any kind of filter (sintered stainless steel, micro-fiber), the MERLIN separates **liquid droplets and particulates** (up to 10 microns) effectively from gas phase by centrifugal forces. Indeed, the density difference between a gas and solid particulates / liquids provides **separation by centrifugation**.

The separated components flow axially downwards out of the separator with the bypass flow. The dry and clean gas sample exits from the top side of the separator to the analyzer.

Compared to traditional filtration systems that require frequent replacement of filter elements, the MERLIN provides a huge saving in maintenance costs. More over there is no clogging issue which could result in a stop of analysis process.



## FILTER EFFICIENCY

(Tests realized and certified by TUV)

Separates :

- ✓ 40 l/h of water from 60 NI/h air (low flow)
- ✓ 40 l/h of water from 1000 NI/h air (medium flow)
- ✓ 40 l/h of water from 2000 NI/h air (high flow)

## MAIN FEATURES

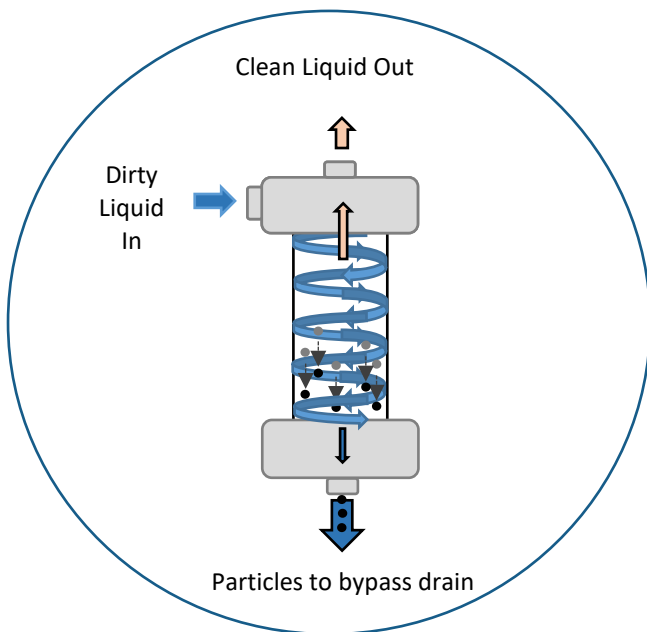
- Employs cyclonic centrifugal forces
- Removes particulates up to 10 microns and condensate film (oil vapors)
- No filter element
- No clogging
- No moving parts

## STANDARD MODEL SPECIFICATIONS

- Material: SS316 body and Viton Seal
- Dimensions: L 200mm x D 65mm
- Internal volume: 160 cc
- Sample in connections: 1/4" FNPT
- Sample bypass out connections: 1/2" tube
- Sample to analyser connections: 1/2" tube
- Maximum service pressure: 100 bars
- Maximum temperature: 200°C

## MERLIN Cyclonic Separator for liquid applications

The MERLIN separator offers particle separation (up to 10 microns) from liquids by centrifugation.



### STANDARD MODEL SPECIFICATIONS

- Material: SS316 or PVC body with Viton seal
- Dimensions: 200mm L x 65mm diameter
- Sample in connections: 1/4" FNPT
- Connections Sortie Bypass: 1/2" OD
- Sample to analyzer connections: 1/2" tube
- Maximum service pressure: 100 Bar
- Pressure test report up to 20 Bar
- Maximum temperature: 200°C

A finer filtration is possible by adding a filter element that will be automatically cleaned by cyclone effect.

The filter element can be back flushed by instrumentation air or clean liquid periodically. There is no need to dismantle the separator during this cleaning phase and down time is then very short.

A specific model with a larger size is also available for low inlet pressures.

### DIFFERENT APPLICATIONS

The MERLIN can be used in different applications such as:

- Waste water treatment
- Algae and sludge separation in waste water for TOC analysis
- Filtration of cracked fuel products
- Sludge separation in sour water for pH measurement
- sparger

Vertrieb in Deutschland und Österreich