

MAXSWIRL® Inlet Cyclones

Feed Inlet Devices

AMACS' MAXSWIRL® Inlet Cyclones consist of multiple cyclone tubes arranged symmetrically in order to maximize gas-liquid separation and enhance the separation efficiency of the vessel. AMACS' MAXSWIRL® Inlet Cyclones are designed specific to the application. They typically come in bundles, the number and size depends on flow rate, gas-liquid ratio, oil-water ratio etc.

The flow enters the cyclone tubes tangentially, generating rotational flow. Within each tube, the swirling fluids create a high force of separation of gas and liquid. The gas stays in the center, forming a gas core, exits through an orifice in the top of the tube. Liquids are pushed to the tube wall and flow downwards existing through a peripheral gap in the tube wall at the bottom.

The design of inlet cyclones is very critical. In order to have a device that works through the whole operating range of the separator the liquid level and cyclone number and dimensions should be such that at high gas load there will be no gas-blowby and at high liquid load there will be minimal liquid carry over in the gas.. Therefore, Inlet Cyclones are designed on the basis of a pressure balance between the pressure drop needed to force the gas up and out the top of the cyclone and that required to push the liquid out the bottom of the cyclone.



Advantages:

- Withstand high inlet momentums
- High gas/liquid separation
- Enhances liquid-liquid separation
- Defoaming capabilities

Applications:

- 2 phase & 3 phase separators
- Production & test separators
- Inlet separators
- Retrofit of existing separator with liquid-liquid problems or high inlet momentums

