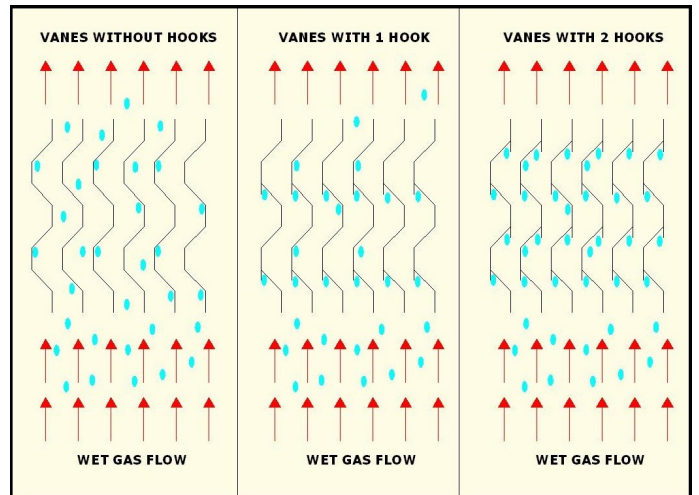


- STANDARD VANE PACK -

Vane packs, with wire mesh separators, are the most widely used internals when the need is to separate liquid droplets carried by gaseous streams.



- **SEPARATION:** vane packs are composed by sets of vane profiles where the gas passes through and, changing direction, it clashes on the vanes and are captured by the hooks. Liquid droplets slide down along the vanes and are drained down by a tube into the liquid section of the vessel.
- **CROSSING SPEED:** usually, compared with wire mesh separators, the crossing speed is higher and that allows to reduce the crossing area and the vessel diameter.
- **PERFORMANCES:** on the other side, the diameter of the smallest separated liquid droplet is bigger than in a wire mesh separator. For this reason vane packs are not indicated when high performance of separation are required.

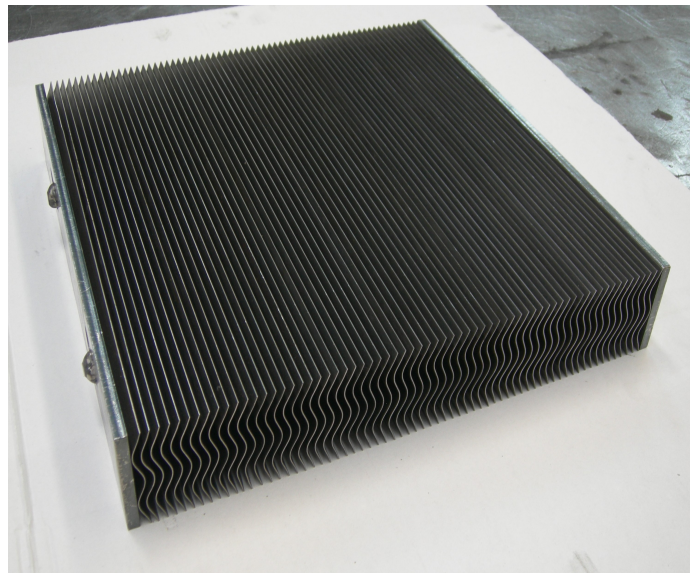
- W BANK -

The so called "W bank" is a particular kind of vane pack used when to shorten the length of the tank is a priority. Thanks to its particular "V" shape it's possible, with half length of the pack, to obtain an equivalent crossing area and so, with the same performances, reduce the dimension of the vessel.

The W bank maintains all the characteristics and qualities of normal vane packs and so it's possible to assemble packs with different styles of vanes or stick on a wire mesh agglomerator to increase the performances.



- DRYER FOR CYCLONE -



This kind of special vane pack is often used in "steam drums" located over cyclones to eliminate small liquid droplets drained by vapour stream.

They can be made with different shapes and profiles to obtain the best performances in terms of droplets separation and pressure drop.

- HIGH PERFORMANCES VANE PACKS -

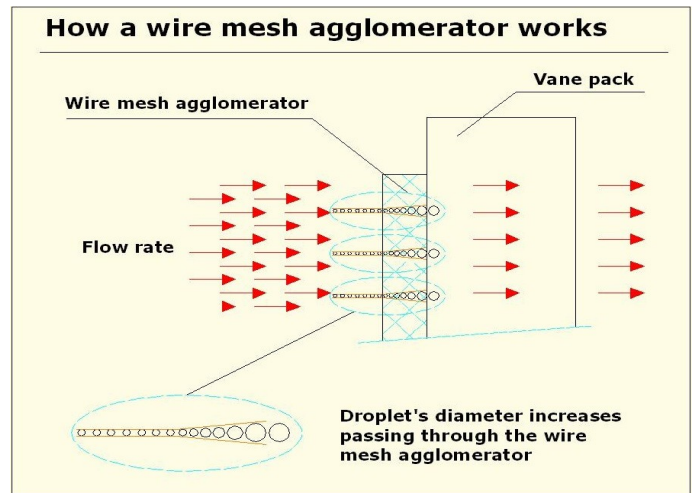
1 - VANE PACK WITH MESH PAD AGGLOMERATOR

Sometimes happens that:

- the dimension of the droplets is too small to be intercepted by the vanes (for example 4/5 microns)
- the flowrate speed is too high for a normal wire mesh demister and with it is not possible to entertain the droplets and they are teared over the mesh
- the required efficiency is high

- the diameter of the vessel is too small to install a properly sized wire mesh demister

In this particular case the solution is to apply a properly sized wire mesh agglomerator before the window of the vane pack. As showed in the scheme below, the droplets, passing through the agglomerator, increase their dimension arriving at the vane pack with the correct speed and diameter.



2 - VANE PACK WITH DISTRIBUTION PERFORATED SHEET

When the diameter of the vessel is too small to allow a correct distribution of the flowrate there is the risk that the gas passes through only a fraction of the available area of the vane pack window.

This bad distribution of the gas flow generates two problems:

- a too fast speed of the gasflow through the vane pack
- a lower efficiency of the process because many droplets can be captured by the vanes and they are teared over the mesh.

To solve this problem is possible to apply a distribution perforated sheet that force the flowrate to be distributed all over the available area of the vane pack window (see the scheme below).

