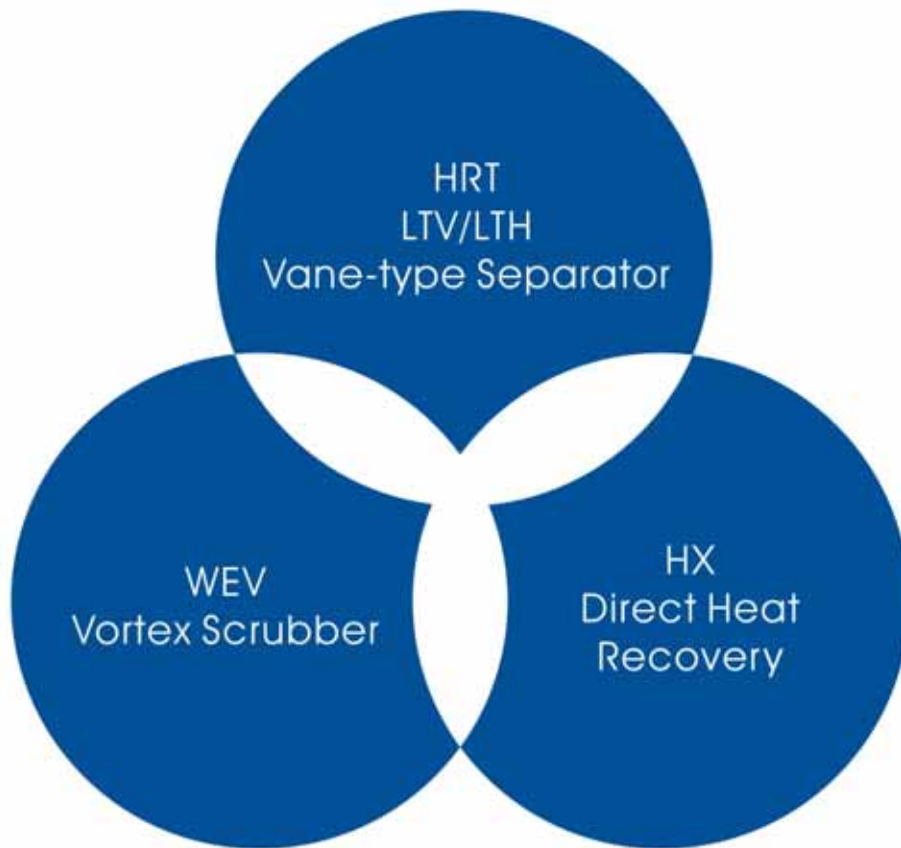


WATSON PROCESS SYSTEMS



Leaders in Engineered Gas Process Equipment



TECHNOLOGIES & PRODUCTS

HRT Radial Spin Separator for gas flow in any direction

Product Description:

The HRT Radial Spin Separator is an in-line unit that uses centrifugal spin to separate droplets from the gas stream. It is a versatile design which is used in applications where plugging may be a problem.

Advantages:

- high liquid capacity
- gas flow can be in any direction, including downflow
- retrofits easily in existing ductwork
- suitable for vacuum and pressure processes
- non-plugging, maintenance-free operation
- no moving parts

Materials of Construction:

- Metals: 304, 316 stainless steels, carbon steel;
- Plastic: FRP and Thermoplastic lined FRP;
- Available in any fabricatable material

Operating Range:

- Face velocity: 6-12 m/s; special types up to 15m/s.
- Limit drop size: 25+ microns, depends on gas flow
- Capacity: 2000 – 200,000 ACFM
- Performance data shown in curves is f(face velocity) at standard gas density (1.2 kg/m³). Actual performance is based on actual process data.
(Conversion: 1m/s ~ 200 ft/min; 1 mbar ~ 0.4" WG)

Applications:

Used in gas streams containing “dirty” droplets which cause plugging or rain-out, and where maintenance-free operation is essential.

- Protection of ventilation fans; papermachine exhausts
- Collection of entrainment from scrubbers, especially with particulate loading; reactors; blow tanks (pulp); evaporators; steam vents; general process gas cleaning;
- Elimination of droplet rain-out – stack mounted

Application Bulletins:

Available on request

We supply:

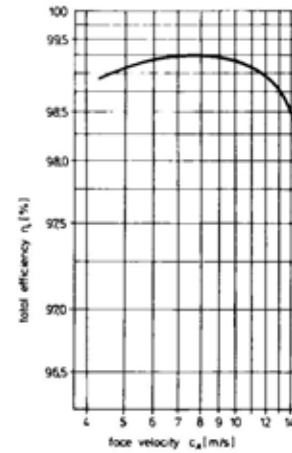
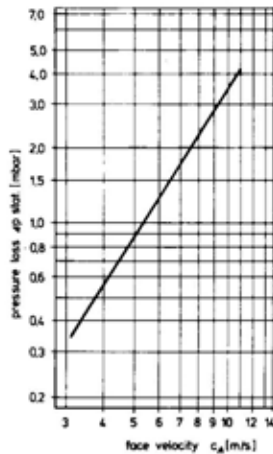
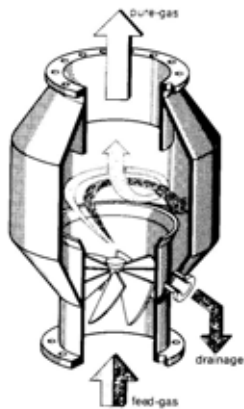
HRT Separator complete with all necessary accessories (spray, hatch, pre-separator etc.): coupled with



system fan; also stack for rain-out types.

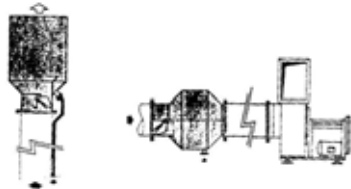
Principle of Operation:

Specially designed static spin vanes in the inlet throat induce a high velocity spin which separates the droplets from the gas by centrifugal force. The droplets collect in the separation chamber and drain from the separator body.



Types and designations

Series HRT: (Radial spin separators)



These are a family of separators that use axial spin (in-line centrifugal) to separate droplets from the gas. They are available in a wide variety of configurations and operate with the gas flow in any direction (including vertically downwards). They are used a lot in "dirty applications" i.e. where there are plugging materials present. The HRT does not have the smallest limit drop size but it is the most versatile and is unpluggable.

The HRT is supplied as an integral unit complete with housing.