

PHC High Efficiency Desanding Hydrocyclone

Designed to meet the harsh conditions of the upstream process, PHC Desanding Hydrocyclones achieve efficient solids separation while managing pressure drop. The number of operating liners is determined by the system differential pressures and flow rates to maximize efficiency.

How it Works

The PHC Desanding Hydrocyclone achieves cyclonic separation of solids using energy from the flow stream. Flow direction changes force the fluid to spin in a radical vortex pattern. As the internal diameter is reduced over the length of the cyclone, the vortex flow is accelerated, and separation occurs. Heavier material moves to the outside while lighter material moves to the core. Solids as fine as 5 microns are removed by exiting into an accumulation chamber.

Common Applications

- Wellhead upstream of the choke (up to 15,000 psi, multiphase systems, and 100% gas flow)
- Downstream of the choke and before the production separator (wellstream)
- From the separator in the aqueous phase or sand jetting effluent
- Secondary Recovery
- Primary separation of solids from production separators
- Primary and Secondary Produced Water Treatment
- Offshore Production

Key Benefits

Cost Savings

- Robust design and wear resistant reaction bonded silicon carbide offers a long life with less maintenance and OPEX

Better Performance

- Closely packed liners within the vessel produce finer separations than other hydrocyclones in the market
- Uses involute inlet geometry to minimize fluid turbulence and reduce inlet wear

High Flexibility

- Compact design for reduced footprint and weight
- Flexible operation for variations in rates
- Installation options for easy retrofit and piping
- Available as standalone equipment or complete skid packages

Standard Features

- ASME code stamped (Div I & Div II)

Materials of Construction

- Vessel: Carbon Steel, Stainless Steel, or Duplex Stainless Steel
- Cyclones: Reaction Bonded Silicon Carbide