LAKOS® VS.?

Hydrocyclones

Similar to LAKOS in that this equipment employs centrifugal action for particle removal, hydrocyclones differ in that they create an increasing acceleration from their tangential entry to their spiral down the narrowing apex of the cone. LAKOS, by contrast, accelerates through the tangential slots in the upper chamber and then decelerates in the separation barrel.

Solids removal—The high acceleration of fluid in the cyclone may produce significant particle removal performance (potentially greater than the LAKOS Separator), although with solids of high specific gravity, LAKOS also achieves similar results. It is important to note, however, that when the hydrocyclone converts its solids discharge technique from continuous underflow to a solids collection chamber, its particle removal capability is decidedly compromised.

Flow range—Individual models do not handle very large flow rates. Consequently, extensive manifolding is necessary...and often quite complicated. Total liquid loss from the aggregate of all the underflows can be extremely significant.

Pressure loss—The typically high rate of fluid acceleration evokes an equally high pressure loss across hydrocyclones. This cannot be compromised without a related loss of performance.

Liquid loss—With continuous underflow, liquid loss is predictably excessive, often ranging from 5% to 30% of system flow. Controlled with a collection chamber, performance then suffers.

Solids handling—The high volume of liquid lost with continuous underflow limits this equipment's ability to easily concentrate separated solids for further handling.

Replacement parts—The acceleration of solids-laden fluid at the conical apex of a hydrocyclone produces abrasive wear. In response, most cyclone makers provide a flanged apex with replaceable cones or liners (requiring a stock of parts). Unless monitored, sufficient wear can result in leaking and related facility damages.

Maintenance requirements—Continuous underflow requires periodic monitoring. Worn cones or liners may increase underflow and alter performance, demanding system shutdown and replacement.

Space requirements—At the higher flow rates, manifolded cyclone systems demand significant floor space. Depending on the method for handling the solids discharge, the overall height of a cyclone manifold may also be demanding.

We consider the LAKOS Separator to be the advanced evolution of the hydrocyclone. Though its particle size performance may, at times, be slightly less, LAKOS nonetheless satisfies a wide range of process needs. Examine the application requirements and review the overall value of LAKOS.

Ask your LAKOS representative about other filter comparisons and the specific advantages of LAKOS Separators.

1365 North Clovis Avenue • Fresno, California U.S.A. 93727
Telephone: (559) 255-1601 • FAX (559) 255-8093
Toll-Free: (800) 344-7205 (U.S., Mexico & Canada) • In California: (800) 742-1850
World Wide Web – http://www.lakos-laval.com