

COP™ Clarifier

Product and Application Summary

Overview: COP has taken the efficiency and performance of clarifier operations to next level. COP is the total integration of nine proven design features and other parameters that together to maximize a clarifier's performance. WesTech achieves this by customizing all the components of the clarifier to each installation. The COPC1 clarifier uses the following nine design parameters:

1. The clarifiers basin configuration,
2. The center column
3. The WesTech innovative dual gate EDI
4. The flocculating feedwell
5. The density current baffles
6. The spiral rake blades
7. The WesTech sludge ring
8. The skimming system
9. The launder cover or launder cleaning system

Applications:

- Secondary Sedimentation
- Primary Sedimentation (without the use of the Sludge Ring, COPC2)

Application Range: Sludge with concentrations between 0.5% and 4%.

The COP design can be custom created for both new and existing installations and specific elements of the nine key parameters can be retrofitted to existing clarifiers to measurably increase their performance.

Misapplications: Sludge Rings in primary clarifiers, are not to be used.

Advantages:

- Relatively easy to install
- Exceptional performing clarifiers when designed with the COP software
- WesTech's COP software helps engineers in the design process.
- COP designed clarifiers are more frequently becoming the basis of design on many projects.

Installations: Over 1,350 Worldwide mechanism installations.

Configurations:

- Secondary clarification applications with column supported cage drive or bridge supported shaft drive mechanisms with spiral blades utilizing the sludge ring.
- Primary clarification applications with column supported cage drive or bridge supported shaft drive mechanisms with just spiral blades.

FAQ's: Four innovative products with COP clarifiers:**The COP clarifier design software**

The COP software takes into consideration the three basic interrelated objectives of clarification; to maximize the flow rate through the clarifier, producing the cleanest effluent possible, and maximizing the underflow concentration and then balances them to determine proper equipment sizing for each application.

The Dual Gate EDI

The trough allows the cross collector to be able to efficiently transport the sludge to a sump for removal by eliminating losses on the sides of the collector. Sludge collection for basins without troughs can be achieved through siphon pipes or a sludge header system.

The Sludge Ring

The sludge withdrawal ring is designed to prevent short-circuiting of the influent to the underflow. The sludge ring is generally 20% of the tank diameter. Feedwells are generally 20-25% of the tank diameter. So, logically it makes sense to put your sludge withdrawal device right below the flocculation zone, just inside the feedwell. Testing has proved that this location was where a majority of the solids will settle.

Precision Bearing Gear Sets

The WesTech precession bearing drives are designed so that any loading that affects the mechanism is dispersed evenly across all of the bearings around the main gear. Superior load distribution provides longer bearing life.

Images:

