

# Sludge Removal

## Conventional Scrapers

Angled scrapers push the settled solids or sludge to the centrally located hopper for removal. The hydraulic flow in the main settling area moves in the same direction as the angled scrapers and actually helps move the sludge gently toward the center of the tank.



*Conventional straight-blade angled scrapers.*

## Spiral Scrapers

Continuously tapered spiral-shaped scraper blades and faster operating tip speeds enable the plant operator to increase sludge transport capacity and improve return sludge concentrations.



*Spiral-bladed scraper.*

## Spiravac Clarifier - Rapid Suction Removal

The Spiravac Clarifier uses rotating “V”-plows to direct settled solids to suction nozzles for sludge removal. Heavy, gritty material too large to be withdrawn passes through the “V” apex. Succeeding plows push this heavy material to the sludge sump located at the clarifier center for removal from the tank. The spiral flow pattern also helps direct the sludge to the central draw-off point. The Spiravac offers either controlled or direct removal of activated sludge.



*Individual sludge removal pipes for Type CR design.*



*Common header pipe removes sludge in Type DR design.*

## Controlled Removal (Type CR)

The Type CR Spiravac allows the operator to vary the quality and quantity of flow from each sludge removal pipe. The smooth plastic sludge removal pipes and rotating valve construction help eliminate plugging problems and the hang-up of stringy material at the valve discharge. The controlled removal design allows removal of obstructions in the sludge piping without dewatering the tank.

## Direct Removal (Type DR)

The Type DR Spiravac collects activated sludge from suction nozzles on a common header tube rotating on the clarifier floor. The sludge is suctioned off the floor and removed from the tank through a rotating manifold at the tank center.