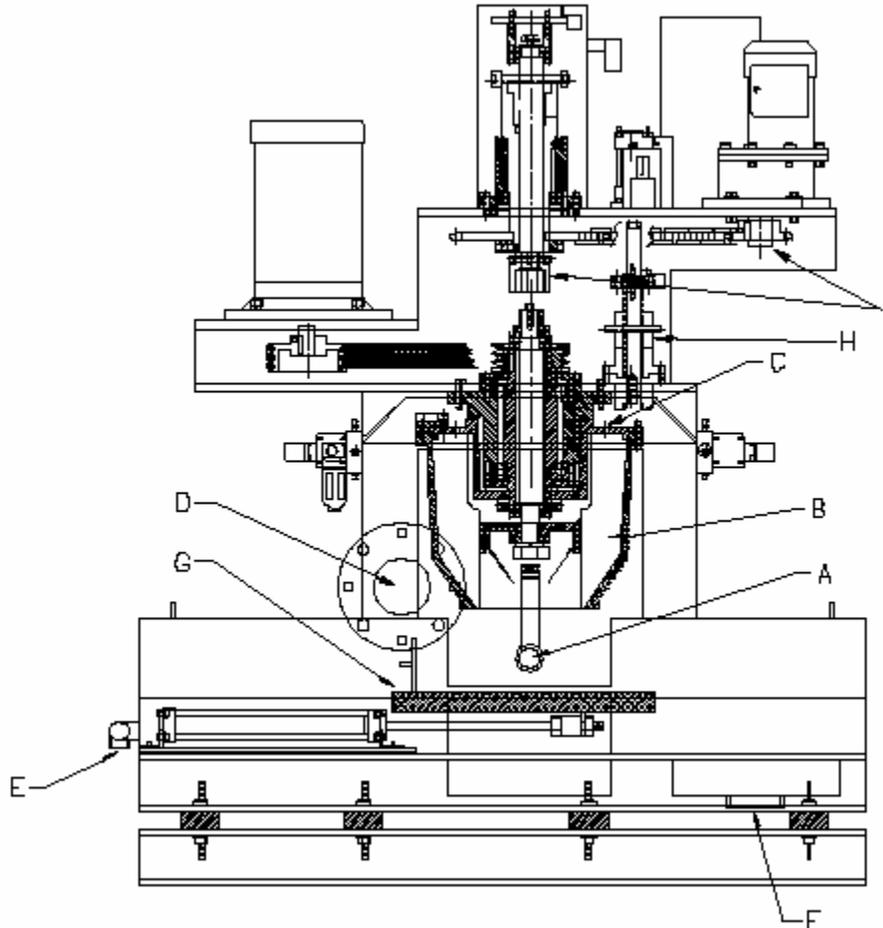


## Principle of Operation - Microseparator Self-Cleaning Centrifuge

Models: TSK 60A, TSK 100A, TSK 150A

Models: CF 65G, CF 105G, CF 125G, CF 155G, CF 105GX, CF 175



The automatic Microseparator® is a centrifugal processing tool for the removal of solid particulate from a liquid medium. Feed enters at the dirty liquid inlet (A) and progresses upwardly through the rotor body (C). Centrifugal force is applied to the liquid stream in the main body of the rotor causing solid particulate to move toward the rotor wall. Clarified liquid overflows through the top of the rotor (C). The clean overflow discharges into the segregated upper frame and drains from the clean liquid outlet (D). Solids deposited in the rotor are compacted by centrifugal force and allowed to build until removed during the cleaning cycle. A feed timer or a parts counter are used to determine when the cleaning cycle will be initiated. During the feed cycle the lower cabinet is flushed continuously at (E) with dirty liquid to minimize the accumulation of solids in that area. When the cleaning cycle initiates, the feed pump stops flow to the

Microseparator® or a valve diverts flow. The drive motor is de-energized and the rotor coasts, or via optional DC braking, is brought to a full stop. Any residual liquid remaining in the rotor will drop into the lower cabinet (F) and then drain back to the process tank. Only drain liquid is removed from the frame in this manner dramatically reducing misting of process liquid.

The accumulated solids are removed from the rotor in the following manner. First, a solenoid valve energizes and the drain plate is pneumatically retracted (G). This movement opens the bottom of the rotor to the sludge drum below. A second air solenoid pneumatically operates the stopper assembly (H), which locks the rotor in position and engages the scraper drive (I). In some Microseparator, the rotor is held fixed by way of a disc brake, replacing the stopper assembly. Clockwise and counter clockwise rotations of the scraper (B) clean the solid particulate from the walls of the rotor causing the solids to drop into the sludge drum below. After the sludge has been removed from the rotor, all of the above operations are reversed and the Microseparator® returns to full speed. Normal operation will continue until the system is shut down or vibration is detected which initiates an automatic cleaning cycle. On normal shut down, a complete cleaning cycle is initiated to ensure that the Microseparator® shuts down clean.

For more info:

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