

STEPS OF A BOTTOM DISCHARGE VERTICAL BASKET CENTRIFUGE CYCLE:

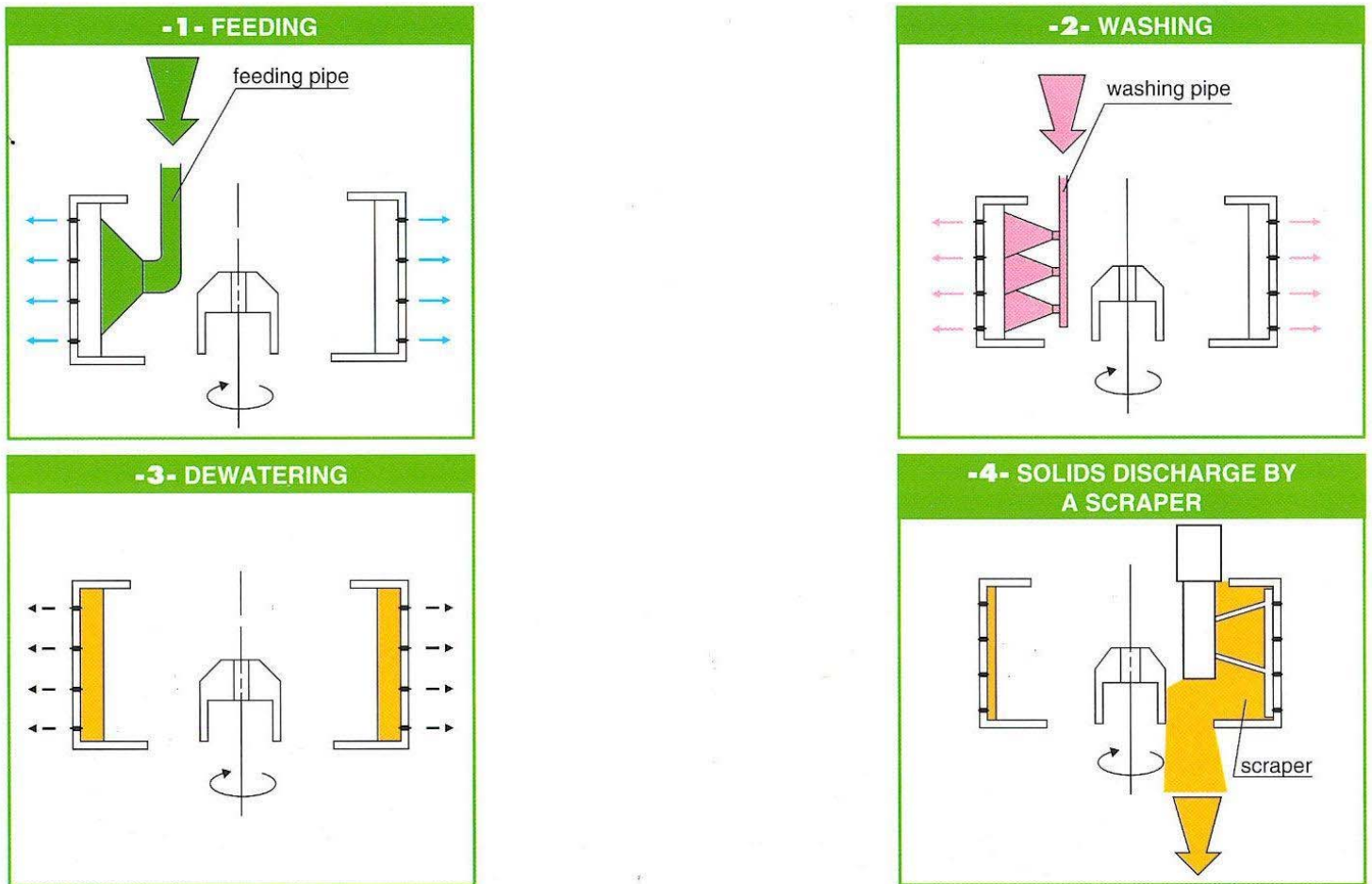
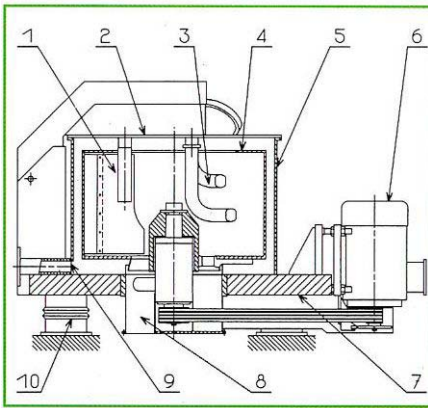


Figure 1: Vertical basket bottom discharge centrifuge cycle

- 1) **Feeding:** The slurry is introduced to the rotating basket having a filter cloth. The filter cloth captures the solids. Centrifugal force drives the liquid through the caked solids and the mother liquor is discharged through perforations in the basket circumference.
- 2) **Washing:** A wash liquid is introduced and is driven through the caked solids. The plug flow action of the wash liquid purifies the solids and removes residual mother liquor.
- 3) **Spinning:** Residual liquors are driven from the caked solids and are discharged through the basket perforations to achieve maximum cake dryness.
- 4) **Scraping:** A scraper knife advances into the rotating basket to discharge the solids to downstream equipment. The solids are discharged through openings in the basket bottom.

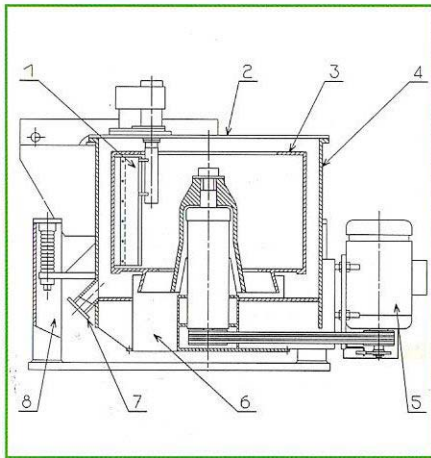
- 5) **Residual heel removal:** After scraping, a 6-10 mm ($\frac{1}{4}$ " - $\frac{3}{8}$ ") layer remains inside the rotating basket. With the scraper in an advanced position, high pressure nitrogen or air is used to dislodge this residual heel. This step can be performed after several centrifuge cycles, or after each cycle.

CUTAWAY DIAGRAMS OF VERTICAL BASKET BOTTOM DISCHARGE CENTRIFUGES:



- 1 Scraper
- 2 Cover
- 3 Feed pipe
- 4 Basket
- 5 Casing
- 6 Drive motor
- 7 Integral inertia plate
- 8 Solids outlet
- 9 Liquid outlet
- 10 Vibration isolators

Figure 4: Cutaway of vertical basket bottom discharge centrifuge – Integral inertia plate design - Type RC



- 1 Scraper
- 2 Cover
- 3 Basket
- 4 Casing
- 5 Drive motor
- 6 Solid outlet
- 7 Liquid outlet
- 8 Suspension column

Figure 5: Cutaway of vertical basket bottom discharge centrifuge – Triple suspension design - Type SC