



EXCLUSIVE WESTERN STATES RINGLESS BASKET Increase Your Centrifugal's Capacity

Increase usable basket volume

without changing the 2-speed motor or other major components^[1]

Replacement ringless baskets utilize same outside diameter but larger inside diameter by eliminating steel support rings

Utilizes **high strength Duplex Stainless Steel^[2]** which provides **superior resistance to pitting and corrosion**

Provides the **same high purging performance** as our ringed baskets

Superior manufacturing processes and quality control

Available up to 72" diameter

No other major modifications required^[3]

Notes:

1. 54" baskets may require a larger motor to achieve equivalent performance.
2. Yield strength is approximately 2x that of austenitic steel
3. Basket screens are longer but the same height and the discharger blade tip may need to be increased about one inch in length



Accelerating and decelerating a ton or more of steel and sugar at 1,200 rpm is not a simple task. Don't risk team safety, production downtime or costly repairs by using anything other than GENUINE Western States parts. Western States is known for designing and manufacturing the most reliable centrifugals in the world for 95 plus years WITHOUT a SINGLE basket failure due to design, materials or manufacturing.

Contact Innovation@WesternStates.com to find out how we can help you increase your productivity!

Connect with us!



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48" x 30" Ringed to 50.75" x 30" Ringless:

VRINGED = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 48"; DINNER = 34"; Height = 30"; VRINGED = 15.65 ft³

VRING-LESS = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 50.75"; DINNER = 34"; Height = 30"; VRING-LESS = 19.36 ft³

VINCREASE = VRING-LESS/VRINGED = 19.36/15.65 = 1.237

Thus, the volumetric increase is 23.7%

48" x 36" Ringed to 50.75" x 36" Ringless:

VRINGED = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 48"; DINNER = 34"; Height = 36"; VRINGED = 18.78 ft³

VRING-LESS = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 50.75"; DINNER = 34"; Height = 36"; VRING-LESS = 23.23 ft³

VINCREASE = VRING-LESS/VRINGED = 23.23/18.78 = 1.237

Thus, the volumetric increase is 23.7%

48" x 30" Ringed to 50.75" x 36" Ringless:

VRINGED = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 48"; DINNER = 34"; Height = 30"; VRINGED = 15.65 ft³

VRING-LESS = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 50.75"; DINNER = 34"; Height = 36"; VRING-LESS = 23.23 ft³

VINCREASE = VRING-LESS/VRINGED = 23.23/15.65 = 1.484

Thus, the volumetric increase is 48.4%

54" x 40" Ringed to 57" x 40" Ringless:

VRINGED = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 54"; DINNER = 40"; Height = 40"; VRINGED = 23.92 ft³

VRING-LESS = $[0.7854 \cdot (D^2_{OUTER} - D^2_{INNER}) \cdot \text{Height}] / 1728$
Where: DOUTER = 57"; DINNER = 43"; Height = 40"; VRING-LESS = 29.98 ft³

VINCREASE = VRING-LESS/VRINGED = 29.98/23.92 = 1.253

Thus, the volumetric increase is 25.3%



IMPORTANT CONSIDERATIONS

1. When converting from a ringed to a ringless basket, one must consider the increase in cycle time due to the increased sugar wall thickness. If a loss of 1 cycle per hour is assumed due to increased wash time and 20 cycles per hour were achieved before the conversion, the following capacity increases can be anticipated:

- 48" x 30" Ringed to 50.75" x 30" Ringless: 368 ft³ / 313 ft³ = 1.176 or **17.6%** increase in capacity
- 48" x 36" Ringed to 50.75" x 36" Ringless: 441 ft³ / 376 ft³ = 1.173 or **17.3%** increase in capacity
- 48" x 30" Ringed to 50.75" x 36" Ringless: 441 ft³ / 313 ft³ = 1.409 or **40.9%** increase in capacity
- 54" x 40" Ringed to 57" x 40" Ringless: 570 ft³ / 478 ft³ = 1.192 or **19.2%** increase in capacity

2. The inertia (ωr^2) required to rotate a 48" ringed basket is nearly equivalent to that required to rotate a 50.75" ringless basket (both loaded and unloaded). Thus, the torque/time required to accelerate and decelerate the unit to top speed are similar. This eliminates the need for additional motor HP. This is not the case with the 54" basket. Additional HP is required to accelerate/decelerate the 57" basket at the same rate. Accordingly, a larger motor will very likely be required when making this conversion.