



## QUADRA-CLEAN™: TECHNICAL SPECIFICATIONS AND PRINCIPLES OF OPERATION

### Technical Specifications:

#### BASKET DIMENSIONS AND CAPACITIES

<b>Basket Diameter</b>	<b>54"</b>	<b>1372 mm</b>
<b>Basket Depth</b>	<b>27"</b>	<b>686 mm</b>
<b>Basket Cap Width</b>	<b>6.75"</b>	<b>172 mm</b>
<b>Volumetric Capacity</b>	<b>15.7 ft<sup>3</sup></b>	<b>445 liters</b>
<b>Filter Surface Area</b>	<b>31.8 ft<sup>2</sup></b>	<b>2.96 m<sup>2</sup></b>
<b>Basket Speed</b>	<b>1100 RPM</b>	
<b>Standard Centrifugal Force</b>	<b>900 G</b>	

#### APPROXIMATE CENTRIFUGE DIMENSIONS

<b>Length</b>	<b>122"</b>	<b>3100 mm</b>
<b>Width</b>	<b>92"</b>	<b>2340 mm</b>
<b>Height to top of closed cover</b>	<b>97"</b>	<b>2460 mm</b>
<b>Height to top of open cover</b>	<b>122"</b>	<b>3100 mm</b>



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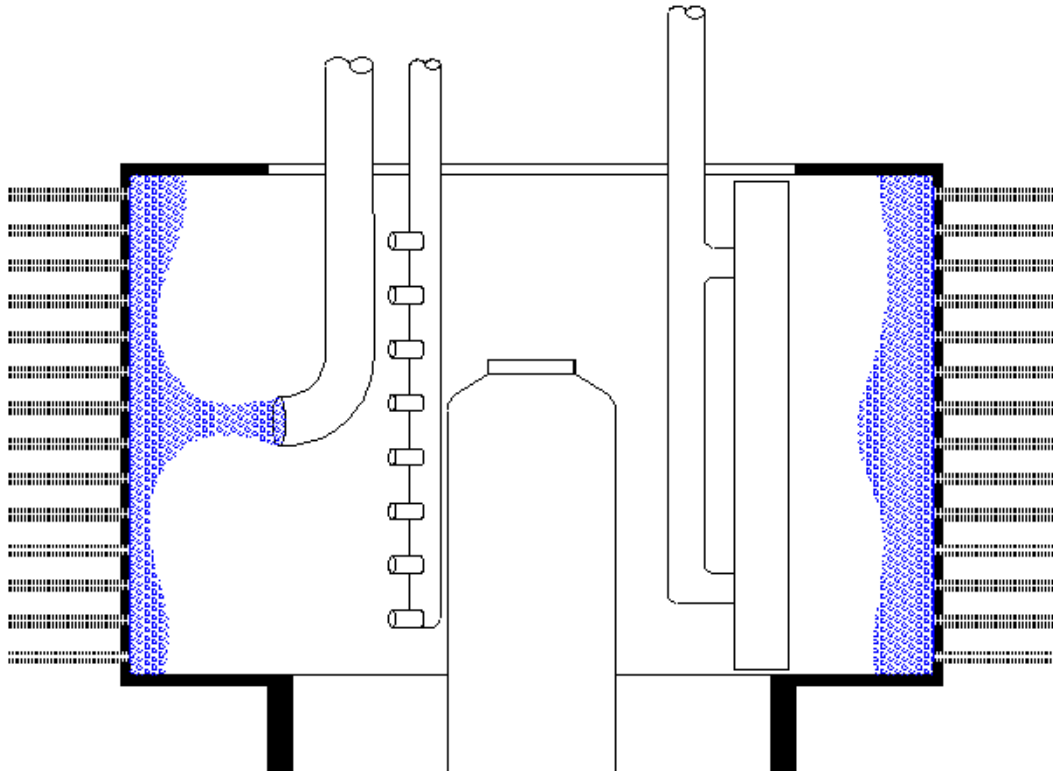


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## Principle of Operation of a Vertical Filtering Centrifuge

1. **LOADING** - The centrifuge accelerates to a predetermined loading speed and the flow of feed is initiated via the feed pipe. As centrifugal force drives the mother liquor through the deposited cake, filter media and perforated basket wall, a cake builds up on the filter media as the liquid effluent is discharged through a tangential outlet.





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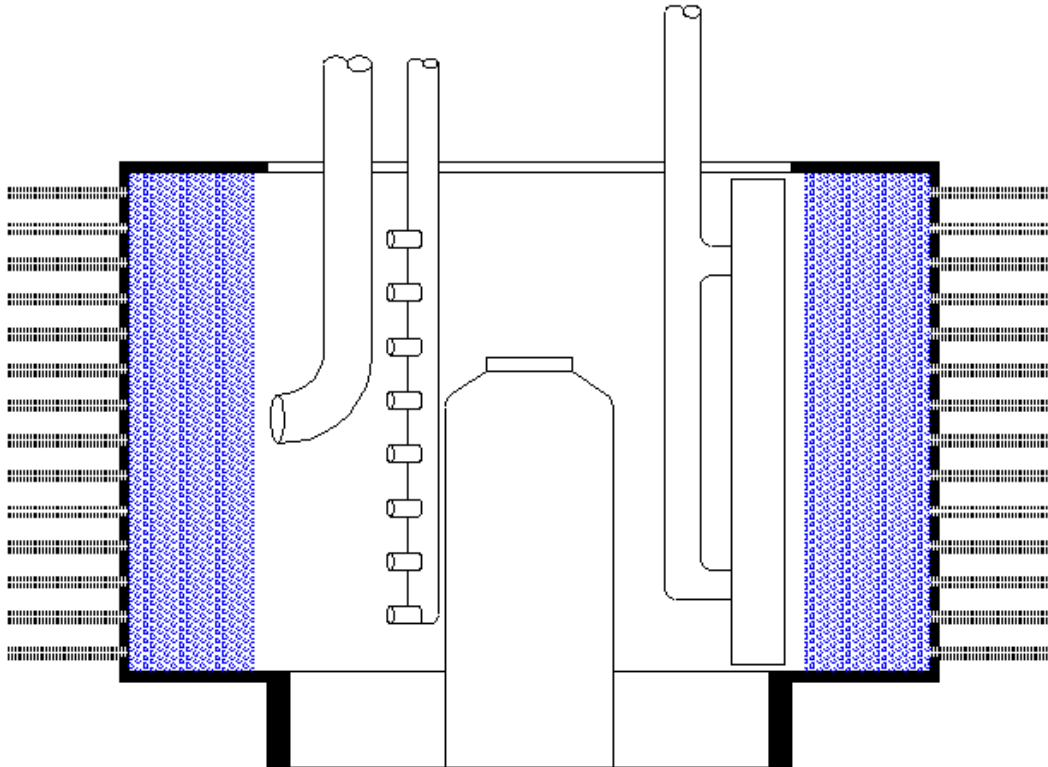
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2. **PURGING** - After the suspended solids have filled the basket to a preset volume or cake thickness, the cake detector provides the signal to shut off the feed and the retained solids are purged of mother liquor by accelerating the speed of the basket.





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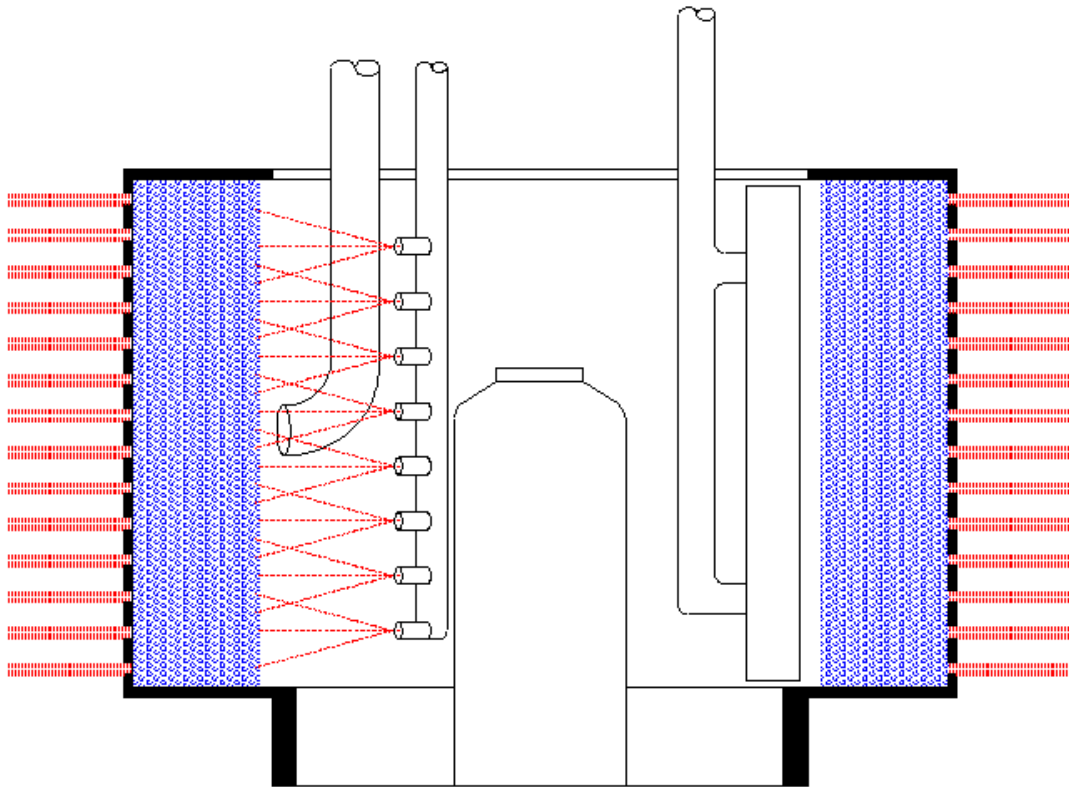
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- 3. WASHING** - The wash liquid is applied to the product cake evenly via the wash pipe. Washing is generally initiated before the high speed is reached during purge. The retained solids are purged of mother liquor, washed and accelerated to spin drying speed.





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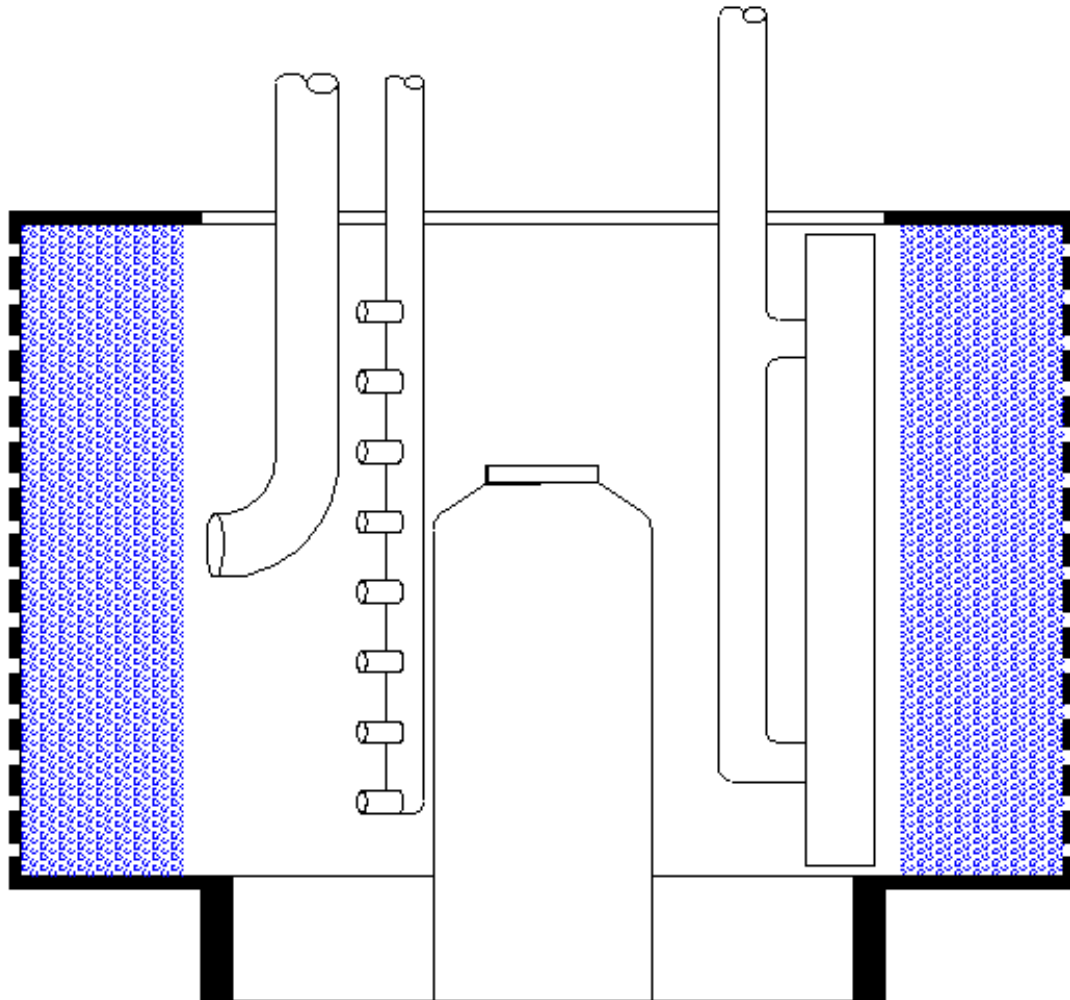
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4. **DRYING** - After washing, the basket speed is maintained at high speed until the desired level of moisture is obtained.





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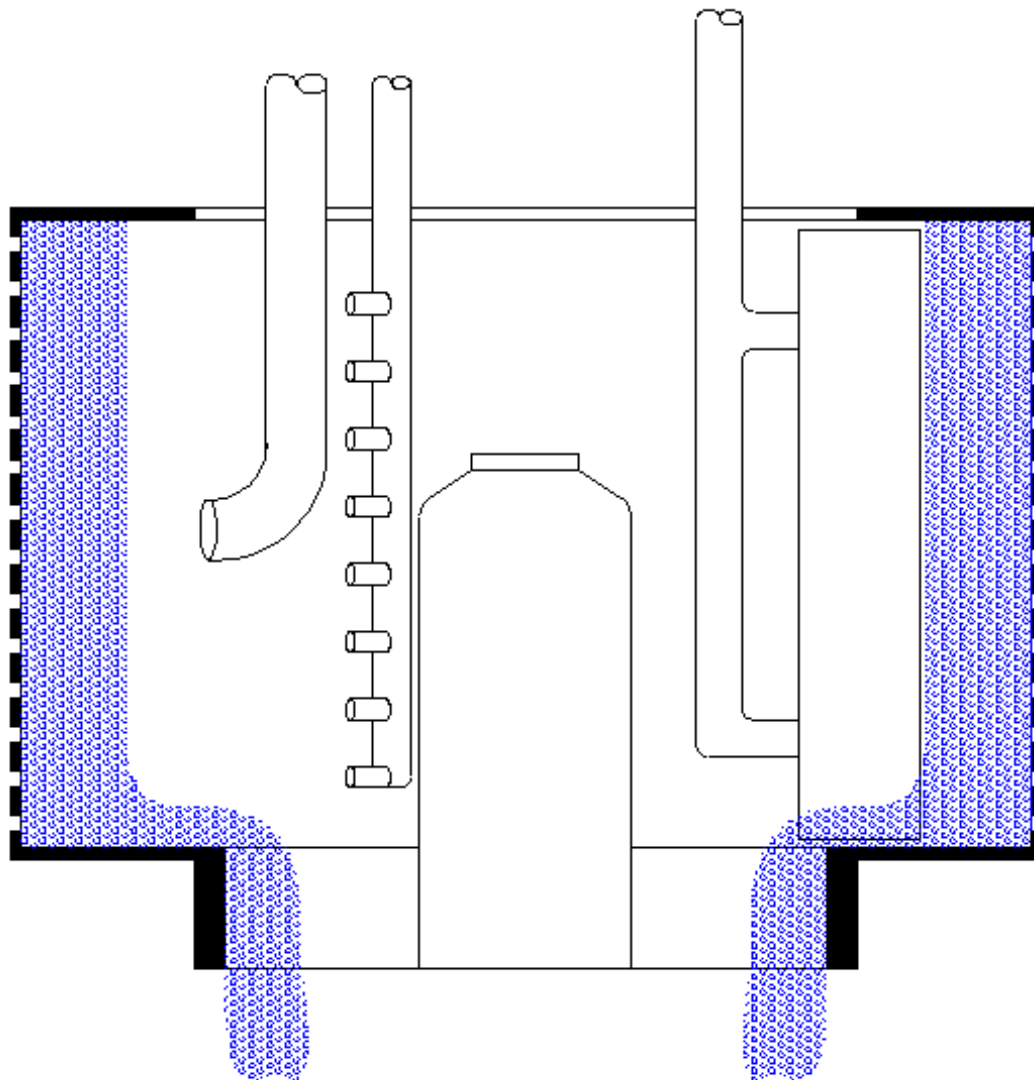
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5. **DISCHARGE** - The centrifuge decelerates to discharge speed and the discharge blade moves into the filter cake to remove the product from the basket. An alternative discharge method, not illustrated, allows top removal of product in a filter bag.





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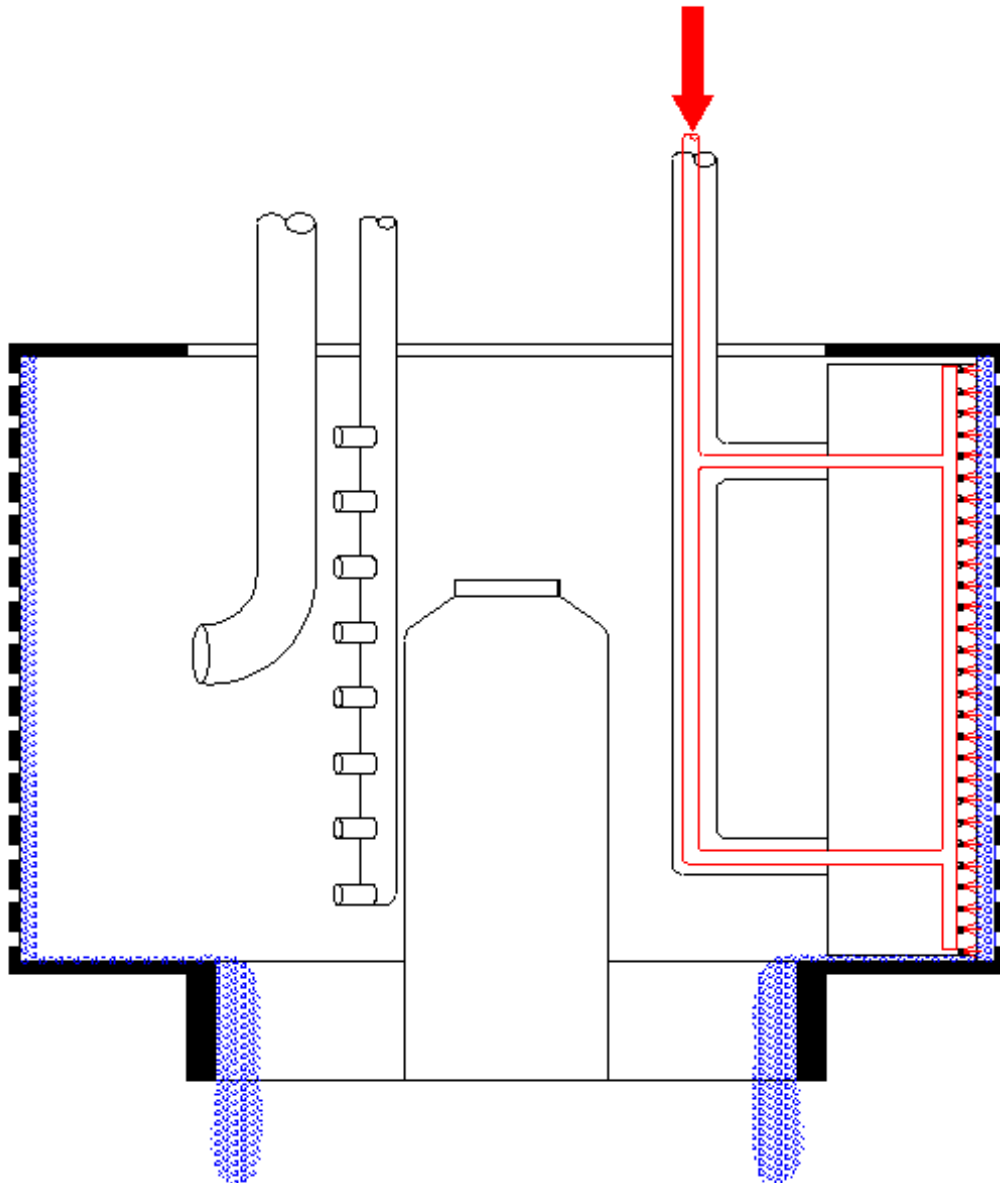
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- AIR KNIFE HEEL REMOVAL**- The residual heel of the filter cake is removed by using pressurized gas applied by nozzles on the discharge blade.





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- BLOW BACK HEEL REMOVAL** – The residual heel of the filter cake can be alternatively removed by using pressurized gas applied by nozzles outside the basket.

