

Waukesha Cherry-Burrell Products: Votator® 4 x 120 Scraped Surface Heat Exchanger

The patented Votator® 4 x 120 is designed to deliver efficient performance for lower initial investment, as well as lower maintenance cost. The Votator 4 x 120 is a unique concentric scraped surface heat exchanger designed for heating and cooling moderately viscous products.



Features:

- All **316 stainless steel** construction
- High efficiency **0.083 stainless steel heat transfer tube**
- Available with **9 ft² (0.84 m²) heat transfer area**
- **Horizontal units can be mounted side by side** with up to 8 cylinders per frame or furnished loose for vertical mount
- All units are suitable for **steam or liquid media**
- **Mechanical seal with flush connection** on drive end with sleeve bearing on non-driven end
- **3 and 5 horsepower (2.2 kW - 5.5 kW) gear drives** with **shaft speeds of 90 and 175 rpm**
- **Celcon or Ryton plastic scraper blades**
- **Product side pressure of 200 psig (14 bar) @ 365°F (185°C) Jacket pressure of 150 psig (10.5 bar) @ 365°F (185°C)**
- **2.375 inch (60 mm) shaft diameter for particulates up to 0.75 inches (19 mm)**
- **2 inch "S"-line product connections, 1-1/2 FPT media connections**

All barrels indicated normal wear patterns with no pitting, gouging or scarring. There is a hazy residue on the drive end that is easily rubbed off. All mutators are straight and complete with all blades. Clarification: The mutators have 4 rows of blades on the outlet ends only, they are two-row staggered for the rest of the length of the mutator (see photo). Blades are 13-1/2 inches long.

One abnormality was found. The lower left barrel has a raised spot of less than 1/16 inch about 5-1/2 feet from the outlet end. Our best guess is that the barrel sustained a hit from the outside, probably during original assembly or insulation. The wear pattern on the blade (see photo of blade on broken executive chair) shows the bump to be less than 1/16 inch in height and less than 1/2 inch long. The blade shows consistent contact wear along its entire length. All other blades show 100% consistent contact wear. There is no reason to believe the bump hinders heat transfer, useful life, operation or cleaning in any way but it is indeed there so we are disclosing it.

