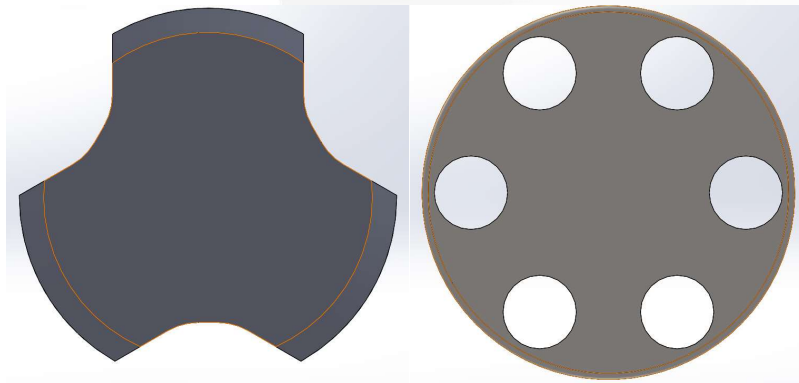


## Flapper Valve Design Change – Lubecore Pneumatic 2.0 10:1 Ratio

Lubecore is updating the flapper valve design for 10:1 ratio pneumatic pumps, replacing the current lobed design for a circular design (see Figure 1). This change is being introduced for the following reasons:

1. Circular shape eliminates the possibility of the flapper valve becoming jammed in the pump.
2. Improves manufacturability.



*Figure 1: Current lobed flapper valve (left); new circular flapper valve (right).*

This new flapper valve has been designed to have the same grease-flow characteristics as the current product. It was tested at -25°C, 20°C, and 70°C, and performed well in these conditions. It also performed consistently across more than 3,000 consecutive greasing cycles.

The improved flapper valve will be integrated into all new 10:1 ratio pneumatic pumps effective immediately.