



PVR SERIES VANE PUMPS

HOW A VANE PUMP WORKS

How It Works

Continental Hydraulics' variable volume, pressure displacement, pressure compensated vane pumps are highly efficient and reliable sources of hydraulic power. Figures 1 and 2 show how the moving cam ring provides variable volume and constant pressure.

As the rotor turns clockwise, the volume between two adjacent vanes (segment) increases at the suction porting. When these segments enter the pressure port area, the volume is reduced and forces the fluid out through the pressure port.

Maximum output occurs when the cam is in the extreme eccentric position (Figure 1). When system requirements are less than maximum pump output, system pressure forces the ring up (against the spring), reducing eccentricity and resulting in less flow.

Constant pressure from zero to full displacement is maintained by the spring. When system volume demand falls to zero, the system pressure drives the ring to a concentric position (Figure 2). This changes the displacement to zero while system pressure is maintained.

Quiet Operation

Geometry of porting combined with precision-fitting vanes and moving parts make Continental pumps among the most quiet in the industry. Sound levels range from below 68 dBA for 6 gpm models when tested in accordance with NFPA Recommended Standard T3.9.1M-1970 (R1981).

A More Efficient Pump

Continental pumps produce only the flow the system demands at any one time. This results in less heat generation, fewer system components, smaller or no heat exchanger and does not require a high pressure bypass. The result is a simpler, more energy efficient system that accurately and efficiently matches fluid power volume to the task while maintaining constant pressure in the system.

Options and Accessories

Continental pumps may be tandem mounted to achieve multiple pump operation from a single power source for separate or auxiliary circuits. Pump options include handwheel pressure and volume controls; dual volume and dual pressure control combinations, plus a variety of mounting arrangements.

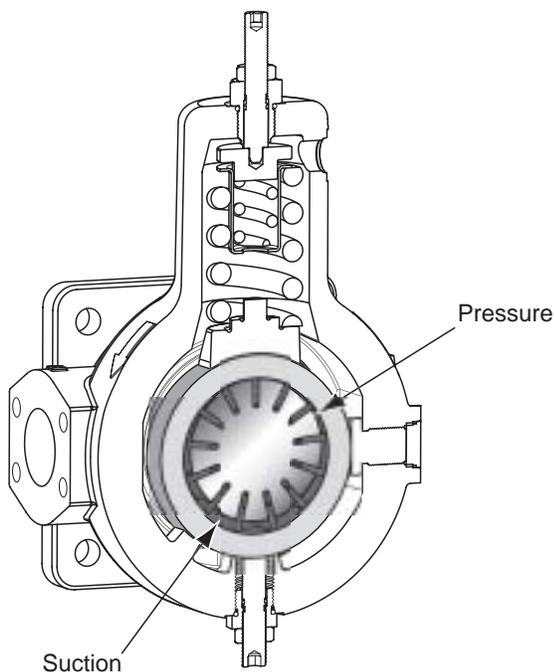


Figure 1

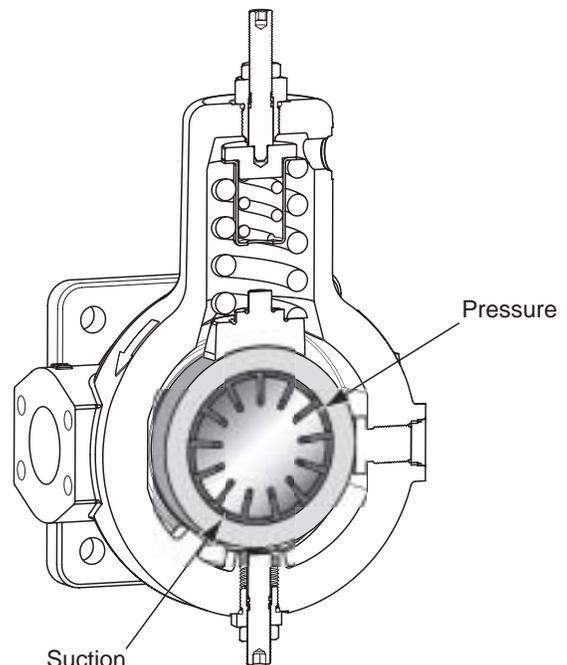


Figure 2

**PVR SERIES
VANE PUMPS**



**S
P
E
C
I
F
I
C
A
T
I
O
N
S**

