



## OPERATING COST ANALYSIS INDUSTRIAL VACUUM TECHNOLOGY

Pump model / Technology	UV16 rotary vane	Oil-sealed liquid ring	Water-sealed liquid ring
Flow (ACFM) at 24" HgV	686 ACFM	685 ACFM	685 ACFM
Installed horsepower	40 HP	60 HP	60 HP
Absorbed horsepower at 24" HgV	31.5 BHP	50.5 BHP	50.5 BHP
Flow per Brake Horsepower	21.8 ACFM	13.6 ACFM	13.6 ACFM
Annual Operation	8736 hours	8736 hours	8736 hours
Oil capacity	8.5 gallons	44 gallons	None
Oil consumption	None	Varies	None
Water usage	None	None	21 GPM
Water/sewer cost per gallon	\$0.007	\$0.007	\$0.007
Annual water/sewer cost	None	None	\$74,088
Electricity cost	\$0.08 kWh	\$0.08 kWh	\$0.08 kWh
Annual electrical cost	\$17,851	\$28,618	\$28,618
Annual maintenance parts cost	\$2,416	\$2,450	Negligible

Total Operating Cost (each year)	\$20,267	\$31,068	\$102,706
Operating cost (per ACFM)	\$29.54	\$45.35	\$149.94

Annual electrical cost = (bhp x 0.746 x hours x kWh) / motor efficiency  
Bearings and seals not included in liquid ring vacuum pump maintenance figures.