



Install on any brand of vane pump with a 3 phase motor.

Pressure Control

Just determine the vacuum level that is best for your process and adjust the pressure controller accordingly. The pump will then run at maximum speed until that pressure is reached and will then slow its speed to maintain the vacuum you have selected. The dead band, or hysteresis, can be adjusted to give the control range that you need.

To minimize turbulence and particles during evacuation, you may select a ramp to "Soft Start" your pump down and then switch to maximum speed to give the ultimate vacuum you need.

When your system pressure reaches the required vacuum, you may want to slow the pump again to perhaps 20% of capacity.

Roughing for Cryo or Ion Pumps

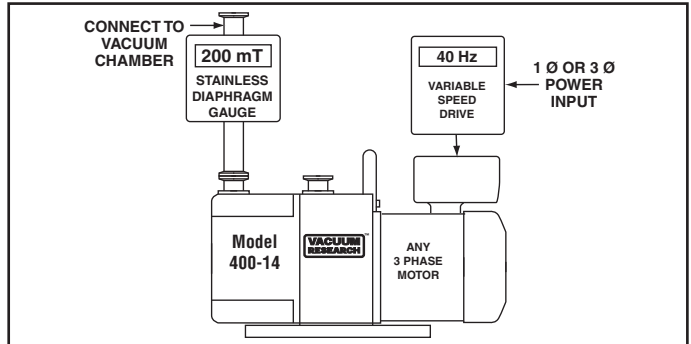
With this system you can operate your mechanical pump at maximum speed, or use a Soft Start Program as described above. When the high vacuum pump takes over, slow the mechanical pump to about 20% of capacity and keep it running slowly so it will be warmed up and ready for the next pump down cycle. Or if the high vacuum cycle is very long you may want to turn the mechanical pump off when roughing is complete.

Backing of Turbo and Diffusion Pumps

Use a single pump for roughing and backing for turbo or diffusion pumps. For roughing, run the pump at maximum speed, but after crossover slow the mechanical pump to perhaps 25% of capacity. If there is an unexpected gas load, and the foreline pressure increases, the gauge will sense the pressure rise and automatically increase the pump speed until proper foreline pressure is reached again.

- No Moving Parts; No Conductance Limiting
- Control Pressure by Adjusting Pump Speed
- Full Speed for Roughing, Slow for Backing
- Reduce Pump Noise and Extend Pump Life
- Soft Start With Programmable Ramp

\$1495. Complete with cables and Digital Vacuum Gauge



Install on Vacuum Research or Other Brands of Pumps

This system was developed for use with Vacuum Research Rotary Vane Pumps but it can also be used on pumps manufactured by others. The output to the pump motor from the variable speed drive is 3 phase so your pump motor must be 3 phase. The variable speed drive output voltage is the same as the input voltage. For example, if you provide 208 V, single phase into the controller you will get 208V, 3 phase out to the motor. 240V, single phase power in will give 240V, 3 phase out to the motor. Be certain that your pump motor is the right voltage.

Ordering Information

Complete Pressure and Soft Start Control System for Rotary Vane Pumps including:

Digital Vacuum Gauge

with a stainless steel diaphragm and a range of 50 mTorr (microns) to 800 Torr.

Variable Speed Drive

which converts 1 Ø line power to 3 Ø power to drive the pump motor. Includes an adjustable pressure set point and programmable ramps for soft start and capacity control.

NW-25 Tee

plus clamps and centering rings to mount the vacuum gauge on the pump inlet.

Digital gauge operates from 100 to 120 VAC. Variable speed drive operates from 208 to 240 volts, 1Ø, 50-60 Hz. 10 feet of inter connecting cable included. Longer lengths are available.

P/N SS-220-1/2hp for motors up to 1/2 hp.....\$1495.
P/N SS-220-1-2hp for motors of 1 or 2 hp.....\$1595.