

The Headway VacSteal product is a ballast tank to store a volume of vacuum. There is an input fitting to apply a source of vacuum. There is optionally an electrical solenoid valve that is controlled by the Headway spinner controllers, in series with the source and tank. There is a low-cracking pressure check valve in series with the source/tank that will permit air to leave the tank to the vacuum source, but will not allow air to re-enter the tank if the vacuum source line is removed or the vacuum pump is turned off. There is a sintered filter inside the ballast tank to protect the check valve from particles. There are several ports with different style interconnects, to connect the vacuum in the tank to the use point(s) – such as one or more spinner controller(s) that can send the vacuum to a vacuum chuck holding a spinning substrate. The design permits the vacuum in the ballast to “top-off” at the best vacuum provided by the source, which may be fluctuating due to multiple users. If the source should fail during a timed operation using the vacuum in the ballast, the volume will usually be adequate to complete the process before a safety interlock aborts the process – thereby ruining it.

A gage on the VacSteal indicates the level of vacuum in the ballast.

Optional accessories are available that will permit the monitoring of the vacuum level and the control of power to an electrical vacuum pump to turn the pump off automatically when the vacuum is above a preset level. This reduces noise and wear on the vacuum pump when vacuum from the ballast is not being used. The vacuum pump may produce less vacuum than is required during a process, or the vacuum line from the pump may introduce impedance due to small size or unusual length, but the ballast assures adequate low impedance vacuum for intermittent processes, at the point of use. For additional insurance in critical applications, multiple sources of vacuum could be used if introduced through a low-cracking pressure check valve at a connection usually used as a vacuum outlet.

The VacSteal provides a better, more reliable vacuum source, without requiring additional energy, without creating more noise, and without creating particles in a clean room!

