

CARR Centritech Separation Systems
CARR® VP Pilot



Features:

- ViaFuge® bowl for gentle cell harvesting of shear sensitive cells
- Powerfuge® bowl for drier solids and cleaner centrates for microbial separations
- Simple operation
- Improved product design
- Flexible optimization
- Steam-in-place option (SIP)
- Fully transportable tabletop design
- Variable speeds up to 20,000g
- CE Compliant
- Available for hazardous duty environments

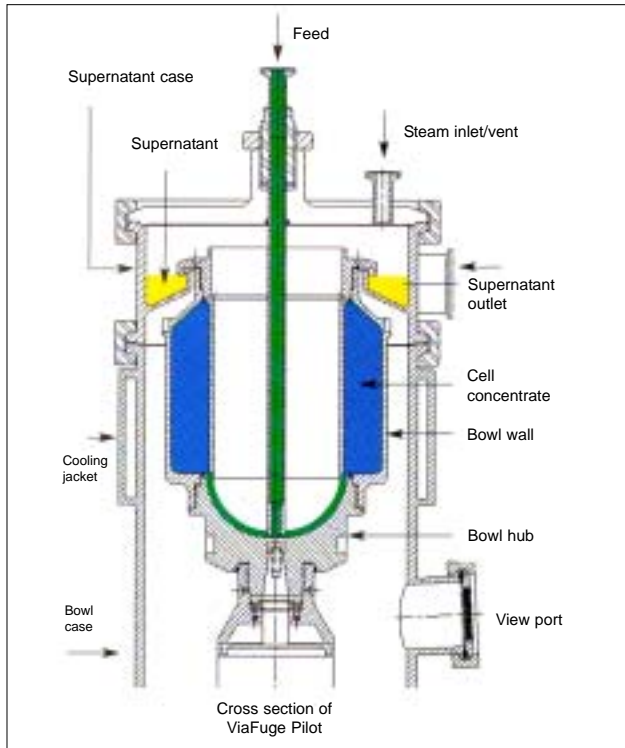
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CARR® VP Pilot

Pneumatic Scale's unique CARR VP Pilot combines fast, gentle, small-to-medium scale cell harvesting and supernatant recovery for shear cells such as mammalian and insect cells and high G-force for liquid/solid separations of bacteria, yeast, proteins or submicron particles.

ViaFuge Bowl For General Operation

Cells are concentrated at the bowl wall while clarified supernatant is continuously discharged throughout the separation process. Once the bowl fills with cell concentrate to a capacity of 1.3L, a simple manifold system and concentrate pump is utilized to recover the cells without breaking containment. Subsequent cycles are performed for recovery of larger batches.



Improved Product Processing

Cellular damage can result in release of intracellular material such as DNA, which may increase downstream processing and in some cases impact product purity. Because the VP Pilot is gentle to cells, damage is minimized from the start of the process. For supernatant recovery applications, filtration requirements downstream may be reduced. For cell harvesting applications, intact cell recovery will be increased.

Low-Shear Design

The VP Pilot's unique design minimizes shear forces on cells. Incoming feed is matched to the bowl hub's rotational velocity, allowing fast, efficient harvesting of even the most shear-sensitive cells without causing cell damage.

Flexible Optimization:

Flexible operating conditions offer optimization for specific applications with a flow rate range of 0.1-4.0 L/min and a relative centrifugal force range of 500-20,000g. For mammalian cell culture, concentration to 1.8×10^8 cells/ml can be achieved.

Powerfuge Bowl For High G-Force

The Powerfuge Pilot Bowl allows fast assembly and disassembly for quick and simple cleaning. The design also helps reduce the time required for maintenance, particularly since there are few parts to replace. And when you're at the end of a run, compressed solids are easily removed with minimal time and effort using a hand scraper contoured to fit the 1L capacity bowl.

Timesaving Operation: Fast processing at a rate of up to 1L/min. means you can accomplish more runs in a single day, which is especially useful for larger batch sizes. And because the VP Pilot eliminates the need for bottles, you can set up runs in less time with fewer manipulations.

Variable speed for your choice of separating power: The VP Pilot has been equipped with a variable speed drive. Users can select their desired flow rates of up to 60L/hr and RCF to 20,000g, providing the operational control necessary to optimize your process.

A wide choice of temperatures: An integral cooling jacket helps maintain product temperatures from 2° C - 40° C. The jacket itself can withstand flow rates as high as 2L/min. and internal cooling temperatures as low as -10° C in order to provide the desired net process temperature.

Vacuum-equipped VP Pilot: The Pilot is also offered with a vacuum option, which aids in temperature control and temperature reduction by limiting frictional heat generation, the reduction of foaming, as well as vapor and aerosol containment and in some applications, an increase in flow rate. The vacuum configuration creates and maintains a vacuum environment of up to 27" Hg.

Easy solids removal and cleaning



Loosen large Tri-clamps to remove bowl case cap...



...remove the centrate case. Lock the bowl in place with the handles on each side...



...place the pegs of the bowl wrench into the notches on the bowl. Carefully unscrew...



...and lift out the bowl.



Place the bowl on its side on a soft surface and use the contoured hand scraper to remove collected solids.

For more information, please contact your CARR Representative at the Clearwater location below.

Pneumatic Scale Corporation

10 Ascot Parkway • Cuyahoga Falls, OH 44223 USA • 330/923-0491
5320 140th Avenue North • Clearwater, FL 33760 USA • 727/535-4100
Otto-Hahn-Str. 54 • 63303 Dreieich-Sprendlingen Germany • + 49 6103 380 990
www.pneumaticscale.com sales@pneumaticscale.com