

PowerFuge® P18

The PowerFuge P18 is designed to separate solids that are suspended in a liquid. Using an innovative design, the feed is introduced through a stationary pipe and accelerated to full rotational speed before entering the titanium-alloy bowl. In this system, centrifugal forces, as high as 20,000 x g, permit separation of even sub-micron particles. Compressed solids are periodically removed with a fully automated scraping cycle. After the solids have been discharged, automated CIP/SIP cycles can be performed via the PLC controlled operating sequence.

Typical applications include:

- E. coli whole cell harvest, lysate removal and inclusion bodies
- P. pastoris clarification
- Specialty chemicals, including aluminum flake and carbon black
- XP and solvent separations, including ethanol, ethyl acetate and similar fluids.

Features

- Complete liquid/solid separations
- Produces the driest cake for maximum yield
- Capable of handling high density feeds without dilution
- Automated Solids Removal & CIP/SIP Capable
- Optimize processes with full automation
- Regulatory documentation available
- Integrated Cooling Jacket & Spindle Cooling Unit
- Service Hoist
- Designs available for:
 - CE Marking
 - 2 bar Steam-In-Place (ASME/PED Rated)
 - Hazardous Environments

Operating Parameters

Variable Speeds	up to 20,000 x g
Typical Processing Rate*	10L/min*
Max. Bowl Speed	8,850 RPM
Max. Concentrate Density	<1.5 g/ml
Bowl Volume	36 L

*Processing speeds are application-dependent and may vary. Please consult factory.

**Weights and dimensions dependent on system configuration and options required.



Equipment Specifications

- Designed to meet containment standards consistent with Biosafety Level 1 (BL1) and Biosafety Level 2 (BL2).
- Product-contact materials and surfaces: type 316 & 316L 17-4PH and Nitronic 60 stainless steel, high strength titanium alloy, Teflon, silicone, EPDM O-rings and gaskets. Stainless steel finish: electropolish (25 RA). Titanium alloy bowl tumbled finish: (25 RA). Swinglock rollers of PEEK (Thermoplastic).
- System footprint (approx.): 255 cm wide x 305 cm deep x 394 cm high (100" x 120" x 155")**
- System weight (approx.): 2,950 - 4400 kg / 6,500 - 9,700 lbs.**

Utility Requirements

- Motor & Control Panel: 400V/50Hz or 480V/60Hz (configuration dependent)
- Spindle Cooling Unit: 230V/50Hz
- Instrument-quality air only, supplied at 80-100psi