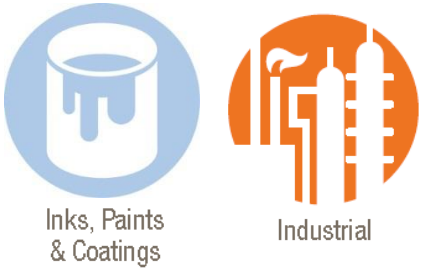
Parker-Hannifin Corporation
domnick hunter Process Filtration

ProBond, resin filtration

Presented by: Bart Scholten

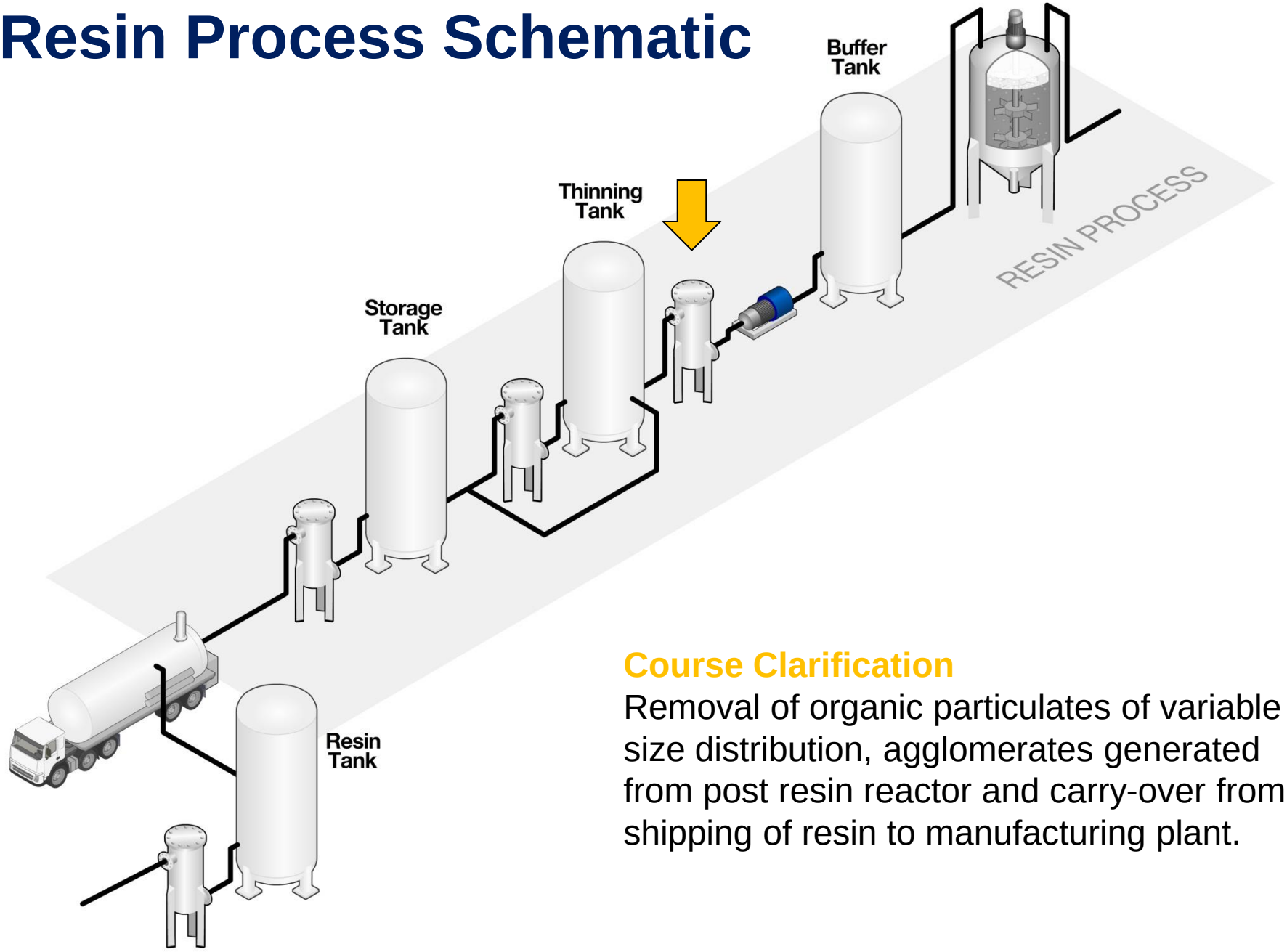
ENGINEERING YOUR SUCCESS.

ProBond Applications



- Inks, Paints & Coatings
- Adhesives
- Varnishes
- Resins
- Oils
- Gels
- Non-Potable Water
- Coolant Fluids
- Sealants
- Lubricants

Resin Process Schematic



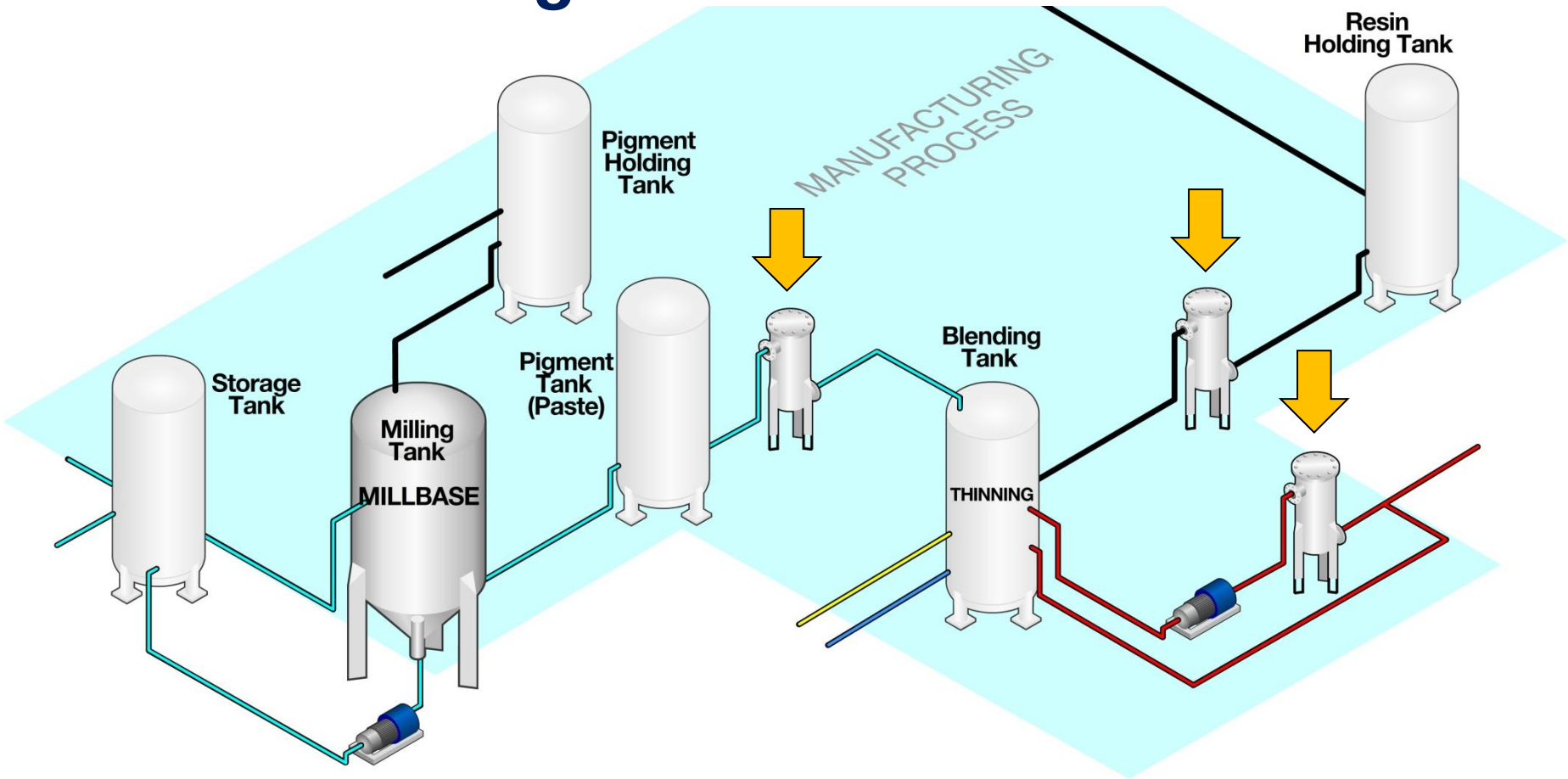
Course Clarification

Removal of organic particulates of variable size distribution, agglomerates generated from post resin reactor and carry-over from shipping of resin to manufacturing plant.

ProBond in the Resin Process

Filter	Feature	Benefit	Advantage
ProBond	Made of phenolic resin	Excellent compatibility with high temperature and aggressive resins	High durability and life
	Graded rigid density matrix	No gel or contaminant off-loading	Low batch rejects and re-work
	Silicone-free media	Prevents formation of cratering or ‘fish-eyes’ on surface finish	No wastage/ reject or re-work of coated substrate

Manufacturing Process Schematic



Pigment Classification
Removal of oversized pigments, gels, agglomerates (fibers, environmental debris, organic polymers) to ensure efficient pigment dispersion rates during the blending stage and prevent rework of the batch.

Transfer Clarification
Removal of fine haze, unreacted resins, contamination entrained through resin transfer and storage tank.

Post-blend (thinning) Classification
Removal of oversize pigments, gels, agglomerates ensure product reaches specification before being packed and shipped.

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ProBond in the Manufacturing Process

Filter	Feature	Benefit	Advantage
ProBond	No requirement of core/cage	Easy to dispose	Environmentally friendly and reduces disposable costs
	Made of phenolic resin	Provides rigid matrix and compatibility at high temperature and solvents	Retention of deformable particles over a longer differential pressure drop rise and so provides good filter life at cost-effective process
	Silicone-free media	Will not cause ‘fish-eyes’ or cratering on painted surface	Reduces product wastage and improves yield

ProBond Construction

Process begins with high quality, virgin acrylic and polyester fibers of discrete diameters and lengths. Long fibers are used for better structural integrity and minimal breakage.

ProBond Construction

Webbing and needling process converts loose fibers into discrete micron fabrics.

ProBond Construction

Logs go into oven via conveyor for a final cure. Mandrels are ejected from logs and filters are cut to length, cleaned, inspected, and packaged.

ProBond Features

Two stage filtration by means of a patented spiral-wound ribbon layer. This fuzzy outer layer is porous and traps large particles to increases the dirt holding capacity and life of the cartridge

ProBond Features

The inner control layer reflects the micron rating and has moderate graded density due to tighter wrapping at the center to increase cartridge life.

ProBond Benefits

- Each fabric type is unique in its fiber composition, resulting in true differentiation between micron ratings.
- Fabrics are coated with high grade thermoset phenolic resin that gives ProBond superior strength and prevents brittleness or breakdown.
- Certified silicone free composition for good coating adhesion and broad chemical compatibility.
- One piece construction on any available length for increased surface area and no risk of bypass.

ProBond Benefits

- Long fibers and high grade resin result in ProBond being the cleanest of all resin bonded filters.
- We offer a backup stock agreement for customers who order large quantities of ProBond several times a year for faster lead times.

Why ProBond?

ProBond Features

- Unique two stage, continuous length filtration design
  - Strengthens cartridge, eliminates by-pass, eases operator change-out
- Strong resin bonded, graded density depth cartridge
- Designed for high temperature filtration applications up to 250°F (121°C)
- Available in a broad range of micron ratings from 2-150µm

ProBond - Your best option for processing viscous fluids...

- Maximize particle retention
- Increase service life

Why ProBond?

...as a classifying filter

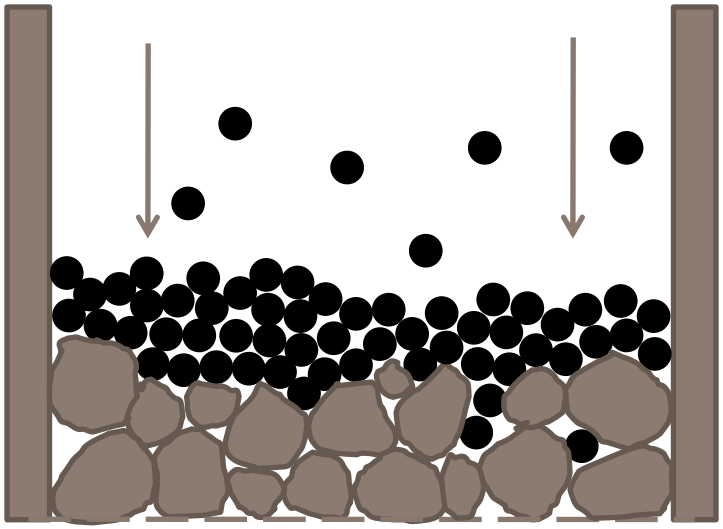
- Efficiency remains relatively constant during filtration
- Allow desirable particles (inks, paints & coatings) to filter through...retains large agglomerated particles & gels
- Eliminate residual debris

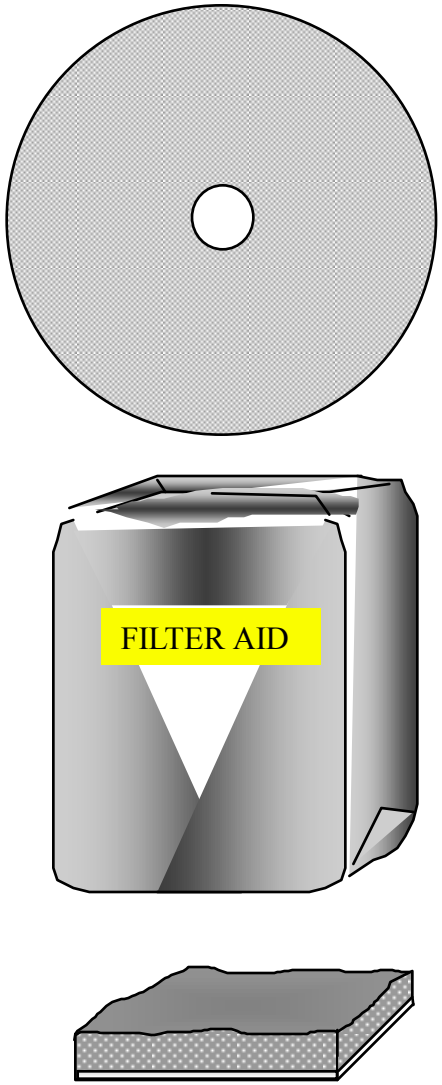
...and when fiber-shedding and silicone matter!

- Lowest fiber dust and contaminated fluid in the market place
- Achieve efficiency performance through our blend of acrylic and polyester fibers and phenolic resin
- Improve service life in a coarser, spiral wrapped layer for pre-filtration

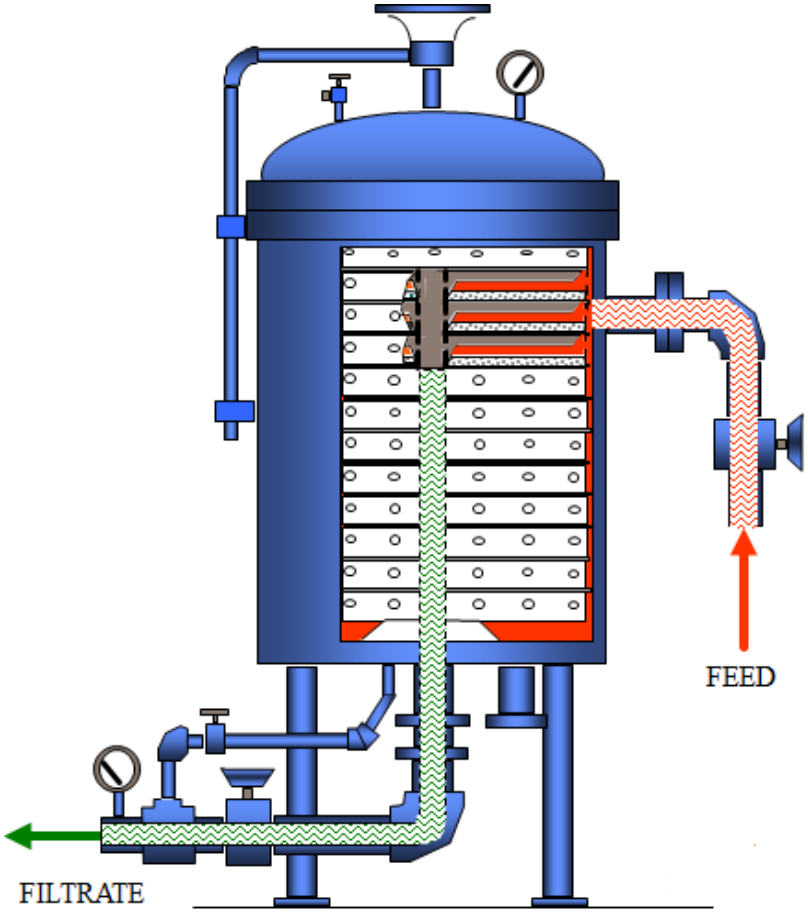
AND...Probond is CERTIFIED SILICONE-FREE! Avoids changes to adhesion properties and cleans up visual defects in a wide variety of coatings applications

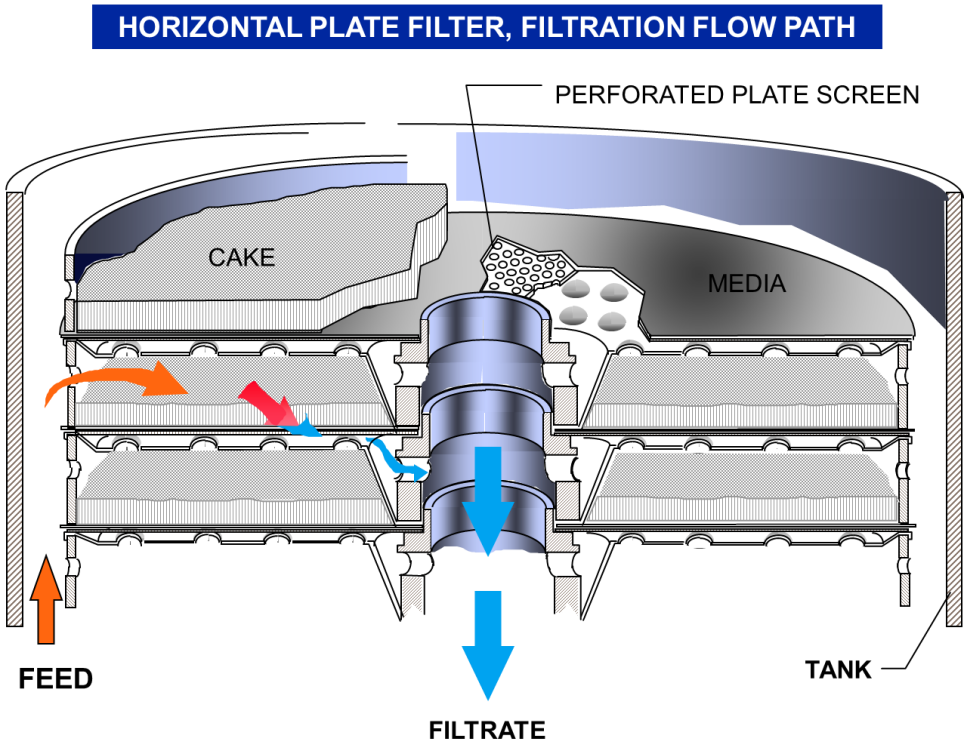
Precoat filtration





Horizontal plate filters





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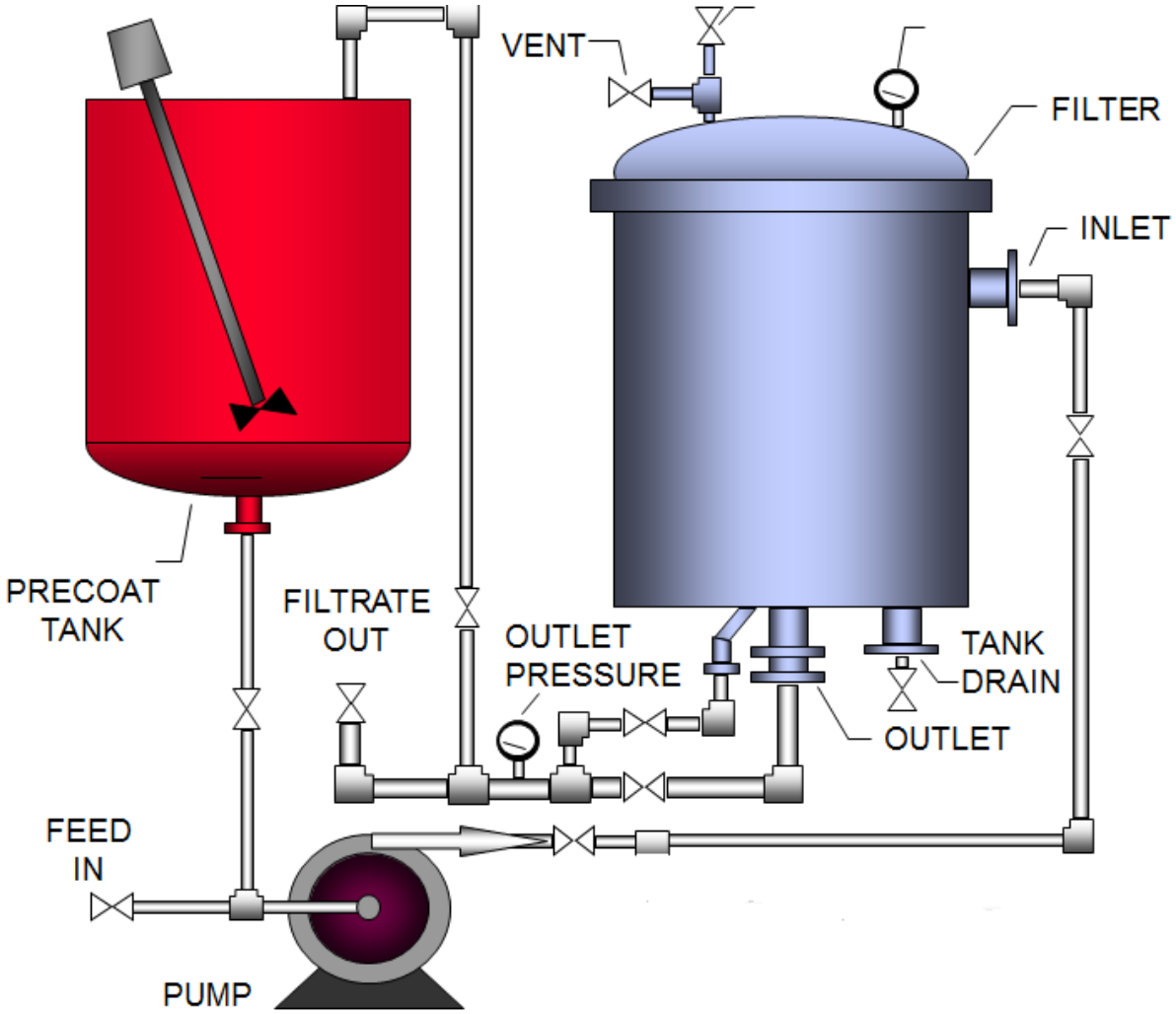
Working principle



Why using a horizontal plate

- Large filtration area available
- Less consumables required
- Lower operational cost per batch

- Parker offering both techniques !

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Questions and Comments

Thank you!

(Name), (Title)

(email)

(Phone)