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Filtration Solutions

Swiss Engineered to Perform.

Sauvik Dutta

10 June 2026

Driven by Expertise, Inspired by Innovation

01

DrM Since 1982

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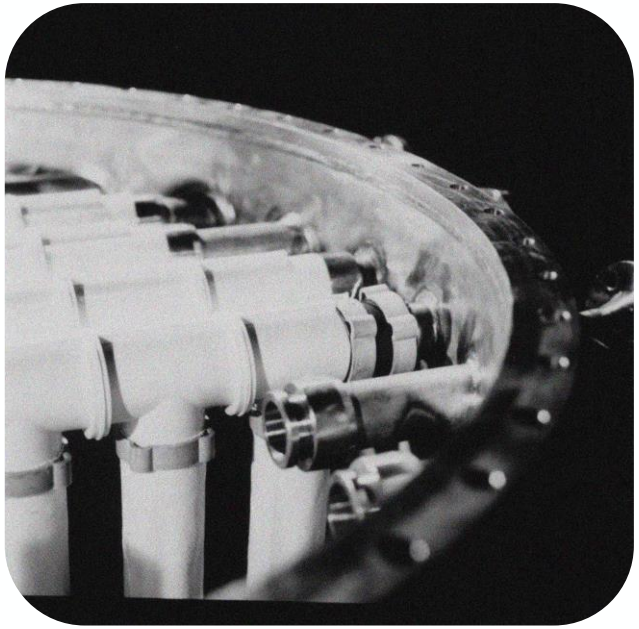
+40
years of experience

+85
countries served

+4,100
filtration units delivered



DrM was founded in 1982 by Dr. Hans Mueller (1913-1984), an engineering school graduate from the Swiss Federal Institute of Technology in Zurich (ETH). His boundless imagination resulted in more than 400 inventions for which patents were issued throughout his academic and industrial career. Today, DrM is still held privately and managed by highly trained technical and creative professionals.

DrM develop, design and fabricate filtration systems for solid/liquid separation as well as Vibratory Mixers and Single-Use Technologies.
Our main products are the FUNDABAC® and CONTIBAC® Candle Filters with more than 4,100 in operation worldwide and approximately 150 new systems put in place every year.

Our Global Presence

06
Entities

40+
Representatives

220+
DrM Members

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Within & Beyond The Pumps

How DrM FUNDABAC® Candle Filter Eliminates Energy Waste — Replacing Every Filter Type

02
Within The Pumps

The Problem: RVDF Needs 4 Pumps + Gearbox + Manual Labour

⚠ Rotary Vacuum Drum Filter (RVDF) — Solid-Liquid Separation Today

PUMP 1
Slurry Feed Pump
Continuously feeds slurry to drum trough

PUMP 2
Vacuum Pump
Continuous suction • Runs 24/7 • Notoriously inefficient

PUMP 3
Cake Washing Pump
Circulates wash liquor through the filter cake

PUMP 4
Self-Priming Centrifugal Pump
Pulls & discharges filtrate from vacuum receiver

✕ **Manual Intervention** Cloth adjustment • Knife/scraper cleaning

✕ **Gearbox + Drum Motor** Running 24/7 — adds load even at low flow • High maintenance

4 Pumps
+ Gearbox + Manual Labour

The Solution: FUNDABAC® — 1 Pump Does It All

✓ FUNDABAC® Cloth-Type Candle Filter — An Upgraded Replacement

PUMP 1 — AND ONLY 1

Standard Centrifugal Feed Pump

Handles filtration AND cake washing in one closed-vessel cycle. No vacuum pump • No backwash pump • No separate filtrate pump

✓ **Fully Automated** Zero manual intervention • No cloth changes mid-cycle • No scraper cleaning

✓ **Gas-Pulse Discharge** Few seconds N_2 pulse ejects cake • Minimum gas consumption

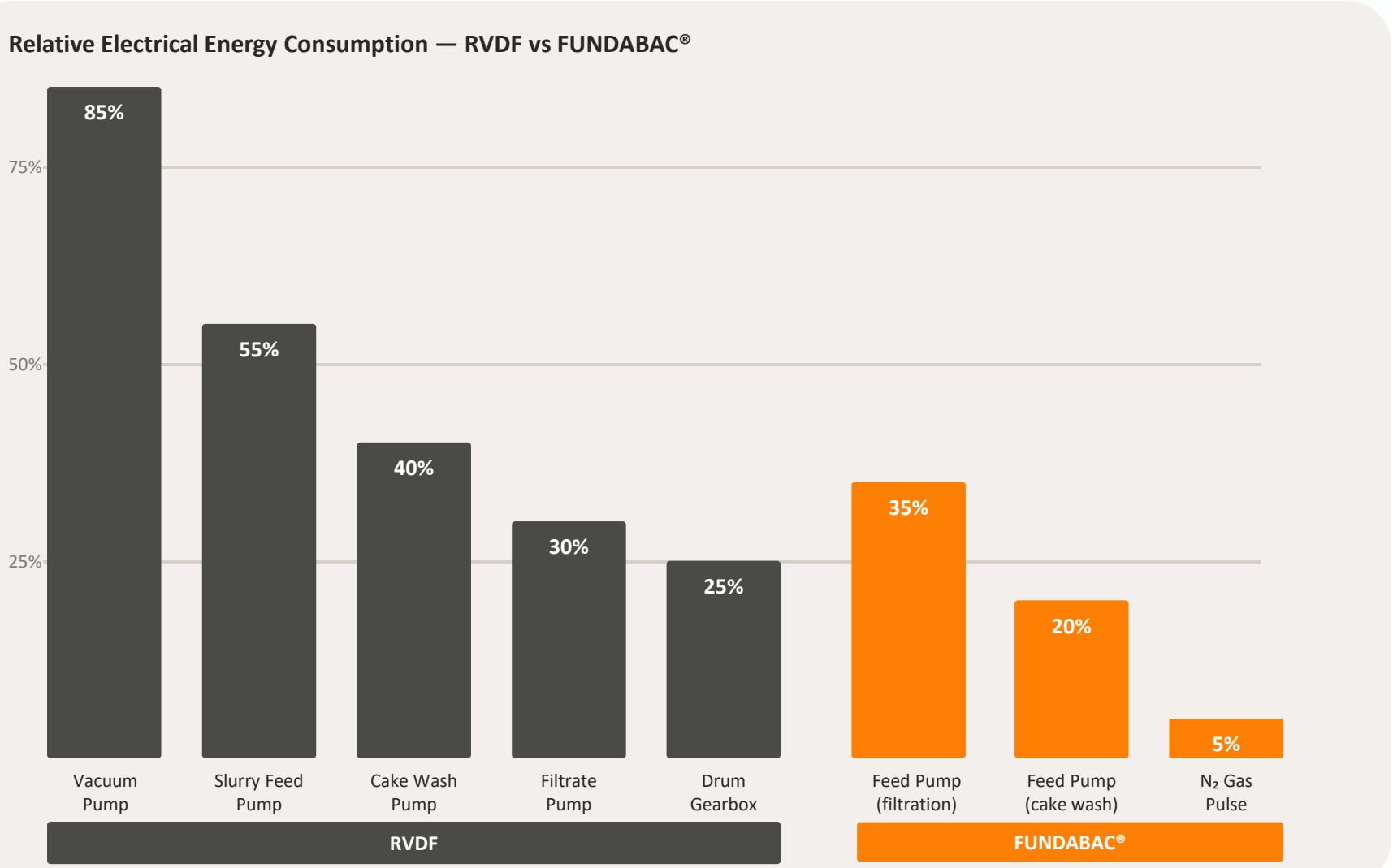
✓ **Complete Static Equipment** No moving parts • No gearbox • No drum motor

✓ **High Filtration Efficiency** Single filter achieves < 99% filtration efficiency • Eliminates use of multiple downstream equipment

1 Pump

Zero Moving Parts • Zero Manual Intervention

Energy Consumption: RVDF vs FUNDABAC® at a Glance



Up to 60%
less energy consumption vs RVDF

0
vacuum pumps required

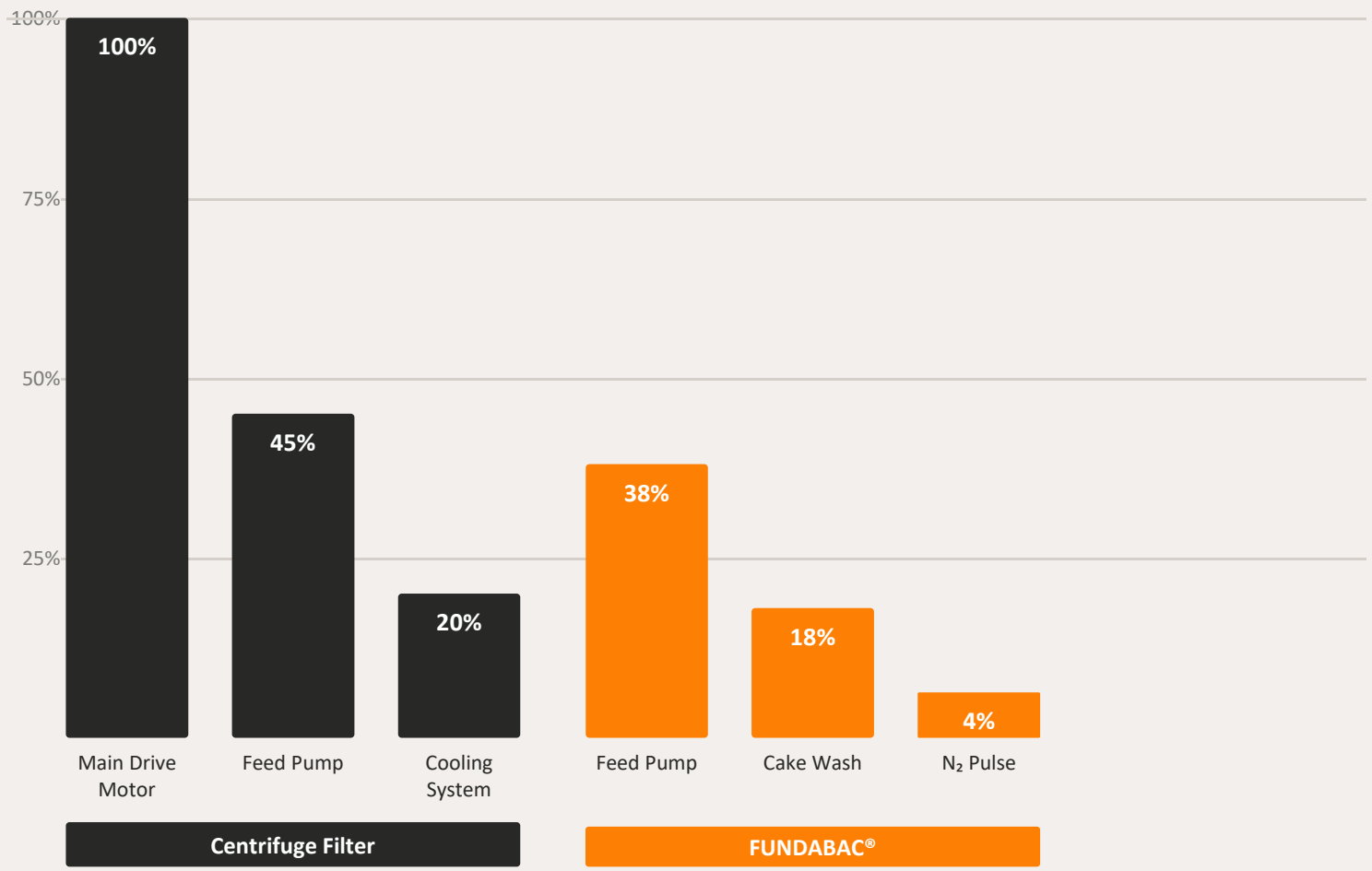
~100%
liquid recovery

Centrifuge Filter vs FUNDABAC®: Energy by Design

Centrifuge Filter	FUNDABAC® ADVANTAGE	FUNDABAC®
G-Force Energy Thousands of RPM • Massive motor kW • Power spikes at start/stop		✓ **Delta-P Only** Simple pressure difference • No rotating parts • Far fewer kW per m^3
Frictional Heat Heat from rotation needs cooling • Extra energy overhead		✓ **Ambient Operation** No friction heat • No cooling system • Operates at process temp
Idle at Full Speed Runs 100% even at low flow • No proportional throttling		✓ **Demand-Proportional** Energy stops when pump stops • Zero idle consumption
Multiple Pumps Separate feed + discharge + flush pumps often required		✓ **Single Feed Pump** One centrifugal pump • Handles filtration + cake wash

Energy Showdown: Centrifuge Filter vs FUNDABAC®

Relative kW Consumption — Same Throughput, Same Duty



~55%
Lower energy consumption vs Centrifuge

0
Friction heat generated

03

Beyond The Pumps

Filter Press vs FUNDABAC®: Static Always Beats Dynamic

Filter Press	FUNDABAC® ADVANTAGE	FUNDABAC®
Hydraulic Clamping Massive hydraulic power to close plates • Constant energy draw		✓ **Static Vessel** No clamping • No hydraulics • Just feed pump pressure
Plate Movement Heavy plates moved for discharge • High mechanical energy		✓ **Gas Pulse Discharge** Few secs N_2 pulse ejects cake • Minimum Gas consumption
High-Manual Dependency Frequent stop in between process for cake discharge • Completely manual intensive process		✓ **No-Manual Intervention** Fully automatic cake discharge • Shorter & fewer process stops
Lower filtration efficiency Outlet expected quality can be < 50 ppm • Higher frequency of cloth change		✓ **High-end filtration efficiency** Outlet quality can be > 10 ppm • Lower frequency of cloth change.

Sparkler Filter vs FUNDABAC®: Automation vs. Manual Labour

Sparkler Filter	FUNDABAC® ADVANTAGE	FUNDABAC®
Full Shutdown to Clean System must be opened manually • Lost production time		✓ **Fully In-Situ Cleaning** Gas backwash regenerates cloth • No opening • No downtime
Manual Plate Removal Operators dismantle filter stack • Labour-intensive • HSE risk		✓ **Zero Manual Handling** Fully automated cycle • No human contact with process
Disposable Filter Cloth/Pads Filter cloth/pads consumed each cycle • Manufacture + ship + dispose		✓ **Reusable Cloth** Same cloth runs thousands of cycles • Zero disposable media
Carbon Footprint Waste incineration • Repeat disposal • Not eco-friendly		✓ **Near-Zero Waste** • Negligible disposal • Dramatically lower carbon footprint

Pressure Leaf Filter vs FUNDABAC®: Closed-Loop Always Wins

Pressure Leaf Filter	FUNDABAC® ADVANTAGE	FUNDABAC®
Manual Leaf Removal Vessel opened • Leaves pulled out manually • Downtime per cycle		✓ **Closed Automated Cycle** Vessel never opened during operation • No downtime
Lower filtration efficiency Outlet expected quality can be < 50 ppm • Higher frequency of leaf repair/ damage		✓ **High-End filtration efficiency** Outlet quality can be > 10 ppm • Lower frequency of cloth change.
Slurry Disposal Spent cake + filter aid as hazardous slurry • Cost to treat + dump		✓ **Dry Cake Discharge** Compact dry cake • Minimal waste volume • Easy disposal
High Operator Contact HSE exposure • Full PPE • Operator tied to machine		✓ **Zero Operator Exposure** Fully enclosed • PLC-controlled • Operator free for other tasks

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Cartridge & Bag Filters vs FUNDABAC®: Closed-Loop Always Wins

Cartridge & Bag Filters	FUNDABAC® ADVANTAGE	FUNDABAC®
Manual Cartridge & Bag Removal Vessel opened • Leaves pulled out manually • Downtime per cycle		✓ **Closed Automated Cycle** Vessel never opened during operation • No downtime
Disposable Waste Manufacture + ship + incinerate thousands of units		✓ **Reusable Cloth** Same cloth runs thousands of cycles • Zero disposable media
Carbon Footprint Waste incineration • Repeat disposal • Not eco-friendly		✓ **Near-Zero Waste** • Negligible disposal • Dramatically lower carbon footprint
High Operator Contact HSE exposure • Full PPE • Operator tied to machine		✓ **Zero Operator Exposure** Fully enclosed • PLC-controlled • Operator free for other tasks

Filtration Systems for Efficient,
Reliable Solid-Liquid Separation

04
FUNDABAC® Process

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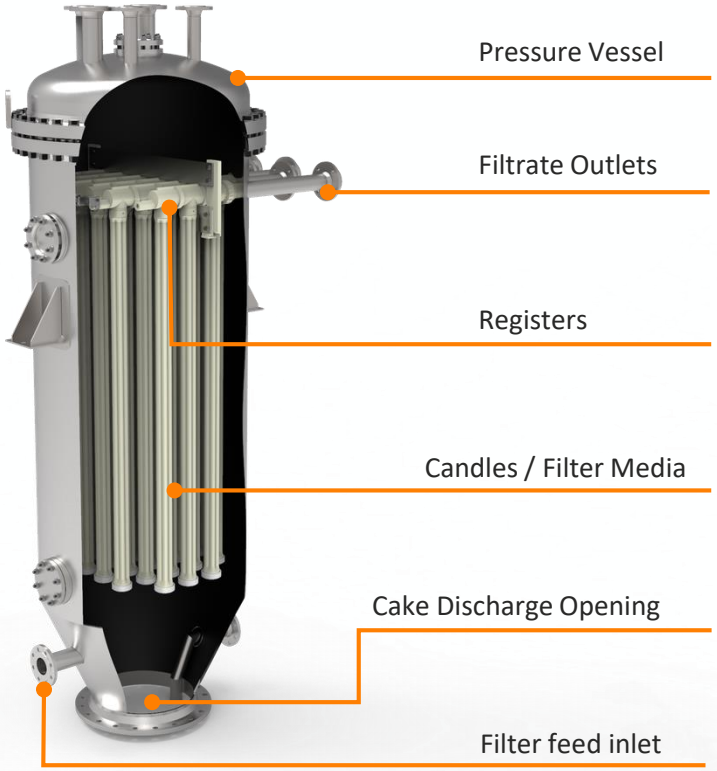
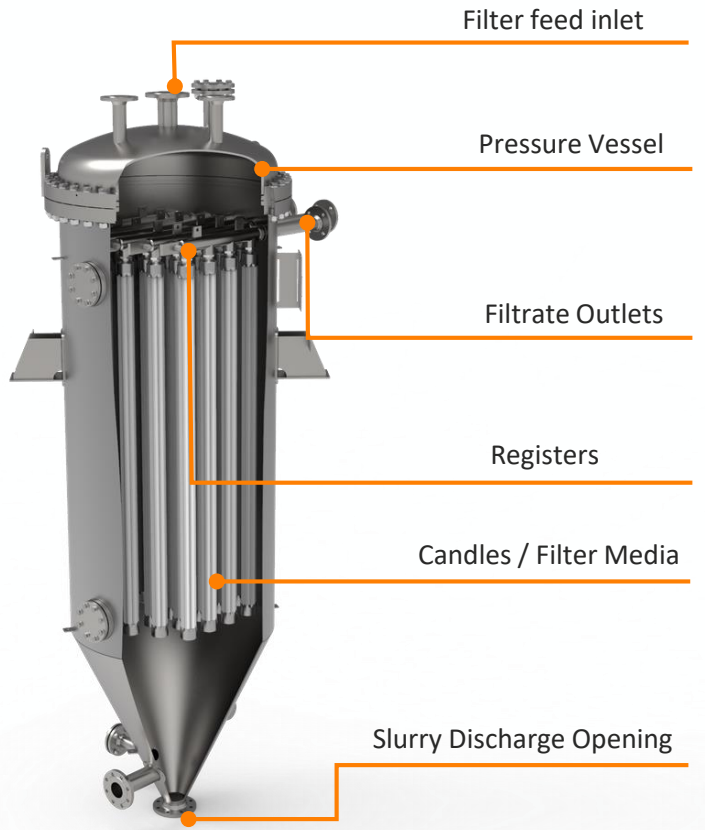
FUNDABAC®



FUNDABAC® filters are engineered for long-term reliability, using high-quality synthetic materials and premium metals to ensure consistent performance even in the most demanding operating conditions. Every component is designed to minimize wear, extend lifetime, and reduce maintenance.

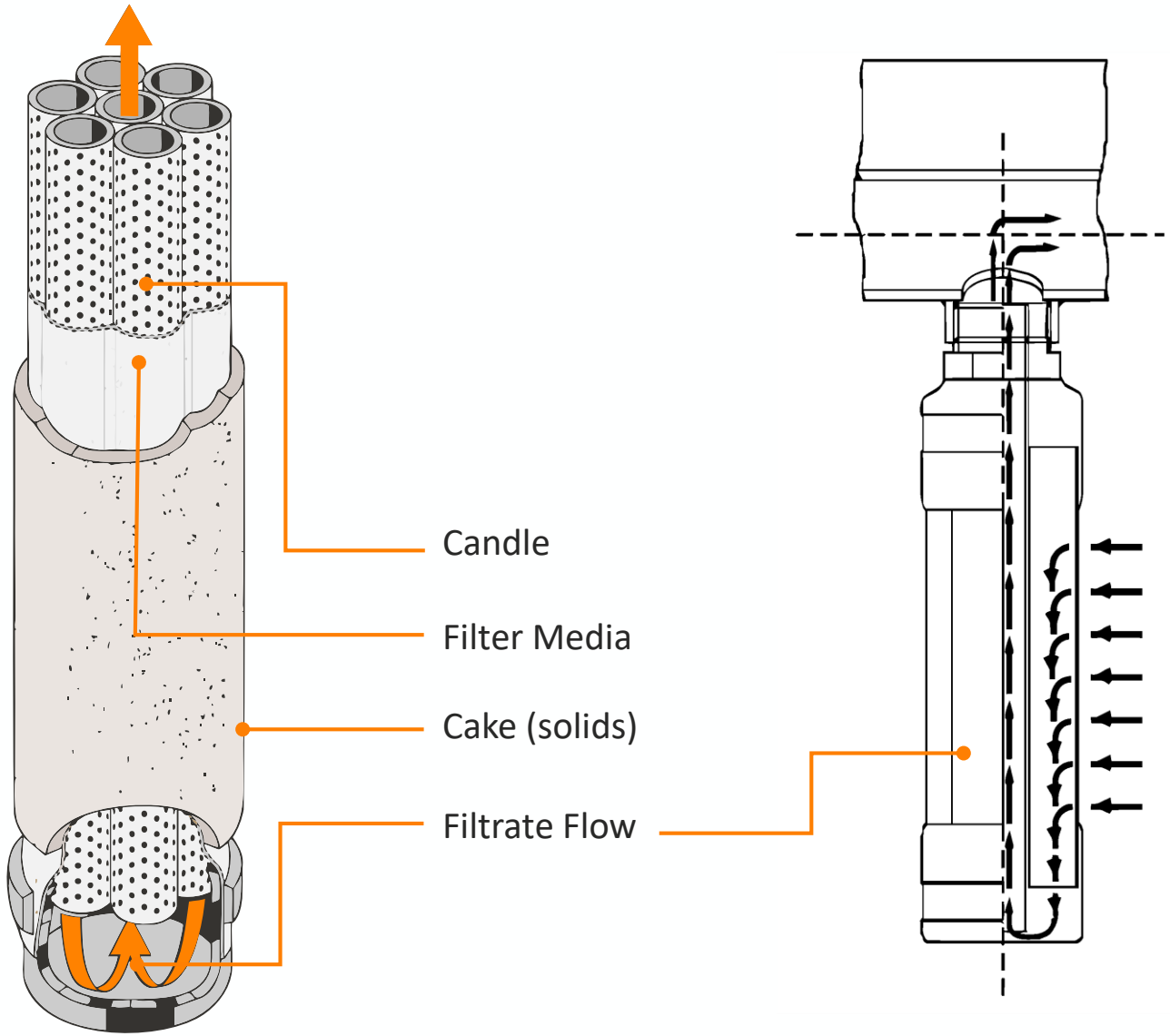
CONTIBAC®



The CONTIBAC® candle filter combines efficient slurry thickening with clear filtrate production. It provides reliable, fully enclosed operation for continuous or semi-continuous processes.

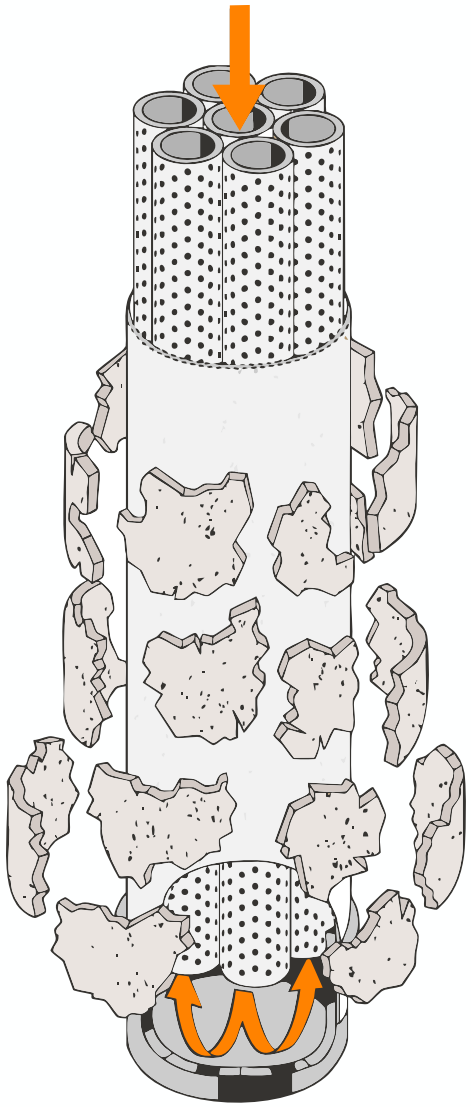
The unique filtration element patented

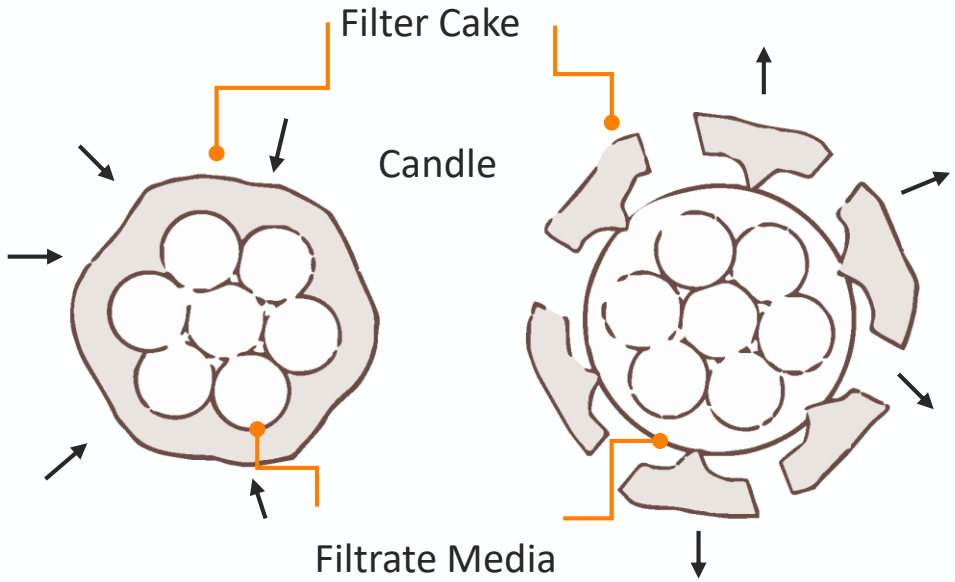
- Multitube candle, 40 bar collapsing pressure
- Pressure forms cake
- Filtrate escapes through center tube
- Grooves help cake adhesion



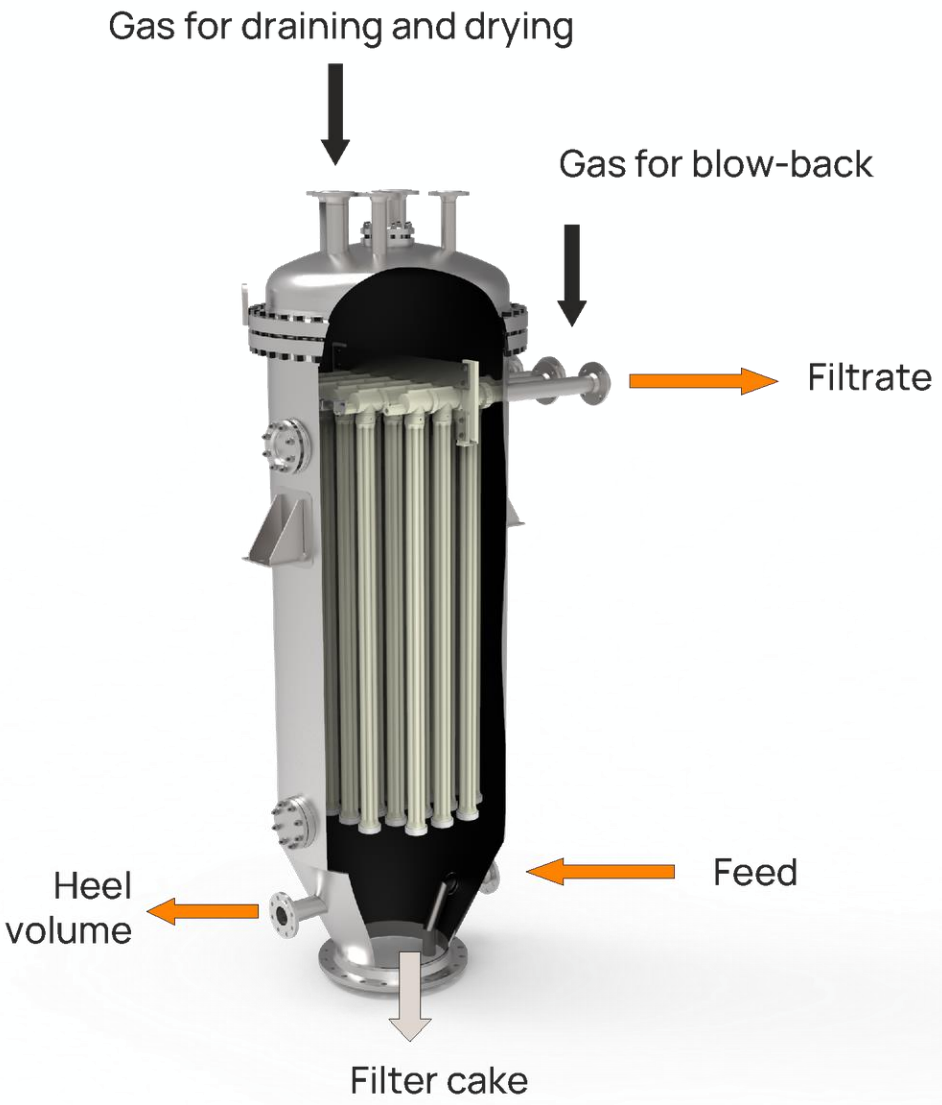
Discharge by Back Pressure

- Dynamic radial movement of cloth
- Modification in cloth shape
- Cracking of the cake
- Breaking the cake into pieces
- Throwing the solids off
- Cleaning of the cloth





- Dynamic discharge with back pressure
- Dynamic radial movement of filter media



Basic Process Steps

Fully automatic cycle

01 Filter Filling

02 Cloths Cleaning

03 Pre-Filtration

04 Filtration

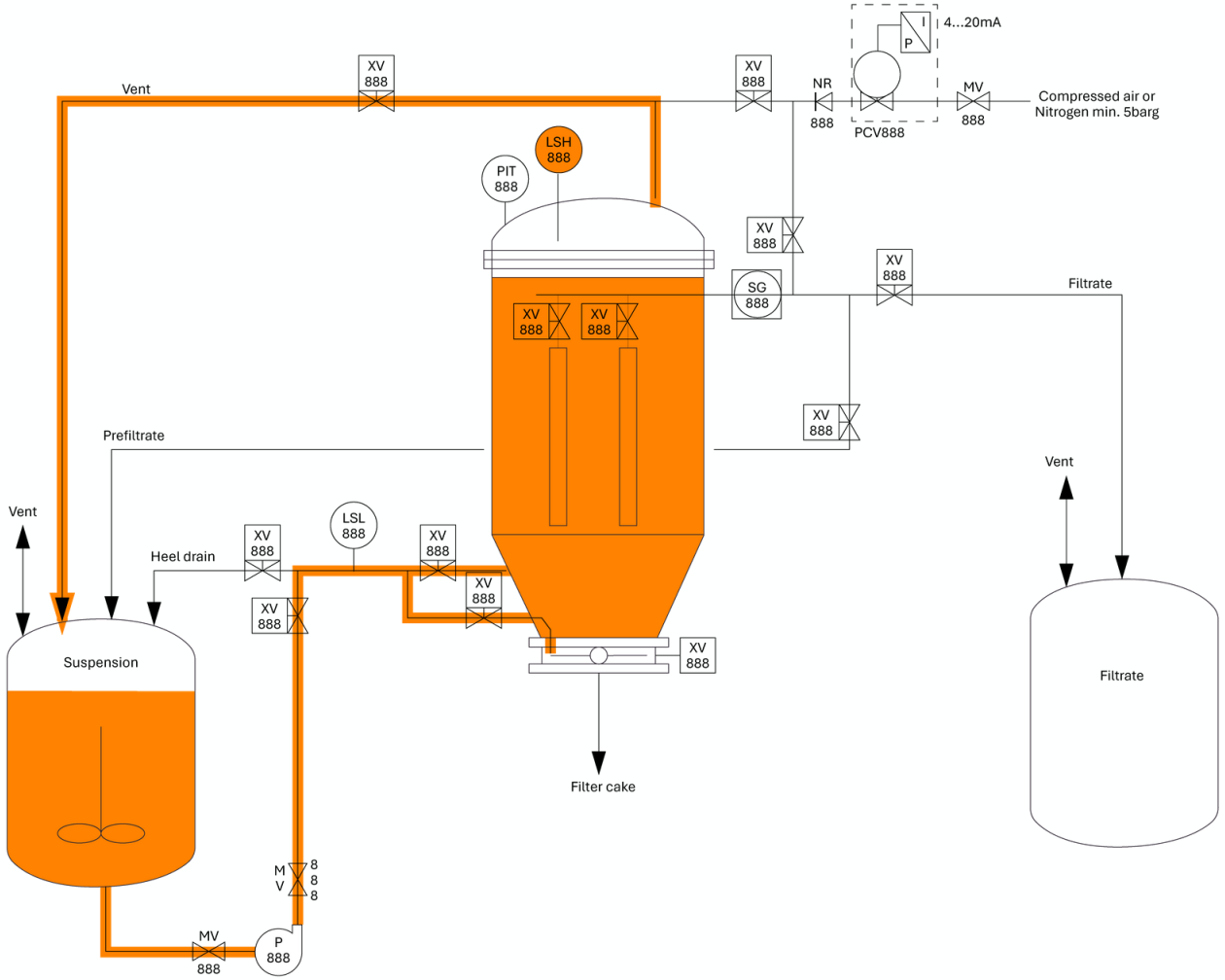
05 Drain

06 Cake Drying

07 Cake discharge by gas blow-back

Basic Process Steps

Fully automatic cycle



01 Filter Filling

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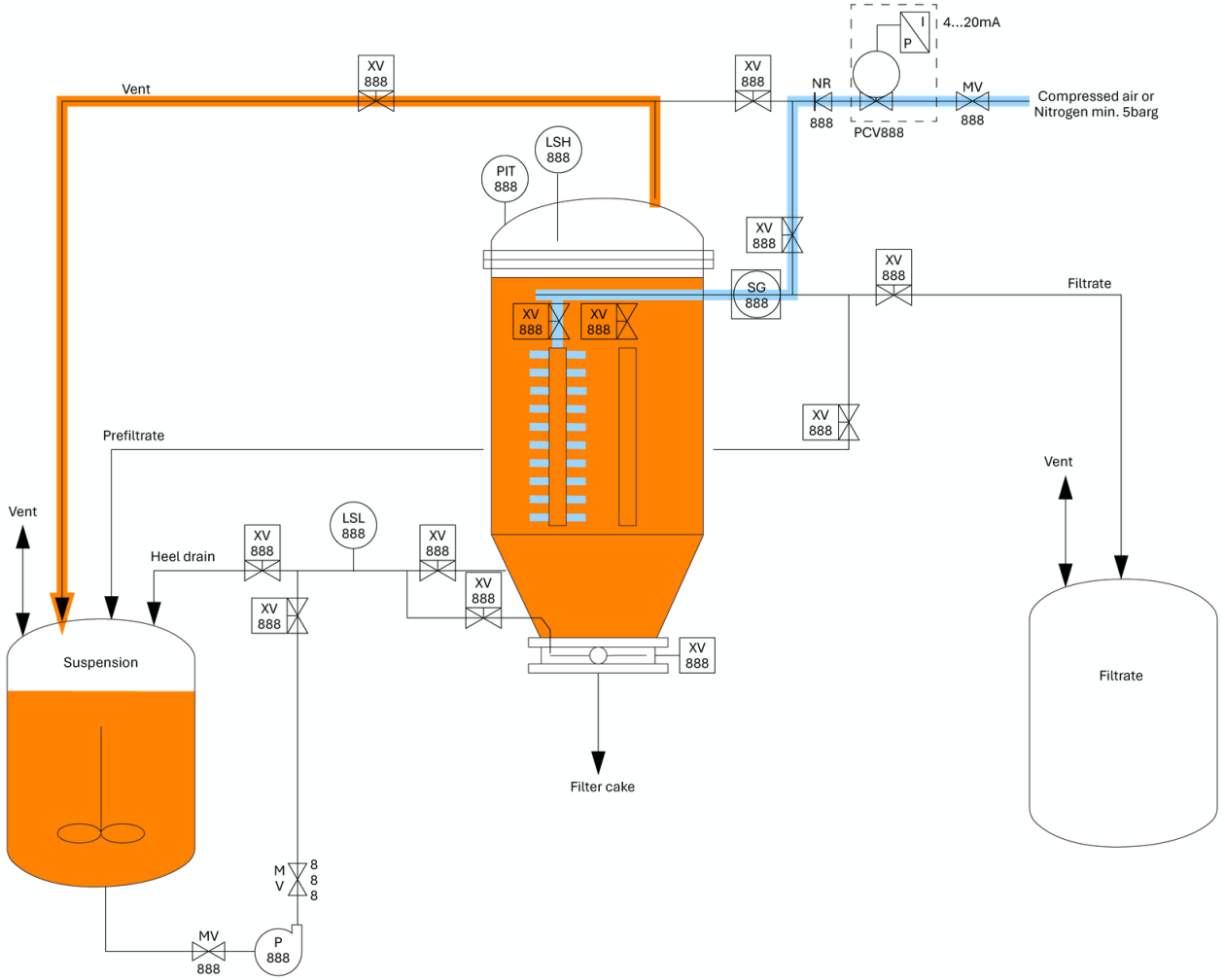
Basic Process Steps

Fully automatic cycle



02 Cloths Cleaning

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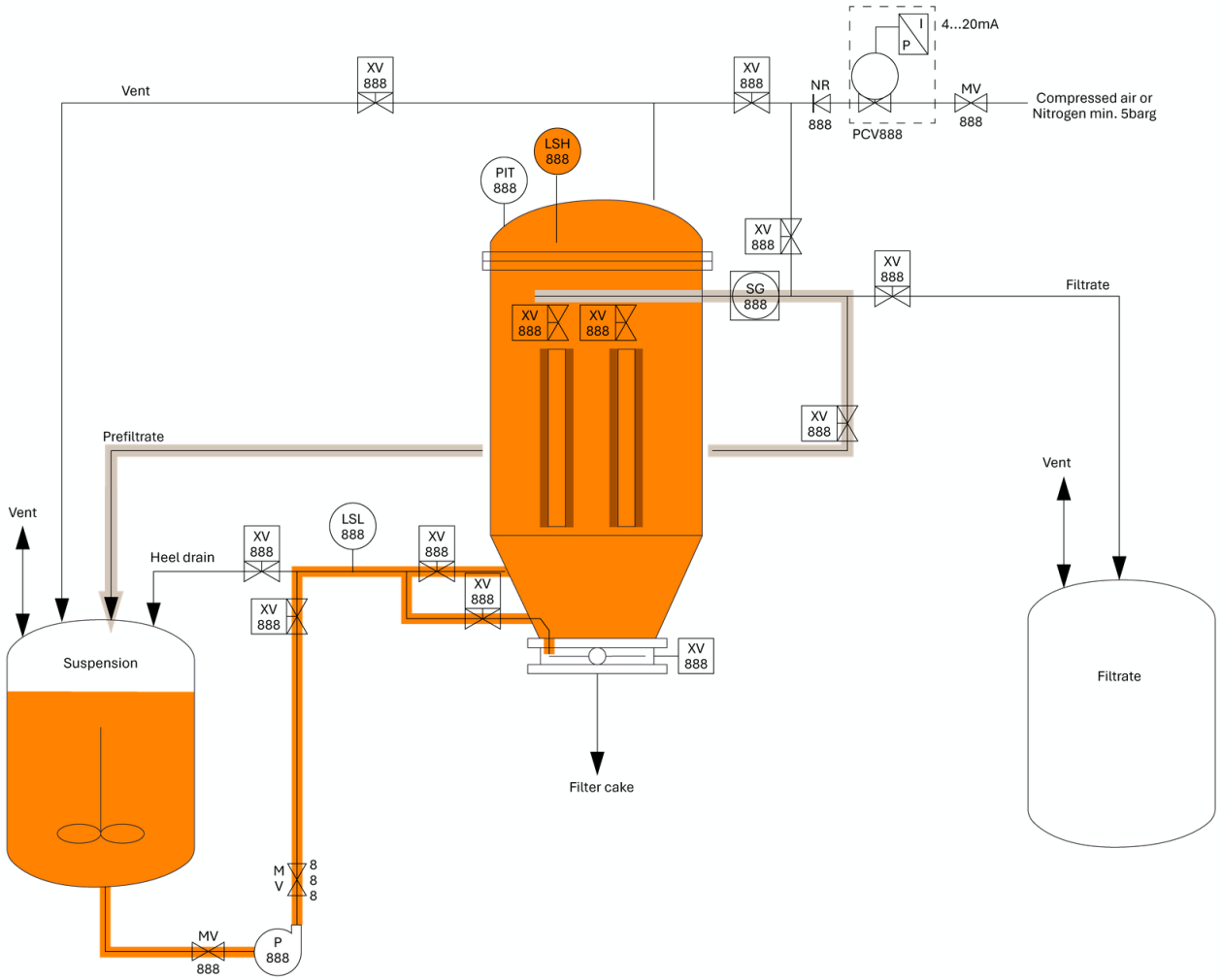
Basic Process Steps

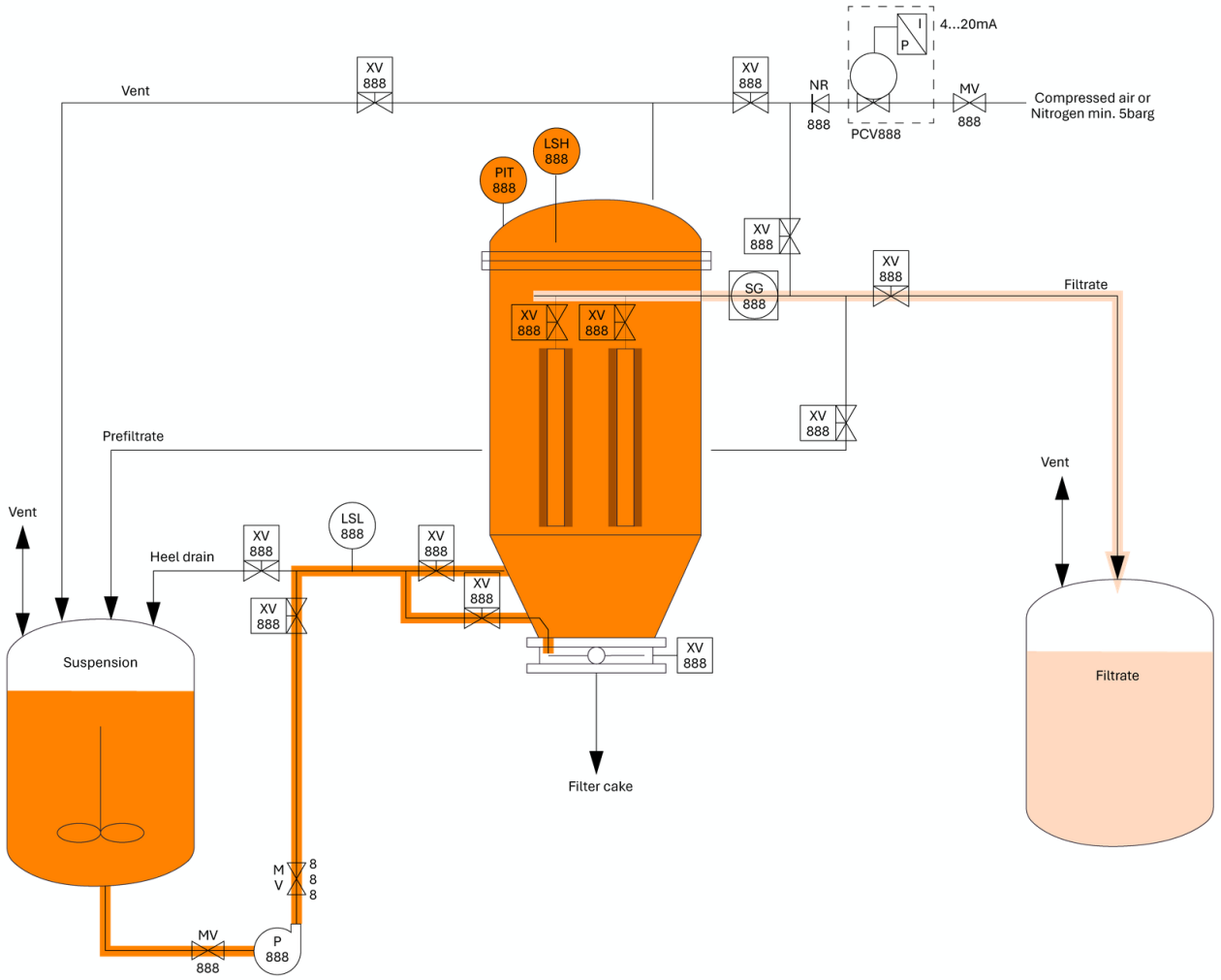
Fully automatic cycle



03 Pre- Filtration

Basic Process Steps

Fully automatic cycle



04 Filtration

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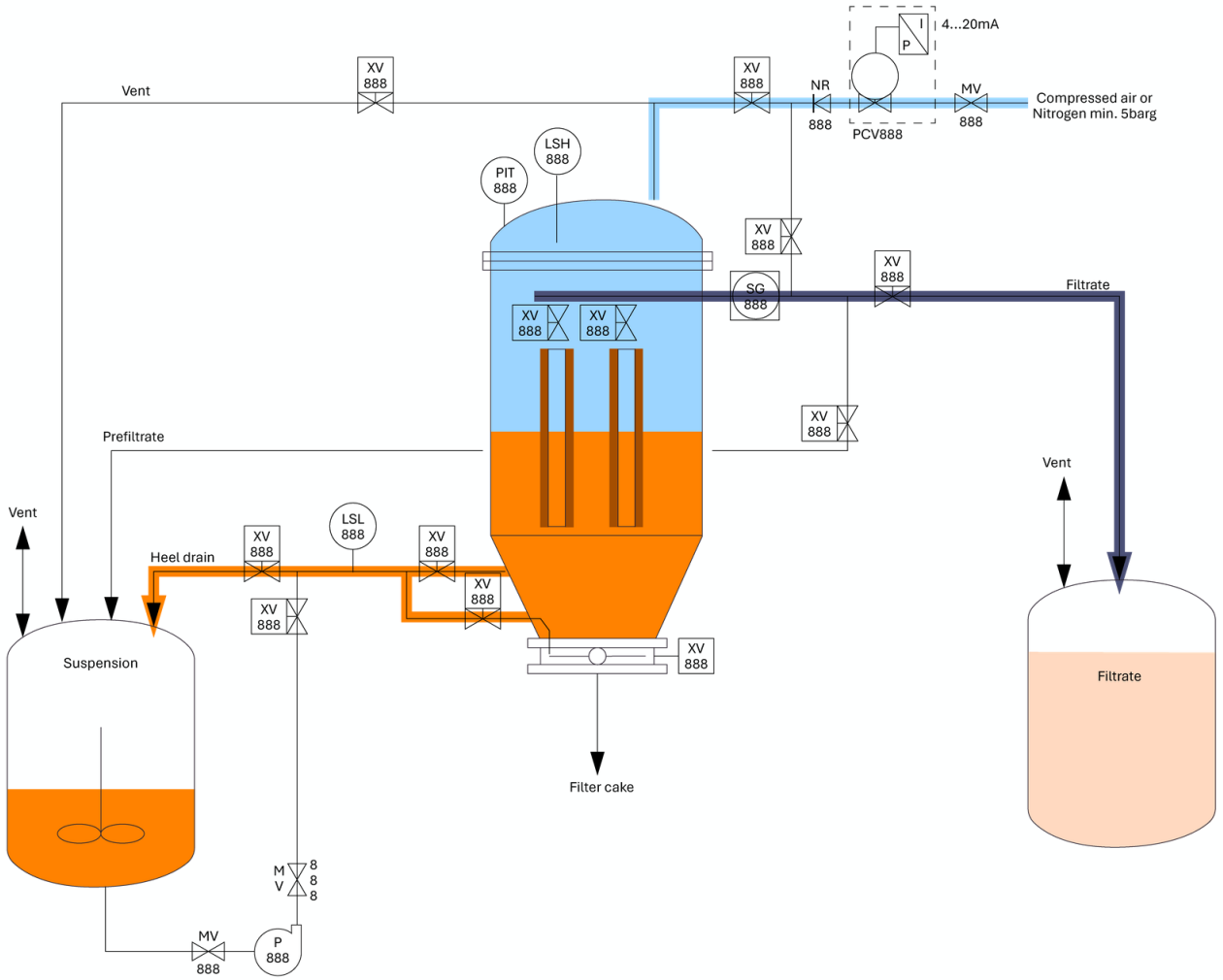
Basic Process Steps

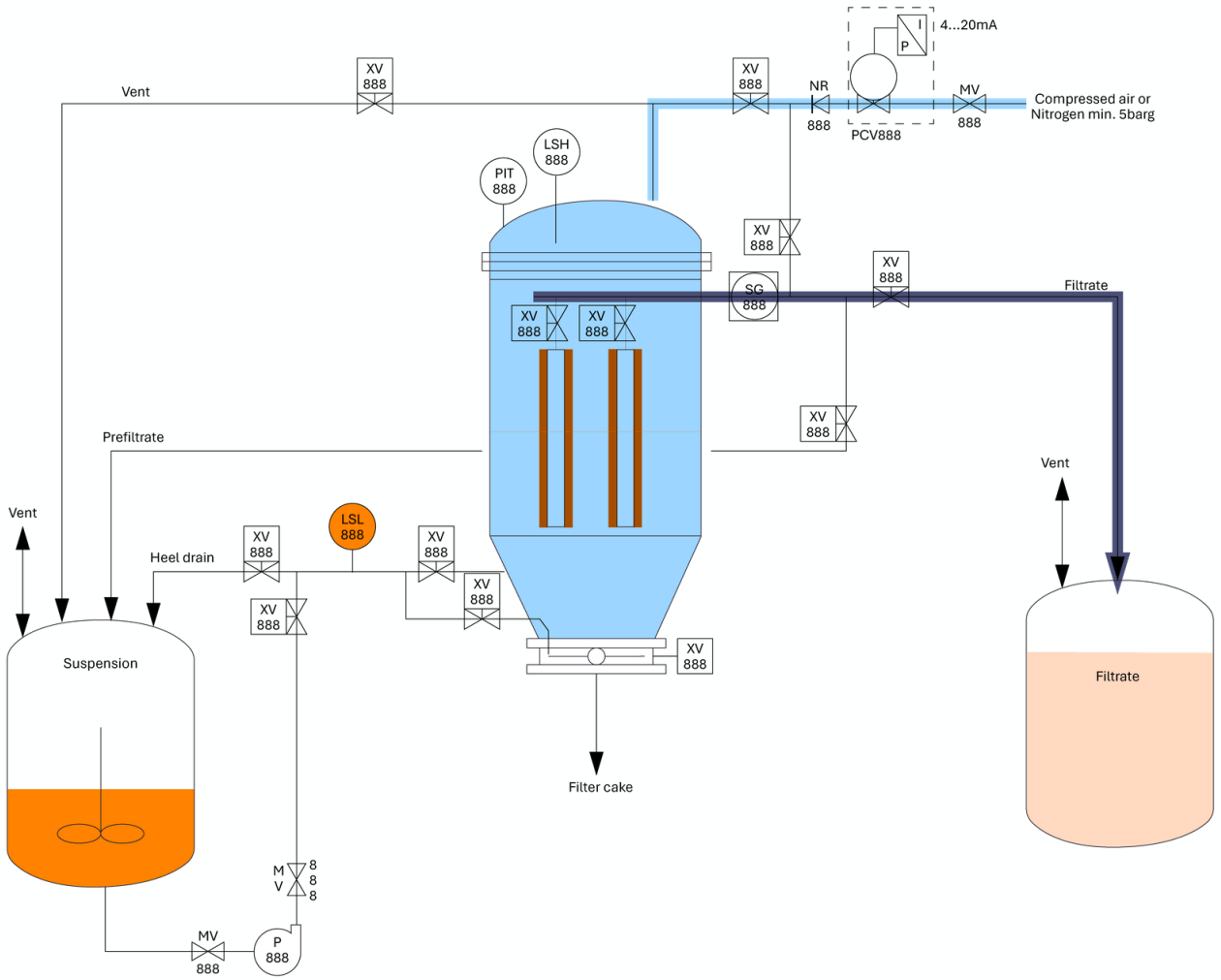
Fully automatic cycle



05 Drain

Basic Process Steps

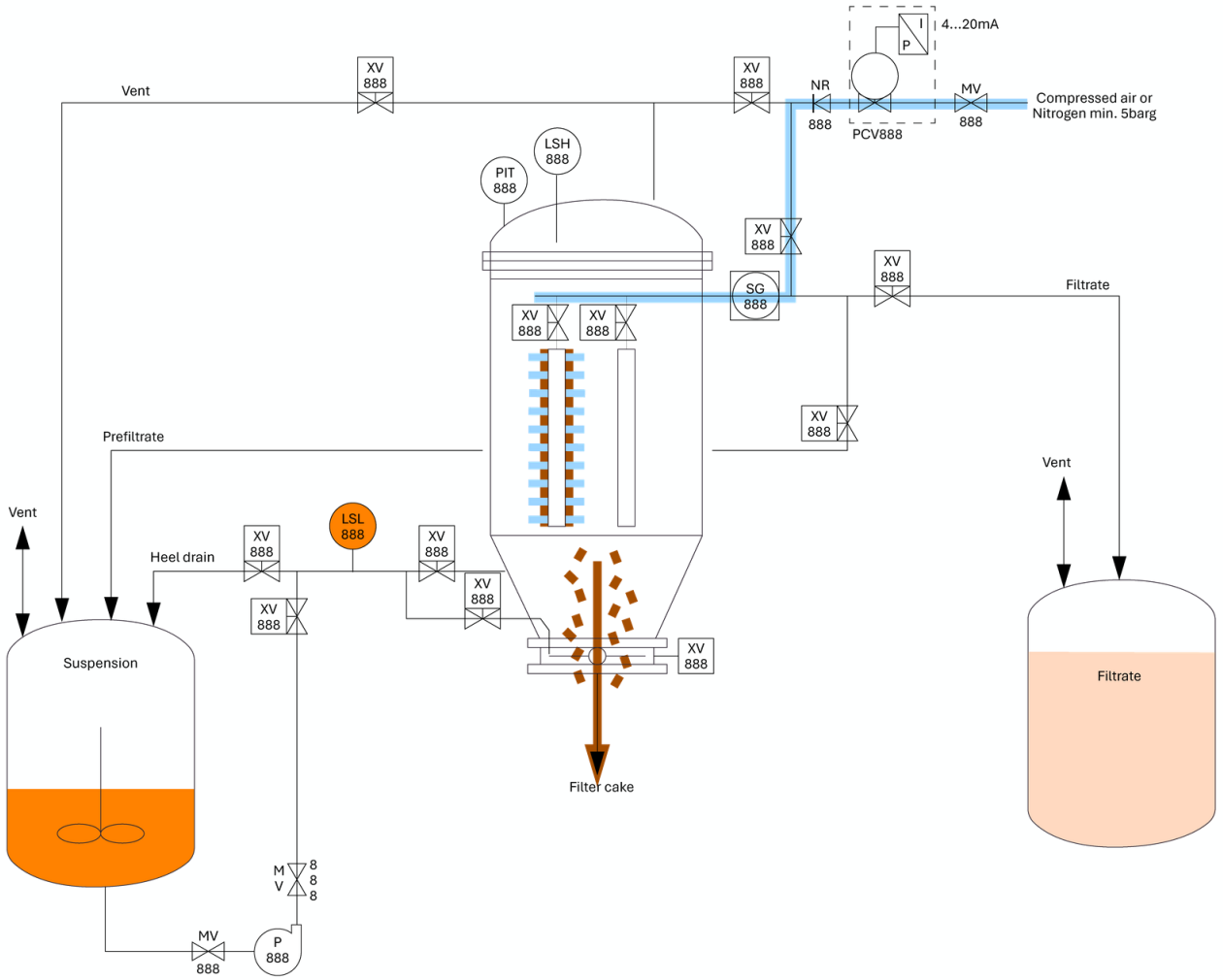
Fully automatic cycle



06 Cake Drying

Basic Process Steps

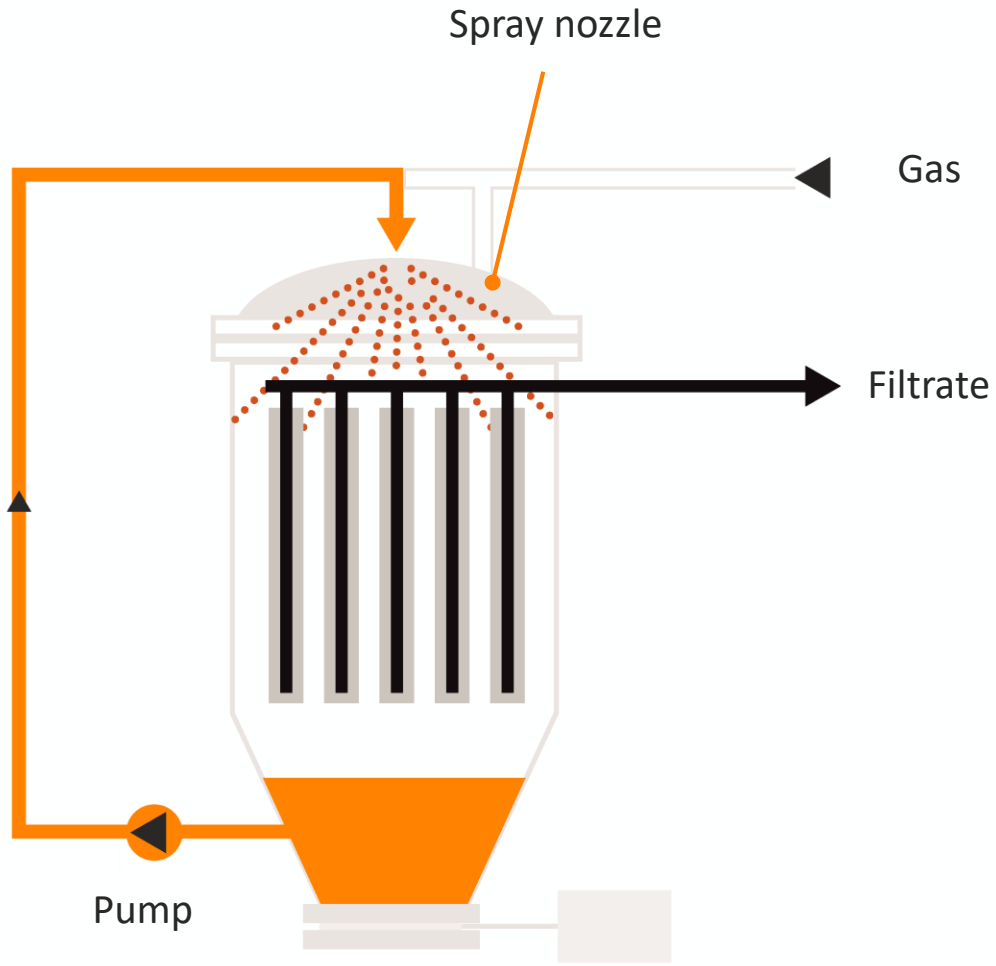
Fully automatic cycle



07 Cake Discharge

Heel Volume Filtration

Elimination of liquid heel



- Recirculation of liquid with pump
- Spraying the liquid on filter top through spray nozzles
- Use of pressurized gas as driving force for filtration

Increases yield (less product loss)

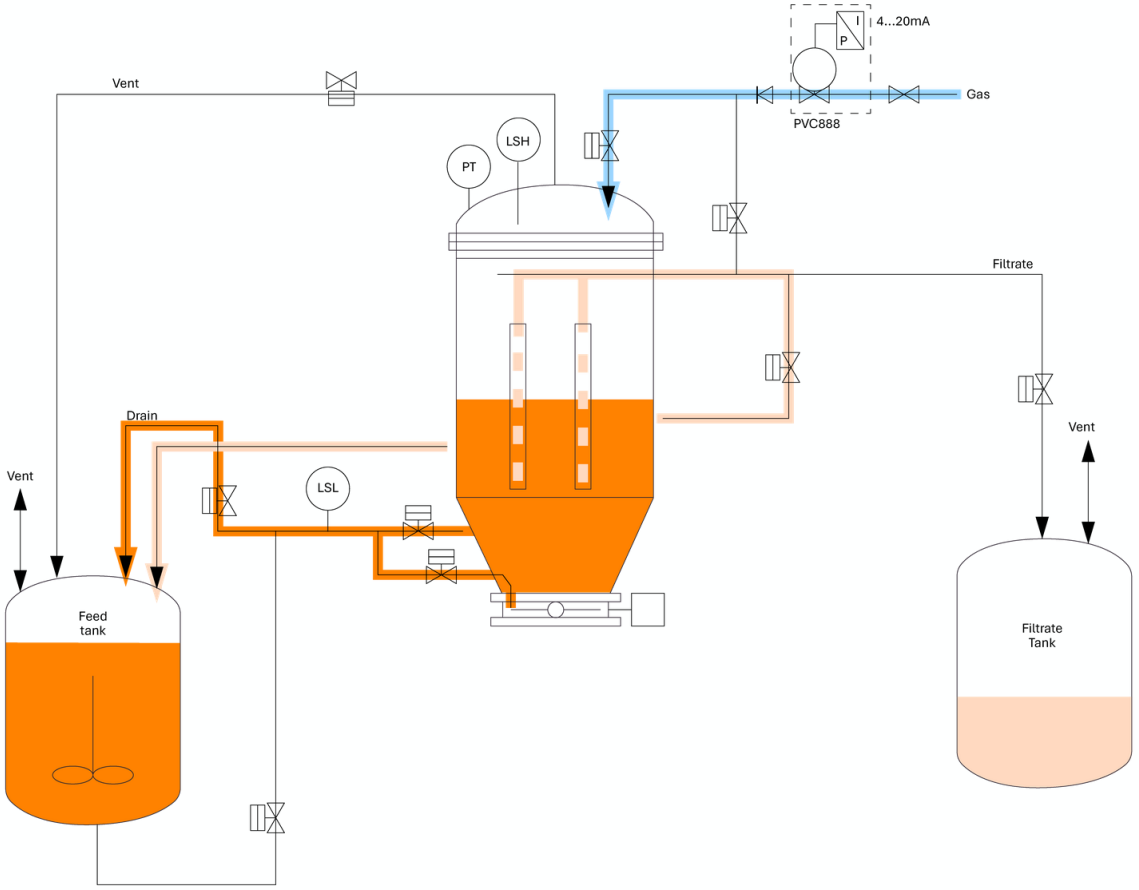
Reduces waste volume and environmental load

Facilitates batch integrity

Improves cost-efficiency

Heel Volume Filtration

Elimination of liquid heel



01

DRAINING TO FEED TANK

Most commonly used when batch integrity is not a need.

Emptying time ~5 minutes.

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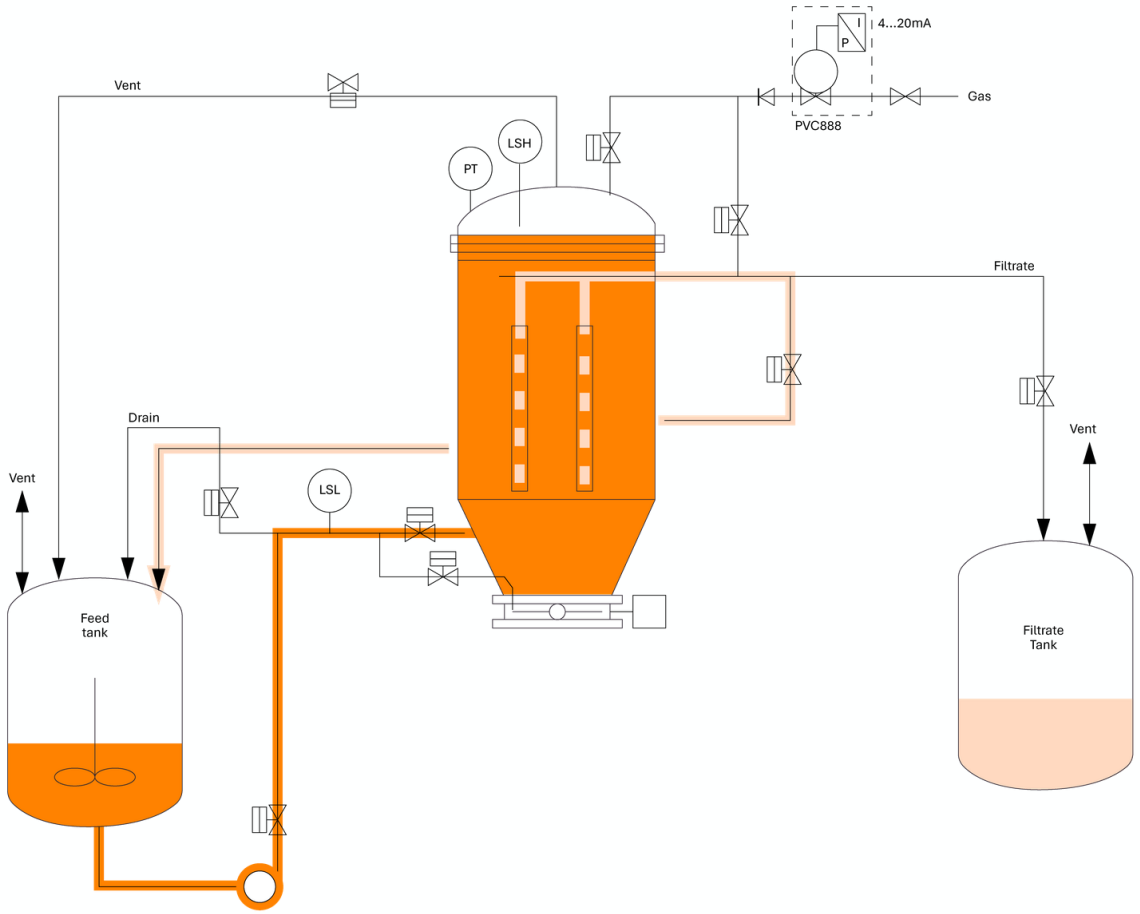
Heel Volume Filtration

Elimination of liquid heel



02

RECIRCULATION TO FEED TANK

Each recycled volume, suspended solids are reduced to ~1/e (~36.8%).

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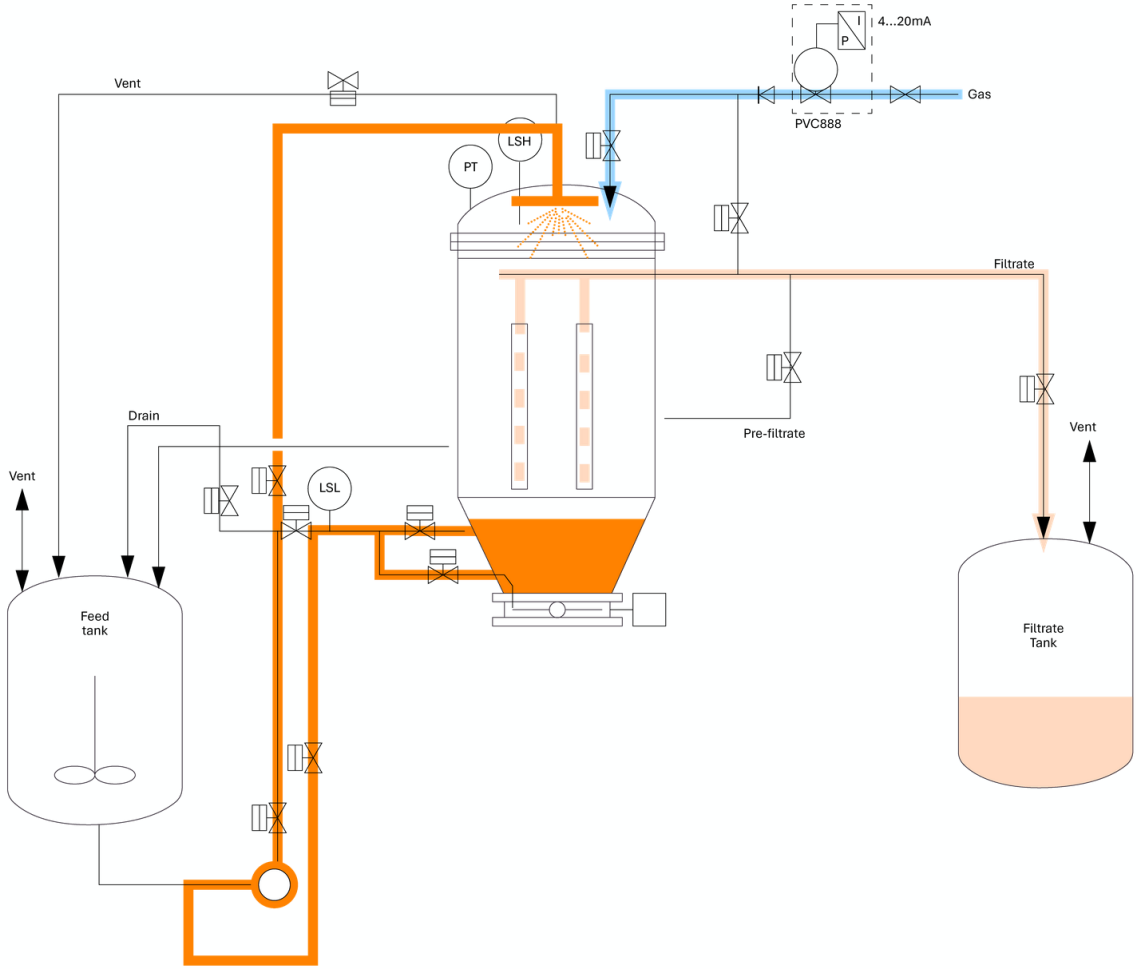
Heel Volume Filtration

Elimination of liquid heel



03

HEEL VOLUME FILTRATION (HVF®)

Additional hardware needed Batch integrity.

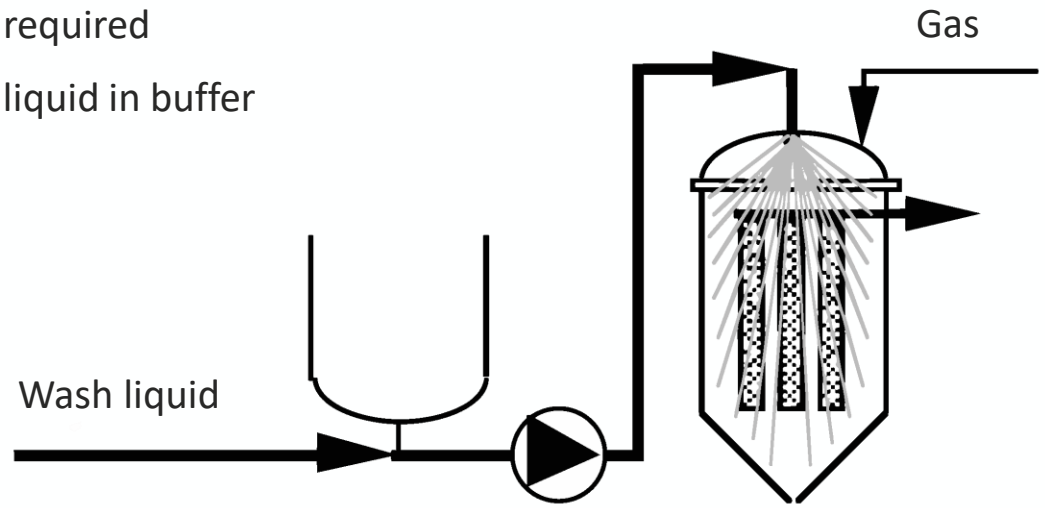
Duration dependent on suspension filterability, typically from 20 to 90 minutes.

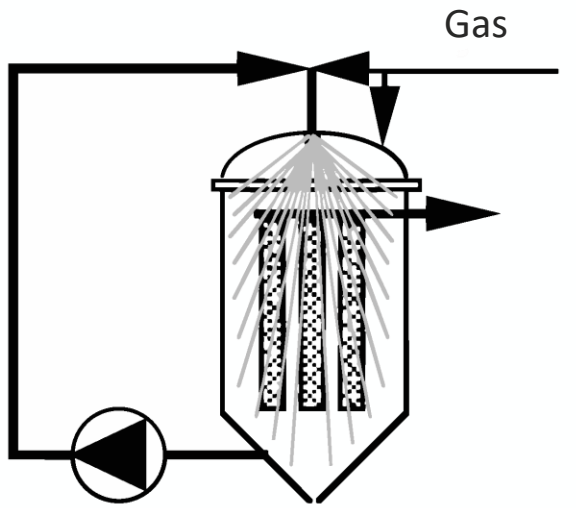
Moderate gas consumption.

Spray Washing

ADVANTAGES COMPARED TO DISPLACEMENT WASHING ARE:

- Less wash liquid consumption
- No wash liquid buffer tank required
- No contamination of wash liquid in buffer
- Shorter cycle time





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Link: here

Cake Discharge – Demo Unit

Link: here

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More than 4,100 filter installations
in operation worldwide

05
Filter Highlights

FUNDABAC® Highlight:
Automatic dry cake discharge

The unique features of the FUNDABAC® result in significant process improvements and in reduction of operating and maintenance cost.

The main features and advantages can be summarized as follows:

- The solid content of the discharged cake can be as high as 70-80%.
- This results in reduced waste generation and simpler disposal procedures.
- Dry cake discharge is a unique design feature of the FUNDABAC® filter.

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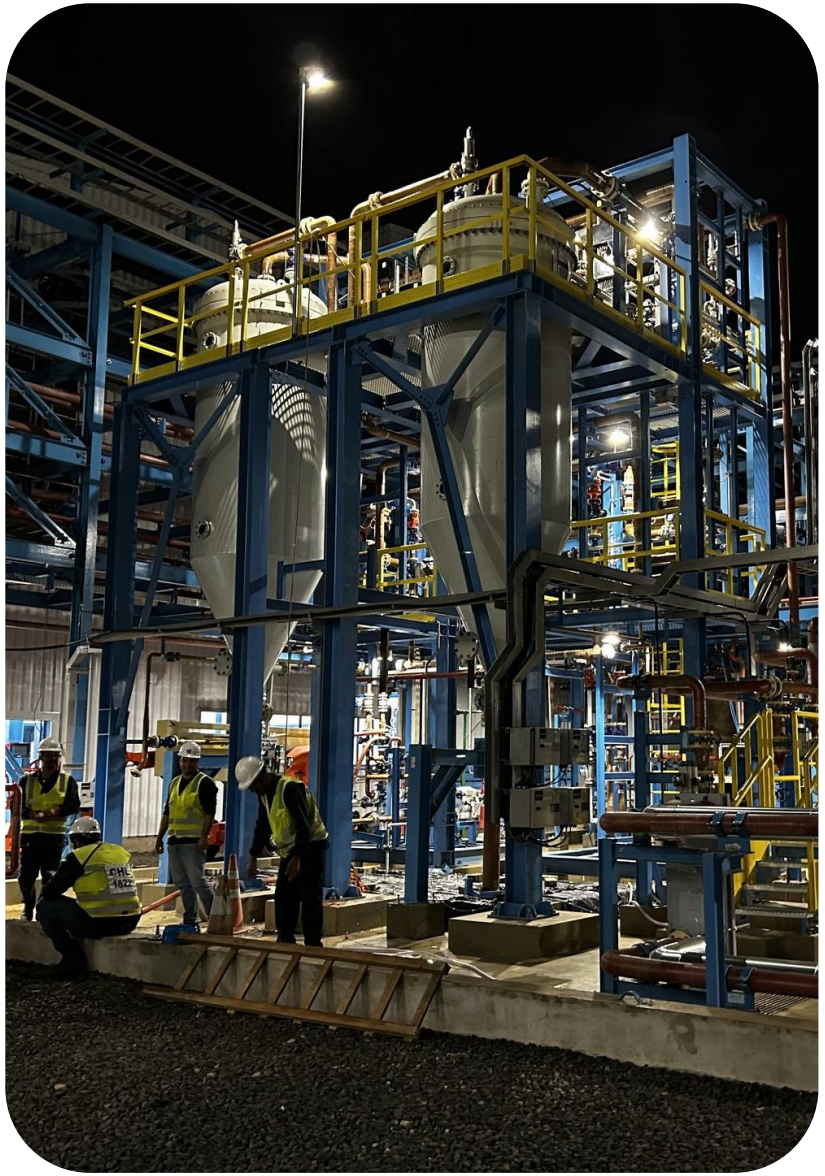

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