



FLUX LAF

Next Generation Large Area Continuous Polymer Filter

FLUX large-area candle polymer filters redefine what processors can expect from melt filtration, combining compact hardware with high-throughput performance for demanding polyolefin and recycling lines. With a flexible, customisable architecture, each system integrates easily into OEM machinery and complex industrial projects, reducing engineering friction and time to market. By focusing on pure functionality and resilience, FLUX delivers a minimalist, service-friendly filter body that is simpler to operate, maintain and scale. The result is a new generation of polymer filtration that is significantly smaller, lighter and less chemical-intensive than conventional systems, delivering tangible productivity and sustainability gains per tonne of material processed.

Your Benefits

- Continuous operation.
- Simplest – most effective – most compact filter design.
- Plug-in start up. Easy to use. Easy to operate. Easy to change.
- Zero dead spots. No degradation risk.
- Shortest material residence time.
- Revolutionary valve design,. Lowered pressure loss.
- Modular. Inlet, outlet, valve positions all configurable.
- The best heating uniformity ($\pm 2^{\circ}\text{C}$), no external heater.
- All round heat insulation. Lowest energy loss.

TECHNOLOGY

CFD PRECISION ENGINEERING

Zero Death Zone - Shortest Flow Path

Advanced CFD analysis eliminates flow disruptions, stagnation points, and residence time issues. Every path is mathematically perfected for plug-flow uniformity – minimizing shear degradation, preventing carbonization.

GENUINE VALVE REVOLUTION

Quick Switchover · Zero Leaks

Patented rheology-optimized valves with zero-dead-spot design execute vessel transitions lightning-fast without pressure spikes, leaks, or production interruptions. True continuous operation – no line stops, no scrap.

ULTRA-COMPACT POWERHOUSE

48% Smaller · 39% Lighter

Engineered to occupy 48% less floor space than competitors while delivering identical throughput. 39% lighter construction cuts foundation costs. More production lines per square meter. Lower CAPEX.

FULLY MODULAR

Configurable adaptor/valve positions

Inlet, outlet, valve positions all configurable. True modularity lets us design inlet-outlet or valves in any direction you want seamlessly—or upsize/downsize for specialty runs.

MONOLITHIC OIL HEATING

$\pm 2^\circ\text{C}$ Uniformity · No External Heater

Fully integrated oil-jacketed heating system in a single monolithic body. Proprietary booster heaters deliver fastest heat ramp-up in the segment. 44% less chemical fluid versus conventional systems.

360° ENERGY SHIELD

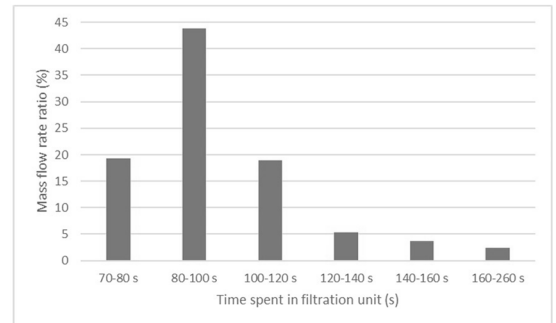
Built-in Insulation · Zero Heat Loss

Complete all-round insulation eliminates heat loss from every surface, pipe, and flange. No cold bridges. No temperature gradients. Meets strictest energy regulations. Lower OPEX. Smaller carbon footprint.

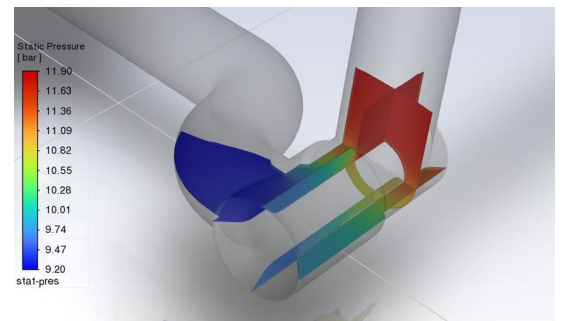
SMART AUTOMATION

Touch HMI · IIoT-Ready · OPC-UA

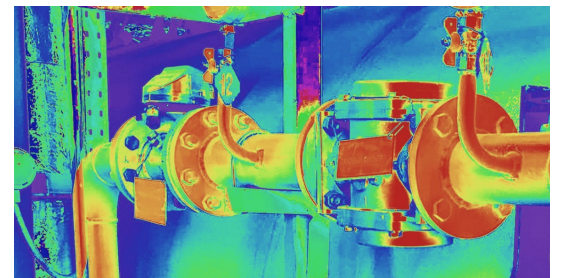
Real-time ΔP monitoring with automatic switchover triggers. Predictive alerts. One-button HMI operation sequences. OPC-UA, Modbus, Ethernet/IP for DCS/SCADA integration. Advanced recipe management module.



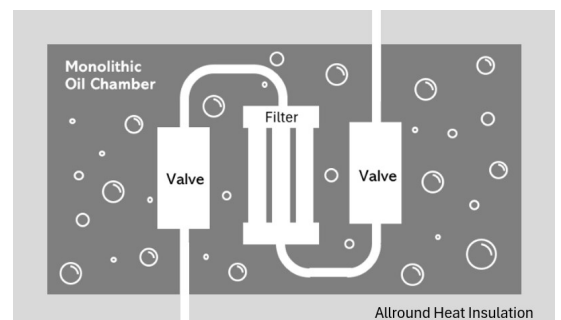
Mass flow distribution of time spent in filtration unit.



CFD analysis of unique valve design.



Typical sector valve thermal non-uniformity



FLUX's Monolithic Oil Chamber Technology

Uniform Heat Distribution

SECTORS

FLUX LAF candle filter systems are engineered to protect product quality, maximize uptime, and reduce waste across the entire plastics value chain – from virgin resin polymerization at multi-thousand-ton scale, to compounding high-performance engineering plastics, spinning fine-denier fibers, and converting post-consumer waste into premium pellets. Filtration is not just a safeguard; it is a critical process step.



POLYMERIZATION

Removal of catalyst fines, gels, and char; prevention of spinneret clogging in fiber lines; extended run-lengths between reactor clean-outs.

Typical Polymers:
PET, PBT, PA6/66, PP, PC

Contaminants:
Catalyst fines, oligomers, gels

Filtration: 5–25 µm



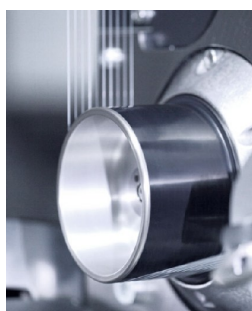
COMPOUNDING

Stable head pressure; reduced gel counts; ability to process high-fill formulations without frequent screen changes.

Typical Polymers:
MB, GF Nylon, FR, TPE/V

Contaminants:
Agglomerates, unmixed additives

Filtration: 10–100 µm



TEXTILE

Drastic reduction in spinneret blockages; fewer thread breaks; improved tensile strength and dye uniformity in finished fibers.

Typical Polymers:
PET POY/FDY, PA6/66, PP BCF

Contaminants:
Gels, particles, degraded resin

Filtration: 1–20 µm



FILM

Elimination of die lines and gels; higher line speeds; reduced scrap rates in critical applications like food packaging and lithium-ion battery separators.

Typical Polymers:
BOPET, BOPP, LDPE/LLDPE, EVOH

Contaminants:
Gels, fish-eyes, foreign particles

Filtration: 5–20 µm



RECYCLING

Continuous operation despite high contaminant loads; reduced melt pressure spikes; higher quality flake-to-pellet conversion.

Typical Polymers:
rPET bottles, rPP/PE, agri film

Contaminants:
Mixed solids, metals, fibres

Filtration: 5–100 µm

SPECIFICATIONS

LAF Type	Filter Size	Capacity PET	Capacity Polyolefin
125	2 x 1.25 [m ²]	115 [kg/h]	80 [kg/h]
300	2 x 3.00 [m ²]	280 [kg/h]	195 [kg/h]
550	2 x 5.50 [m ²]	530 [kg/h]	370 [kg/h]
850	2 x 8.50 [m ²]	850 [kg/h]	600 [kg/h]
1200	2 x 12.00 [m ²]	1250 [kg/h]	875 [kg/h]
1700	2 x 17.00 [m ²]	1850 [kg/h]	1300 [kg/h]
2500	2 x 25.00 [m ²]	2850 [kg/h]	2000 [kg/h]
3500	2 x 35.00 [m ²]	4150 [kg/h]	2900 [kg/h]
5000	2 x 50.00 [m ²]	6200 [kg/h]	4350 [kg/h]

Spec	Value
Filtration Range	1 – 100 [µm]
Safety Pressure	300 [bar]
Max Operating Pressure	250 [bar]
Max Differential Pressure	100 [bar]
Initial Pressure Drop	10 [bar]
Max Operating Temperature	310 [°C] (590 °F)
Oil Pressure	1 [Atm]
Valve Switchover	< 30 [sec]
Filter Change	< 5 [min]
Max Viscosity	50000 [cPoise]
Filter Media	Sintered fiber / wiremesh
Temperature Uniformity	±2 [°C] across all zones

WHAT DIFFER FLUX FROM OTHERS

ENGINEERING COMMUNICATION

FLUX is committed to delivering exactly what you need, every time. Its flexible, customizable architecture integrates seamlessly with your processes and technology to scale projects faster, shorten time to market, and secure a decisive competitive edge. At the same time, FLUX reinforces engineering communication: using the same technical language, with shared understanding and values, makes collaboration with engineering companies smoother and less error-prone. The result is clear satisfaction.

SIMPLICITY & FUNCTIONALITY

FLUX strips away the superfluous to reveal pure purpose. No flourishes, no extravagance, no redundant detail—only functionality and resilience that serve the process with clarity. Rooted in the “less is more” principle, FLUX uses the power of simplicity to focus resources on what is truly necessary, cutting failure points and operating cost. Guided by disciplined engineering, it stands as a minimalist manifesto where streamlined design saves money, reduces surprises, and keeps the process running in its most effective form.

CHALLENGING VALUE

FLUX’s value promise is straightforward: cutting-edge filtration technology at a highly competitive, guaranteed price. It provides the solution you need in the simplest, most effective form, avoiding unnecessary features, complexity, and hidden cost. By focusing on clear performance, transparent pricing, and dependable long-term results, FLUX turns value into a concrete engineering parameter rather than a slogan—this sharp clarity is what makes FLUX so bold, confident, and easy to choose.

FLUX SERVICES

FREE CONSULTATION

You have specific needs or questions about to purify your polymer process? Fill the form to get free consultation about your unique process demands,

www.filter-flux.com/request-a-quote

Or contact our team,

www.filter-flux.com/contact

Or mail us directly,

info@filter-flux.com

We typically provide a preliminary layout and budgetary quote within 48 hours.

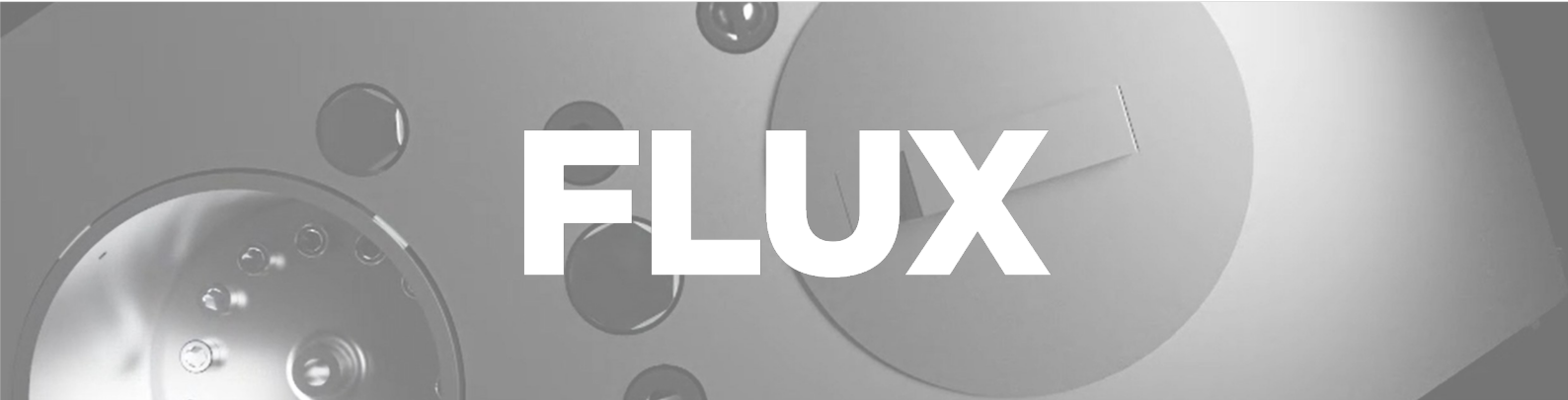
AFTERSALES SUPPORT

- Installation supervision
- Start-up & commissioning
- Operator training & HMI
- Performance optimization
- Test – trial
- Onsite service needs
- Spare parts requests
- IIoT / remote diagnostics

Mail us directly,

aftersales@filter-flux.com

We will be in contact in the next 24 hours.



FLUX