

Unload-f™



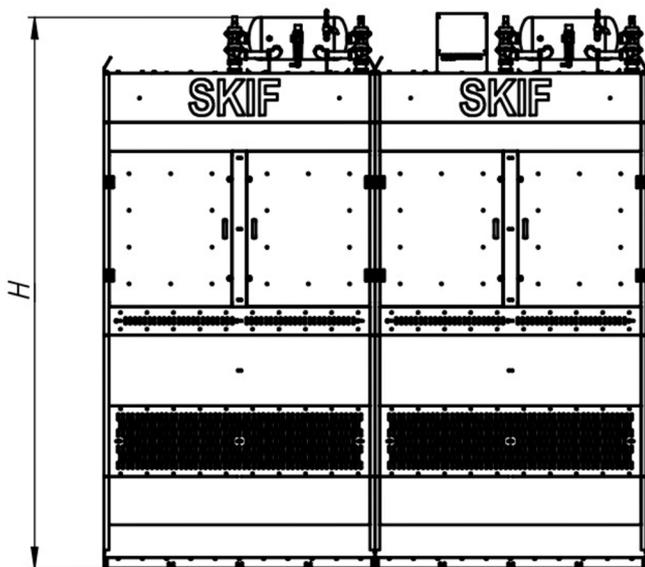
- SKIF Unload-F™ is a localized aspiration filter designed for unloading, receiving and transfer points with intensive dust generation.
- The system captures dust directly at the discharge zone, preventing its spread into the working environment and minimizing emissions to the atmosphere.
- SKIF Unload-F™ is engineered for operation under variable and peak air loads typical for grain intake, mineral and chemical bulk material handling.
- The filtration process ensures full return of captured dust back into the technological flow, eliminating product losses and maintaining material balance.
- Optimized aerodynamics and filtration parameters provide stable performance, low pressure losses and reduced energy consumption even under fluctuating operational conditions.
- The system is fully compliant with current EU directives on machinery safety, explosion protection and industrial emissions, including IED 2.0 – Directive (EU) 2024/1785.

Typical configuration and dimensional layout of SKIF Unload-F™ for unloading and receiving zones.

Compliance with EU directives:

- 2006/42/EC – Machinery Directive
- 2014/35/EU – Low Voltage Directive
- EN ISO 13849 – Functional Safety
- 2014/34/EU (ATEX) – Explosion Protection
- Active and passive explosion suppression systems

Parameter	Standard value	Optional / On request	Notes
Filtration area	18–30 m ²	—	Model dependent (Unload-f 3500-5000)
Residual dust level at outlet	≤ 5 mg/m ³	10 / 15 / 20 mg/m ³	Depending on dust characteristics
Dust type / material	Grain, wood, mineral dusts	Aggressive / food-grade	Specified per project
Execution	Standard	ATEX Category	Directive 2014/34/EU



Engineering notes:

- Designed for localized dust extraction at receiving hoppers
- Suitable for high-intensity unloading operations
- Integrated regeneration system ensures continuous filtration and product recovery
- Optimized for stable pressure drop and energy-efficient operation

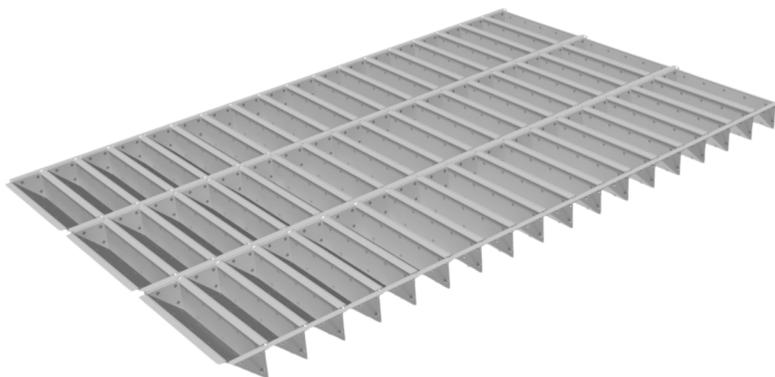
Centrifugal fans tailored for SKIF Unload-F™ localized hopper filtration systems

Depending on the required airflow rate, pressure, and dust characteristics, the selection of the centrifugal fan is adapted to the specific needs of your application.



Parameter	Value	Notes
Fan type	Centrifugal	Integrated or remote configuration
Typical airflow range	Model-dependent	Based on filtration area and velocity
Pressure class	Low to medium	Designed for hopper dust extraction
Execution	Standard / ATEX	Directive 2014/34/EU
Application	Grain, wood, mineral dust	Specified per project

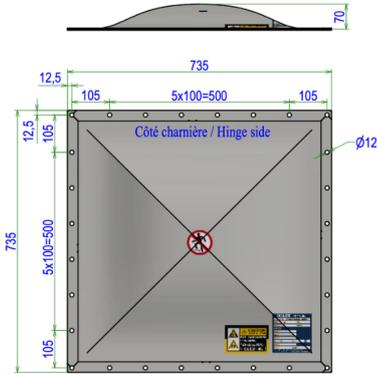
To further increase aspiration efficiency and reduce uncontrolled air ingress, SKIF systems can be equipped with localized dust suppression elements.



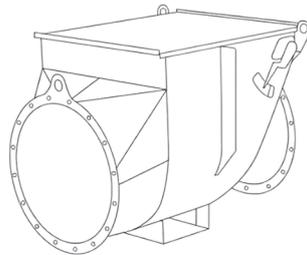
SKIF Flex-Flap

- Reduces uncontrolled air ingress
- Stabilizes aspiration performance
- Decreases required airflow volume
- Lowers fan load and energy consumption

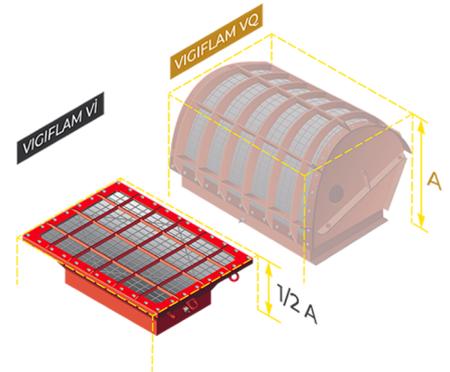
Explosion Safety Solutions Integrated into SKIF Aspiration Systems
 Integrated explosion protection solutions for enhanced safety and ATEX compliance.



Explosion Vent Panels



Explosion Isolation Valves



Flameless Venting Device

- Designed for controlled explosion pressure relief in accordance with EN 14491, suitable for dust applications up to St 3.
- Provides mechanical isolation of explosion propagation in duct systems for dust explosions up to Kst 250 bar-m/s.
- Enables indoor explosion venting with integrated flame arresting technology for safe pressure release without external flame discharge.

