

ON-LINE SIFTER

CONTINUOUS FLOUR SCREENING & PURIFICATION SYSTEM / 在线面粉连续筛分净化系统

BEIJING WINTEC MACHINERY

PRECISION ENGINEERING • FOOD SAFETY • AUTOMATION



This high-performance on-line sifter provides real-time flour purification and particle classification directly within production workflows. Engineered for continuous operation, this system protects downstream equipment, ensures product consistency, and maintains superior flour quality.

这款高性能在线筛粉机提供实时面粉净化和粒径分级。专为连续作业设计，系统在不中断生产流的情况下，通过去除污染物和标准化粒径分布，保护下游设备并确保产品一致性，维持卓越的面粉质量。

FOOD SAFETY COMPLIANT

24/7 OPERATION

KEY FUNCTIONS (1-3)

核心功能 (1-3)

1. Impurity Removal

杂质去除

- Foreign Material Elimination:** Removes sand, stones, metal chips, wood.
异物消除：移除砂石、金属屑、木屑等硬质污染物。
- Fiber Separation:** Captures string, packaging materials, and debris.
纤维分离：捕获绳索、包装材料和纤维碎屑。
- Metal Detection Compatible:** Works with magnetic separators.
兼容金属检测：与磁性分离器配合使用提供全面保护。
- Protects Product Integrity:** Prevents contamination before processing.
保护产品完整性：在进入关键加工阶段前防止污染。

2. Particle Size Classification

粒径分级

- Coarse-Fine Separation:** Screens flour into uniform size ranges.
粗细分离：将面粉筛分为均匀的粒径范围。
- Consistent Gradation:** Ensures predictable dough hydration.
一致级配：确保可预测的面团水合和混合特性。
- Removes Oversized Particles:** Eliminates agglomerates.
去除超大颗粒：消除团聚物和未加工材料。
- Optimizes Baking:** Uniform particle size improves water absorption.
优化烘焙性能：均匀粒径提高吸水率和面团发育。

3. Agglomerate Breaking

结块破碎

- Cake Dispersion:** Separates clumped and compacted flour masses.
粉饼分散：分离结块和压实的面粉团。
- Free-Flowing:** Restores flowability for accurate metering.
恢复流动：恢复面粉流动性，以便准确计量和混合。
- Prevents Lumps:** Eliminates mixing inconsistencies and defects.
防止结块：消除导致混合不均和面团缺陷的结块。
- Humidity Recovery:** Breaks flour that absorbed moisture.
湿度恢复：打破储存期间吸收水分的面粉。

TECHNICAL FEATURES

技术特点

Screening Technology / 筛分技术

High-Efficiency Mesh (micron sizes); Self-Cleaning Action (vibratory/centrifugal); Quick-Change tool-free screens; Sanitary Food-grade construction. (高效微米级筛网；自清洁设计；无需工具快速换网；食品级卫生结构。)

Mechanical & Control / 机械与控制

Vibration Isolation; Heavy-Duty Industrial Motors; Dust-tight sealed housing; Easy Access for cleaning; PLC Integration & Condition Alerts. (隔振安装；重载电机；防尘密封；易于清洁；支持PLC自动化控制。)

SYSTEM INTEGRATION

系统集成

Upstream/上游: Silo discharge, Pneumatic lines, Bulk bag unloaders, Bag dump stations. (筒仓卸料、气动线、拆包站。)
Downstream/下游: Scale hoppers, Mixers, Metering, Secondary packaging. (称重料斗、搅拌机、计量系统。)
Complementary/配套: Magnetic separators & Metal detectors. (磁选器与金属探测器。)

SAFETY & COMPLIANCE

安全与合规

FDA 21 CFR, USDA Sanitary, HACCP CCP capable, BRC/IFS ready, Explosion-proof Class II, Dust

KEY FUNCTIONS (4-6)

核心功能 (4-6)

4. Equipment Protection

设备保护

- Downstream Safeguarding:** Prevents damage to mixers & pumps.
下游机器防护：防止损坏搅拌机、泵和加工设备。
- Reduces Wear:** Removes abrasive particles (accelerated wear).
减少机械磨损：去除加速部件降解的磨性颗粒。
- Extends Life:** Minimizes maintenance & replacement costs.
延长寿命：最大限度减少维护频率和更换成本。
- Prevents Line Stoppages:** Eliminates object blockages.
防止停机：消除异物或超大颗粒造成的生产线堵塞。

5. Quality Enhancement

质量提升

- Superior Purity:** Delivers clean, contaminant-free flour.
卓越纯度：向生产线输送持续清洁、无污染的面粉。
- Optimized Final Product:** Better end-product characteristics.
优化最终产品：提高面粉质量直接转化为更好的产品。
- Consistent Batch Quality:** Eliminates batch-to-batch variation.
一致批次：消除由杂质引起的批次间质量差异。
- Brand Protection:** Prevents recalls and material complaints.
品牌保护：防止异物投诉和产品召回风险。

6. Continuous Operation

连续运行

- In-Line Integration:** Installed directly in conveying lines.
在线集成：直接安装在输送线上，无需中断生产。
- Continuous Screening:** Processes as it flows (no batch delays).
连续筛分：在面粉流动时实时处理，无批次延迟。
- High Throughput:** Maintains production line speeds.
高吞吐量：保持生产线原有速度，不形成瓶颈。
- 24/7 Ready & Adapts:** Designed for unattended operation.
24/7就绪：专为无人值守的连续作业和多变流速设计。

IDEAL APPLICATIONS

应用领域

Environments / 应用场景:

Bakeries (High-Volume), Noodle & Pasta, Pizza Dough, Tortilla, Biscuit, Dumpling & Wonton, Cake & Muffin, Pet Food, Distribution. (大型烘焙、面条面食、披萨面团、薄饼饼干、饺子、宠物食品、配送中心。)

Flour Types / 面粉类型:

Wheat varieties (bread, cake, whole wheat), Rice, Corn, Specialty (rye, spelt, oat), Gluten-free, Pre-mixed, Starch powders. (小麦粉、米粉、玉米粉、特种谷物粉、无麸质粉、预混粉、淀粉。)

Quality Improvements / 质量提升:

Uniform Particle Size, Flowability, Mixing Efficiency, Predictable Dough Development, Consistent Baking Performance. (粒径均匀、流动性好、混合效率高、面团发育稳定。)



MAINTENANCE SCHEDULE

维护计划

Daily/日: Screen/Discharge inspection.

Weekly/周: Cleaning & debris removal.

Monthly/月: Lubrication & belt check.

Quarterly/季: Mesh inspection/replace.

Annual/年: Complete mechanical inspection & calibration.

COMPARISON TABLE

性能对比表

Aspect / 维度	Without Sifter / 无筛粉机	With On-Line Sifter / 有在线筛粉机
Product Safety	Foreign material risk (异物风险)	Continuous contaminant removal (持续净化)
Quality Consistency	Variable particle size (粒径波动)	Uniform, controlled gradation (均匀级配)
Equipment Protection	Accelerated wear/damage (加速损耗)	Protected downstream machinery (保护下游)
Production flow	Blockages from contaminants (杂质堵塞)	Smooth, uninterrupted flow (顺畅无中断)
Product Recalls	Higher risk (风险较高)	Significantly reduced (显著降低风险)
Mixer Performance	Inconsistent hydration (水合不均)	Predictable, uniform mixing (均匀混合)
Maintenance Costs	Higher (equipment damage) (较高)	Lower (preventive protection) (较低)
Quality Control	Batch testing only (仅批次抽检)	Real-time continuous monitoring (实时监测)

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COMPLETE ENGINEERING SUPPORT & TRAINING PROVIDED

Note: System specifications customized based on production capacity, flour types, and integration needs. (注: 系统规格根据产能和集成需求定制。)