

Grain Cleaning Solutions

# Maximize the Value of Your Crop

## Efficient Solutions for Pre-Cleaning, Sorting, and Grading of Grain

KONGSKILDE

# Why Cleaning Is So Important

## The Effects of Impurities

After threshing, grains are contaminated by impurities: Dirt, small pebbles, plant and insect waste, seed cases, weed seeds, etc.

These impurities hinder drying and safe storage operations and make them longer and more costly. Indeed, it would be not only costly but also superfluous to waste time, effort, and money on drying the impurities along with the grain.

These impurities lower the quality of the product and are also a focal point for potential infestation during storage. Cleaning may be accompanied by a sorting of the products according to quality, which is indispensable before storage, marketing, or further processing of the products.




## How Can Cleaning Impact Your Business?

### Cash Crop Farming

Seed cleaning alleviates problems caused by fungus or other unwanted remains sitting on the kernel surface.

### Grain Processing

Secure the maximum output of your grain depending on its further use, i.e. seed or feed, by cleaning the grain.

### Livestock Farming

Secure the maximum commodity output from your livestock with a proven feed handling solution.

### Organic Farming

Take your organic production to the next level with solutions for efficient handling of crops and livestock.

**Don’t see your industry listed?**
Don’t worry, we’re up for the challenge. Contact us for a custom solution.

# KDC Grain Cleaners

Clean grain is essential for reducing toxins, improving storage, and increasing market value. The KDC PLUS includes an integrated aspirator for removing light impurities, while the standard KDC model offers the same screen-based cleaning performance without additional air separation.

### KDC

The KDC is a dual-screen drum cleaner that efficiently sorts grain by size. The inner screen serves as a scalper to remove large particles, while the full outer screen area removes smaller fines to ensure clean, high-quality grain.

### KDC PLUS

The KDC PLUS is a cleaner with a dual cleaning function that utilizes both screen and aspirator technology. The screens sort the grain by means of size, and the aspirator unit removes light impurities and dust by means of air for exceptional cleaning capability.



KDC 4000 PLUS


Bottom of inlet made of heavy stainless steel for higher wear resistance.


KDC PLUS models feature easy access for collection of grain samples.



Easy access to cleaning screens for quick replacement.

### Features and Benefits

- Quick-release system for easy and fast replacement of screens.
- Effective size separation of grain kernels through two layers of screens.
- Large selection of screens for all common crops.
- Limited stress and wear of cleaner with rotative parts only to avoid vibrations.
- All components exposed to the ambient are made in galvanized steel suited for outdoor installations.
- Easy inspection during operation through multiple windows.
- Wear spots are made in stainless steel.
- Dampers on the torque arm for gear drive reduce stress load on screen drum.
- Easy access for collection of grain samples after cleaning (*KDC PLUS models*).
- A vacuum inside the drum compartment limits the amount of dust (*KDC PLUS models*).
- Cleaning by aspiration after size screening for maximum removal of dust (*KDC PLUS models*).
- Easy adjustment of screen drum angle by use of crank handle (*standard on KDC 8000 PLUS*).

# KDC Grain Cleaners




KDC 8000 PLUS



### Aspiration Cleaning

On the KDC PLUS the aspirator unit is placed at the end of the cleaning system and is used to separate light impurities and dust from the grain.

## Accessories

- Outer screen cleaning brushes.
- Rain cover for motors.
- Wheel set for short distance transport between different locations.
- Bottom auger kit *(optional on KDC 5000 - standard on KDC PLUS models)*.
- OK 200 pipe system and cyclone, connected to the outlet of the aspirator blower for conveying of impurities (*KDC PLUS models*).

## Screens

Kongskilde Industries has in-house production of screens and offers a large assortment of efficient and robust screens for size separation of grain kernels. See separate data sheet “Screen Selection for KDC” for more details.

The most commonly used screens are now available in stock and can be shipped within 24 hours on regular workdays.

| Technical Specifications | KDC 5000 | KDC 4000 PLUS | KDC 8000 PLUS |
|---|---|---|---|
| Built-in Aspirator | No | Yes | Yes |
| Max. capacity pre-cleaning, t/h* | 50 | 40 | 80 |
| App. capacity seed cleaning, t/h* | 3 - 10 | 3 - 10 | 6 - 15 |
| App. capacity malting barley, t/h* | 3 - 17 | 3 - 17 | 6 - 25 |
| Screen drum drive motor size kW (hp) | 1.5 (2.0) | 1.5 (2.0) | 2.2 (3.0) |
| Screen drum RPM | 21.9 | 21.9 | 23 |
| Blower for aspirator motor size kW (hp) | N/A | 4.0 (5.5) | 4.0 (5.5) |
| Blower for aspirator motor, RPM | N/A | 3000 | 3000 |
| Auger drive motor size, kW (hp) | 0.75 (1.5)** | 0.75 (1.5) | 1.1 (1.5) |
| Auger drive motor RPM | 3000** | 3000 | 1500 |
| Auger drive RPM | 450** | 450 | 240 |
| Control panel power supply (50 Hz) | 3 x 400 V / Rated 6.0 A | 3 x 400 V / Rated 13.4 A | 3 x 400 V / Rated 15 A |
| Inlet for crop | OK 200 | OK 200 | FK 250 |
| Outlet for cleaned crop | 458.3 cm² / OK 200 | OK 200 | FK 250 |
| Conveying pipes for impurities | N/A | OK 200 | OK 200 |
| Pipe outlet from auger | OK 160** | OK 160 | OK 200 |
| Screen area, Inner drum, m² | 4.1 | 4.1 | 7.5 |
| Screen area, Outer drum, m² | 6.5 | 6.5 | 10 |
| Weight, machine w/o screens and brushes, kg | 800 | 890 | 1,750 |

**Grain 700 kg/m³. Capacity affected by grain type and condition, moisture, impurities, angling of KDC, selection of screens*

***Only if the optional auger is chosen*

# How a KDC Works



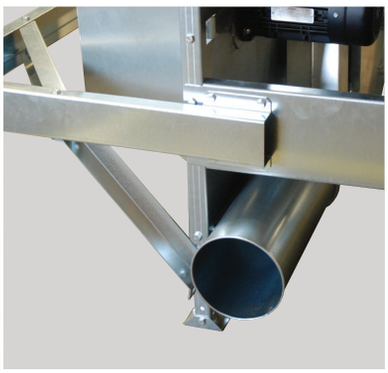
KDC 5000

## Parameters Affecting Capacity

- Grain type and condition, moisture, impurities.
- Higher inclination of the adjustable legs makes the grain pass faster over the screens. This provides a higher capacity, but reduces the cleaner's effectiveness.
- Selection of screens. Inner screens with "small" holes provide a better cleaning at a lower capacity.
- How the cleaner is installed.



Easy-to-open side panels which saves time and increase efficiency when changing screens.



Screenings are conveyed through pipes up to 15 m away (KDC PLUS models).

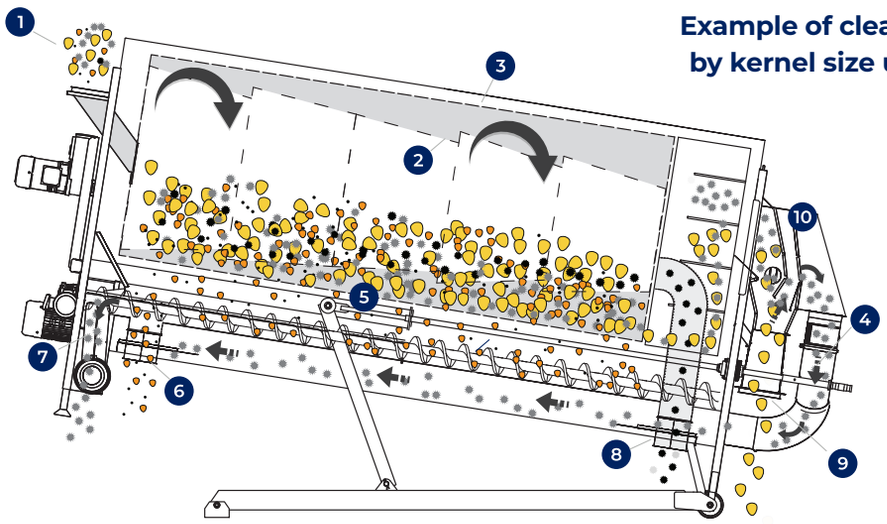


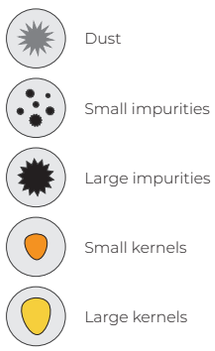
Cleaning brushes (optional) mounted for efficient even load on the outer screens.



A quick-release system makes it easy and fast to change screens and make ready for the next crop.

## Example of cleaning for seed & sorting by kernel size using a KDC 8000 PLUS




1. Grain inlet
2. Inner screen, exchangeable
3. Outer screen, exchangeable
4. Air bleed for air flow control in aspirator*
5. Auger for conveying of screenings**
6. Closable outer screen outlet for screenings / small kernels
7. Blower for aspirator*
8. Closable outlet from inner screen
9. Clean grain outlet
10. Aspirator chamber for dust separation*

* Not included on KDC 5000 models ** Optional on KDC 5000 models

# KF Aspirators





KF 12 mode of operation.



KF 12 model.



FRL 10 blower can be used to vacuum off dust, fines, and chaff at grain dryer discharge or at inlet to downpipe, auger, and conveyor inlets.



Cyclone for discharge of dust.

## How an Aspirator Works

The grain passes through an upwards moving air stream in the aspirator. The air stream picks up dust and light impurities, and gravity allows the grain to fall down into the bottom outlet of the aspirator.

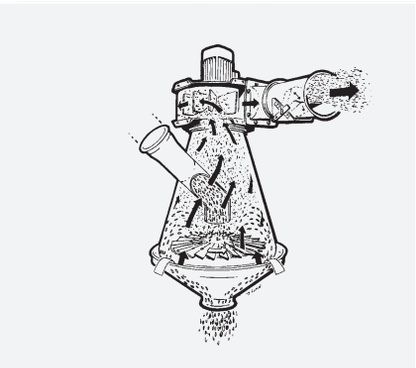
The dust and light impurities follow the air stream through the blower and further on into a pipeline to the desired discharge point.

Aspirators are suited for removal of dust and light impurities from grain. The construction of the pre-cleaner provides many options for integration in a grain plant.

We recommend that the grain cleaner is installed in such a way that it can clean the grain both before going into and coming out of storage.







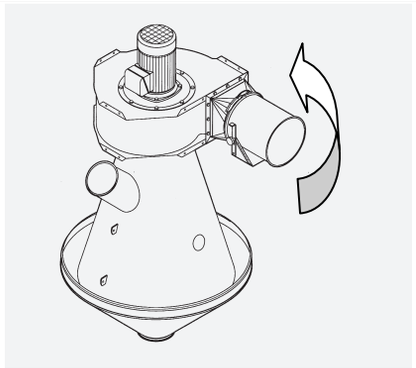
KF 40 mode of operation.



KF 40 fitted with support legs.



Air regulator for adjustment of the suction power of the aspirator blower.



Blower outlet can be turned in any direction.

## Benefits

- Modular system with great flexibility for built-in systems.
- Cost effective way to clean grain before going into storage or coming out.

| Technical Specifications | KF 12 | KF 20 | KF 40 | KF 60 |
|---|---|---|---|---|
| Max. capacity (barley) t/h | 12 | 20 | 40 | 60 |
| Motor size blower motor kW (hp) | 0.75 (1.0) | 1.5 (2.0) | 5.5 (7.5) | 7.5 (10) |
| Motor RPM | 3,000 | | | |
| Motor type | Flange motor Norm motor B5 | | | |
| Weight (incl. motor) kg | 75 | 105 | 250 | 260 |
| Conveying pipes for waste | OK 160 | OK 200 | FK 300 | 2 x FK 300 |
| Max. recommended conveying length for waste (m) | 25 | 15 | 15 | 15 |



# Trusted Global Provider of Grain Handling Solutions Since 1949

**Since its establishment in 1949**, Kongskilde has consistently prioritized the development of products aimed at enabling the efficient, appropriate, safe, and gentle handling of grain commodities, with a notable emphasis on the role of air in this process.

Furthermore, Kongskilde has cultivated a substantial level of expertise in mechanical conveying, cleaning, storage, and drying, positioning the company as a pioneer with unique knowledge in pneumatic conveying systems within the agricultural industry.

In the present day, Kongskilde remains dedicated to providing highly efficient pneumatic conveying systems in diverse layouts, alongside mechanical conveying systems. Each type of system offers specific advantages tailored to distinct solutions, ensuring both flexibility and effectiveness. We extend our efficient and proven solutions from a wide range of products and systems, making them available locally or globally through our own subsidiaries or trusted partners. This philosophy continues to empower us to serve customers worldwide.



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