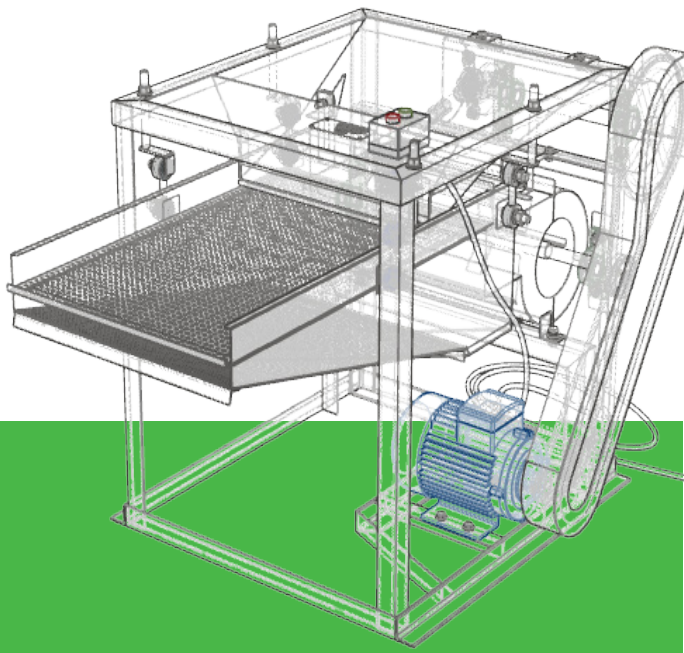


Multi-Grain Cleaner Gen I

Product Manual

A Comprehensive Guide to Operating and Maintaining
Your Multi-Grain Cleaner



Preface

This manual provides essential information regarding the operation, functionality, safety measures, and standard operating procedures (SOPs) for the SAYeTECH Multi-Grain Cleaner (MGC). It also contains information on general maintenance and method for troubleshooting.

It is a stock of knowledge for training newly recruited operators, and could serve as a reference material for refresher programmes for machine operators using the multi-grain cleaner.

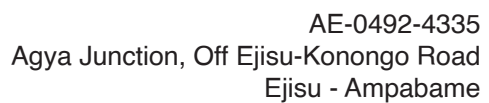
The SAYeTECH Multi-Grain Cleaner (MGC) Product Manual could also be useful to farm managers, machine supervisors, and mechanics.

This MGC Product Manual remains the property of SAYeTECH Company and any unauthorized commercial use, or reprint for sale, or for any other purpose, is strictly banned.

Some of the information in this document have been adopted from the learning material of the Agricultural Mechanization Training Centre (AMTCs) under the Agricultural Engineering Services Directorate (AESD) of the Ministry of Food and Agriculture (MoFA)

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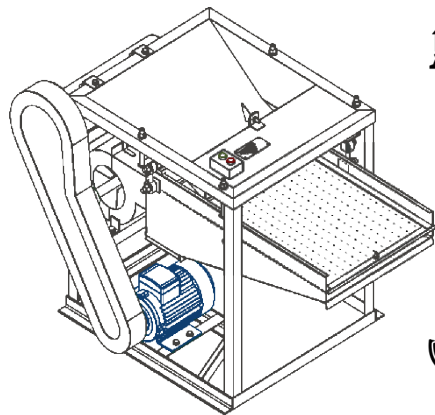
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Module 1

Parts Of The MGC Gen I

Technical Specifications

Cleaning mechanism	Blower type
Net weight	365kg
Dimensions	1m x 1.5m x 1m
Power type	Single phase 3HP High Speed Motor
Grain types	Maize/corn, soybean, cowpea
Feeding type	Manual



**Crops**
Cleans maize, soybeans, cowpea

**Efficiency**
High cleaning efficiency

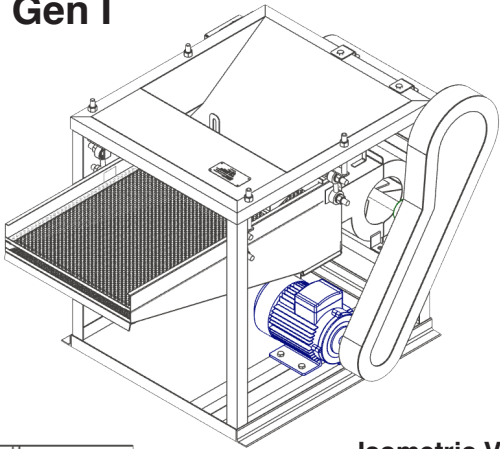
**Capacity**
*Cleans up to 2 tons/hr**

**Power**
Electric motor-powered for efficient cleaning.

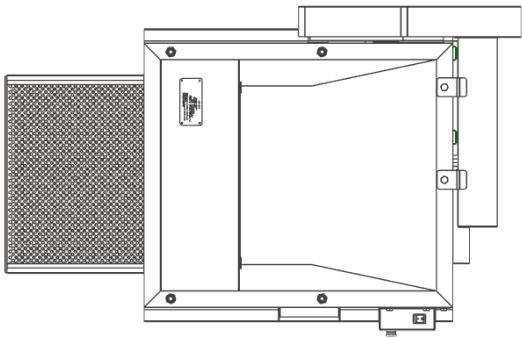
**Warranty**
comes with 6 month warranty

- The output for crops varies
- Capacity depends on the crop being cleaned

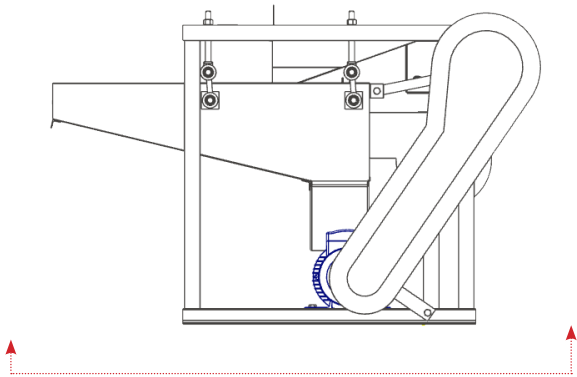
Parts Of The MGC Gen I



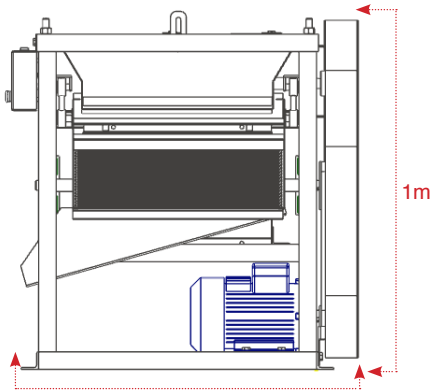
Isometric View



Top View

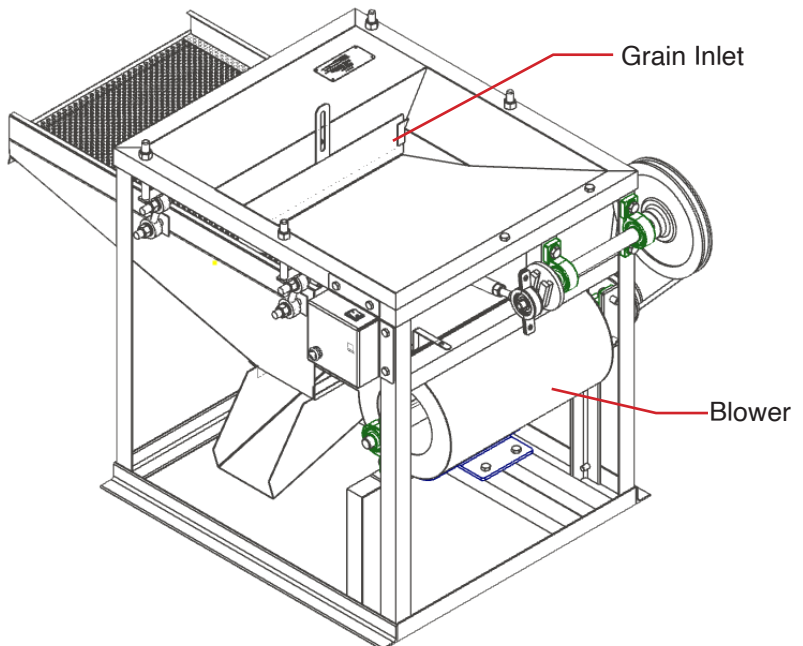
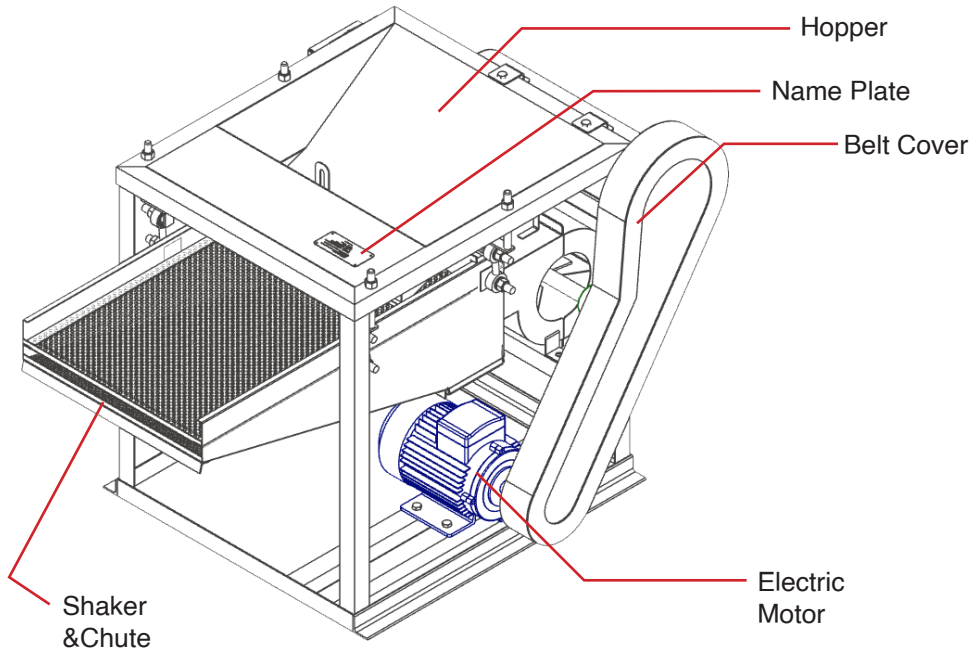


1.5m
Right View



1m
Front View

Main Features



Part	Function
Shaker	Allows the sieving and separation of the grains from the chaff
Chute	Exit for collecting cleaned grains
Hopper	The harvested crop are fed into the thresher through this opening
Grain Inlet	Opens and closes to regulate the amount of grains entering the cleaner
Belt Cover	Prevents accidental contact with moving parts, reducing the risk of injuries
Electric Motor	Provides the necessary mechanical energy to operate the various components of the MGC, ensuring efficient and effective grain cleaning.
On/Off Switch	Turns on and off the cleaner
Blower	Creates a controlled airflow that aids in the efficient cleaning and separation of grain.

Module 2

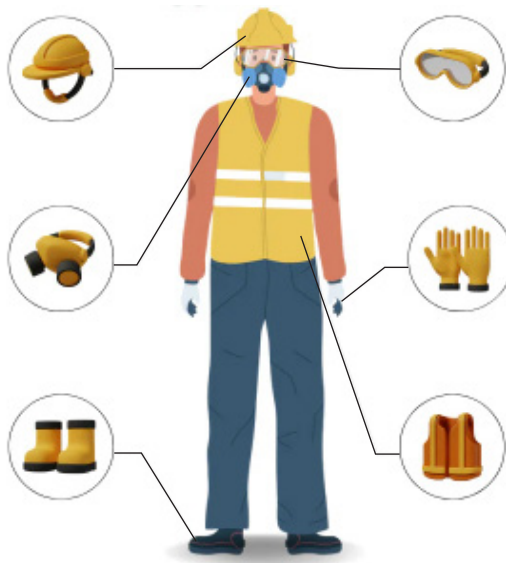
General Maintenance And Safety Precautions

The objective of this module is to ensure utmost safety of the operators and other people present to avoid accidents and damages and additionally give information on practices that ensure efficient operation and maintenance.

General Maintenance And Safety Precautions

To ensure safety during the operation of the MGC, the operator is required to:

- 1. Wear appropriate personal protective clothing, PPE;** including sturdy work boots, gloves, goggles, and hearing protection.
- 2. Wear close-fitting clothing and avoid loose items that** could get caught in moving parts.
- 3. Keep a safe distance from the cleaner's moving parts** and discharge area during operation.
- 4. Turn off the MGC and wait for all moving parts to come to a complete stop** before performing any maintenance or adjustments
- 5. Do not operate the MGC on the steep or uneven terrain** that may cause that may cause instability.



Specific Maintenance Of The MGC

Daily Maintenance

1. Ensure the power supply is stable and properly connected.
2. Inspect and tighten loose bolts and moving parts.
3. Grease all bearings and moving parts before or after use.
4. Confirm that all safety guards and shields are in place and securely fastened.
5. Test the emergency stop button to ensure it functions correctly.
6. Check for any obstructions or damage around moving parts like fans and belts.

Weekly Maintenance

1. Check for any visible damage, wear, or debris buildup on the machine and its components.
2. Inspect belts for wear, tension, and alignment. Check pulleys for damage and proper rotation.
3. Visually inspect electrical components for damage or loose connections.
4. Check for wear, damage, and blockages on the sieve and shaker. Clean as needed.

Monthly Maintenance

1. Disassemble major components like fans, augers, and sieves for a deep cleaning.
2. Visually inspect the motor for any signs of overheating, damage, or loose connections.
3. Contact SAYeTECH if needed.

Module 3

Operation Guidelines, Procedures and Instructions

This module outlines the preparatory steps, operational protocols, and post-operational procedures.

Before you start

1. Make sure the blower's fan blades face the direction of the wind so the chaff can be carried away by the wind.
2. Verify that the power supply is compatible with the MGCs voltage and amparage requirements.
3. Inspect the wiring for any damage, loose connections, or signs of overheating.
4. Ensure all moving parts are free of obstructions and operating smoothly.
5. Inspect belts for wear, fraying, or misalignment.
6. Check that all safety guards and shields are in place and securely fastened.
7. Make sure all bolted connections are tight.
8. Ensure that bearings are greased before operating the cleaner.
9. Test the emergency stop button to ensure it functions properly.

Starting the Cleaner

1. Verify that the power supply is compatible with the machine's specifications. (200V - 230V)
2. Clear the feed hopper and cleaning chamber of any foreign objects or debris.
3. Ensure the grain outlet is open and unobstructed.
4. Select an appropriate sieve to be placed in the shaker depending on the grain size.
5. Locate the motor start button and activate it.
6. Observe the machine's performance. Listen for any unusual noises or vibrations.

Operating The MGC

1. Gradually introduce the grain into the hopper while avoiding overload to prevent jamming, ensuring a steady flow.
2. Monitor the cleaning process to ensure the desired level of cleaning is achieved, listening for any unusual noises and checking for signs of overheating and wear.
3. Collect the cleaned grains from the shaker, and make sure it is cleaned correctly.
4. After use, clean the multi-grain cleaner to remove any grain residue or debris, paying attention to the sieves, cleaning chambers, and other critical components.

Stopping The MGC

1. When cleaning is completed, allow the MGC to run for about 5 minutes to evacuate any debris within the chamber.
2. Locate the main power switch and turn it to the "off" position.
3. Allow the motor to come to a complete stop before opening the hopper or accessing any moving parts.
4. Lubricate moving part and inspect the machine for damage.

Post Operation Activities

1. Allow the heated parts to cool before carrying on any subsequent activities.
2. Tighten any loose bolts and moving parts.
3. Clean the cleaner after use.

Sieve Replacement Guide

1. Remove the bolt on the shaker.
2. Pull the sieve out and replace with the desired sieve.
3. Tighten the bolts back and close the grain outlet.

Module 4

Troubleshooting Methods

This module addresses starting difficulties, power insufficiency, engine stall, reduced efficiency of thresher and other problems that may interfere with the smooth operations of the cleaner.

Problem	Possible Cause	Solution
Poor Cleaning Efficiency	• Worn or damaged sieves and screens. • Incorrect sieve and screen settings. • Ineffective fan operation.	• Contact SAYeTECH. • Adjust sieve and screen settings to match the grain type and desired cleaning level. • Contact SAYeTECH. • Clear any blockages.
Excessive Grain Loss	• Inefficient air flow • Incorrect sieve and screen settings.	• Adjust the fan speed to optimize air flow. • Adjust sieve and screen settings to minimize grain loss.
High Power Consumption	• Inefficient motor operation. • Excessive friction in moving parts. • Incorrect belt tension.	• Contact SAYeTECH. • Lubricate moving parts to reduce friction.

Module 5

Warranty And Customer Information

This module spells out the warranty terms, including coverage duration and what actions may void warranty. It also provides information on frequently asked questions (FAQs)

Warranty Information

SAYeTECH offers a limited product warranty valid for 6 months from the date of delivery. The warranty covers defects in material and workmanship that affects the product's function and render it inoperable provided that is operated and maintained in accordance with the instructions in the product manual or operator training session.

During this time, the company will repair or replace any product or parts that proves flawed due to a defect in manufacturing. The warranty does not cover the motor, damages resulting from negligence or misuse of the machinery, normal wear and tear of parts, or damage caused by external factors such as accidents, floods, fire or earthquake.

Customers are given the option to extend their warranty period the original period as stated. However, service rendered by SAYeTECH in such event will come at a reasonable charge. To claim the benefits provided by the warranty, the customer must:

1. Contact the company to determine the problem and present a copy of the purchaser's receipt.
2. Demonstrate to the SAYeTECH's satisfaction that the customer complied at all times with the maintenance and operations procedure as stipulated in the manual.
3. Be ready to go through our troubleshooting, checks and recommendations

Module 6

Frequently Asked Questions (FAQs)

1. **What is a multi-grain cleaner?**

A multi-grain cleaner is a machine designed to remove impurities such as dust, dirt and foreign materials from various types of grains, such as soybeans, cowpea and corn.

2. **How does a multi-grain cleaner work?**

Multi-grain cleaners typically use a combination of sieving and aspiration techniques to remove impurities.

3. **What are the benefits of using a multi-grain cleaner?**

Improved grain quality, increased efficiency, higher yield, better storage, and enhanced market value.

4. **What factors should I consider when choosing a multi-grain cleaner?**

Capacity, grain types, impurity removal efficiency, power requirements, maintenance requirements, and cost.

5. **How often should I clean and maintain my multi-grain cleaner?**

Regular cleaning after each use and a thorough cleaning and inspection every month or as needed.

6. **Can a multi-grain cleaner be used for different grain types?**

Yes, most multi-grain cleaners are designed to handle a variety of grains, but adjustments may be needed.

7. **Is a multi-grain cleaner cost-effective?**

While the initial investment may be significant, long-term benefits make it a cost-effective solution.

8. **How can I improve the efficiency of my multi-grain cleaner?**

Regular maintenance, proper cleaning, and adjusting settings for different grain types.

9. **Where can I find spare parts and maintenance services for my multi-grain cleaner?**

Contact SAYeTECH for genuine spare parts and maintenance services.

Contact Informatiton

For technical/customer support call

Phone: +233 (0)20 987 9370

+233 (0)24 215 7512

Or visit our workshop for assistance

GhanaPost GPS Address : AE-0492-4335

Agya Junction, Adadientem

Off Ejisu-Konongo Road

Ejisu - Adadientem

