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## Ordering Information:

We reserve the right to ship orders received from unrated firms on a C.O.D. basis. Firms with established credit are normally sold to on a Net 30 day from date of invoice basis. Past due invoices are subject to a 1.5% carrying charge per month on unpaid balances (18% per annum). Payment Terms for customers that place an order from outside the U.S.A. will be either Payment in Advance by wire transfer in U.S. dollars or by Confirmed Irrevocable Letter of Credit.

We accept Visa®, Mastercard®, Discover® or American Express® for orders shipping within the U.S.A. or Canada. Only credit cards issued in the U.S.A. or Canada are accepted.

**Orders:** Place orders via e-mail to our general e-mail box: [sales@seedburo.com](mailto:sales@seedburo.com) or by phone to: 800-284-5779 in the U.S.A. and Canada or 312-738-3700 between 8:30 A.M. and 4:30 P.M. CST. Fax orders to 312-738-5329. Website orders can be placed directly from the Seedburo website. Please provide details, specification, part number and purchase order number when required. We require an End User Assurance Form to be completed on all international shipments.

**Mail Order:** Please designate item number, quantity, description and price. When motors are involved, please specify current, voltage, phase and horsepower.

Be sure to give complete name and post office address. Your shipping address should include your street address or complete information to help carrier locate you. Also provide your telephone number and purchase order number if required by your firm. If you have not established credit with us, please provide the name of your bank, account number (whether checking or saving), your contact and their phone number for our evaluation.

**Warranty:** Seller's products are warranted to be free from defects caused by faulty materials or workmanship for a period of sixty (60) days from the date of shipment. Individual manufacturer's warranties may be longer, but only when indicated by the warranty included with that specific product. The liability of seller under this warranty is limited to repairing, or at its option, issuing credit for any of its products which are returned by the buyer during such period.

**SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, EXCEPT AS HEREIN STATED, AND SPECIFICALLY SELLER MAKES NO WARRANTY AS TO THE MERCHANTABILITY OF THESE GOODS OR AS TO THEIR FITNESS FOR ANY PARTICULAR USE OR PURPOSE. SELLER'S LIABILITY UNDER THIS CONTRACT SHALL BE LIMITED TO THE STATED SELLING PRICE PER UNIT OF ANY DEFECTIVE GOODS AND SHALL, IN NO EVENT, INCLUDE BUYER'S MANUFACTURING COSTS, LOST PROFITS OR GOOD WILL, OR ANY OTHER SPECIAL OR CONSEQUENTIAL DAMAGES.**

**Shipments:** All prices shown on the website or within a printed price list are ex-factory. In all cases, we will ship the fastest, most economical way. We can ship via truck, U.P.S., Federal Express, DHL, parcel post, air freight or ocean freight. Whenever possible, we will ship U.P.S. or according to your specified routing. Truck shipments will be prepaid and freight charges billed with the merchandise unless specified within the order. U.P.S. charges will be prepaid and added to the invoice along with insurance and handling charges as separate line charges. Credit card related fees will be added to invoices that are paid with a credit card.

**Damaged Shipments: Seedburo cannot be responsible for, nor can we accept, the return of merchandise damaged in transit without a returned goods authorization.** If a truck shipment reaches you in damaged condition: Save all original packing materials and shipping papers, contact the carrier to complete a damage report, photograph the packaging and the damage from multiple angles, email the photos to a Seedburo salesperson, or [sales@seedburo.com](mailto:sales@seedburo.com), and file claim with carrier. On U.P.S. shipments, articles damaged must be held by you in their original shipping container and you should contact the nearest U.P.S. office to request an inspection. If U.P.S. takes the package you should receive a receipt and the number on it should be reported to Seedburo. With your cooperation, we will be able to file a claim and credit your account accordingly.

**Returns and Allowances: Returns are subject to a restocking charge.** On items shipped from a Seedburo warehouse there is a 15% restocking charge. Shipments sent from the manufacturer are subject to their established restocking charge. **No merchandise is to be returned without a return goods authorization number, which is provided prior to return shipment.** Please advise why you are returning the equipment. We will then provide the correct shipping instructions for returning the merchandise. This is especially important in the return of large equipment. Include the return goods number with returns so that you will be sure to receive correct credit or replacement. **All returns are to be made via prepaid freight.**

**Bilingual Sales Staff:** Seedburo has a Spanish speaking sales staff that can assist with all aspects of our product line and international shipping.

**Sales Tax:** Seedburo Equipment Company is required by law to collect sales or use taxes imposed by many state, or local governments. Taxes are determined by the location to which the shipment is delivered. As rates vary from state to state, please remit the correct percentage for that locality. If you have a Sales Tax Exemption Certificate, make sure it has an original signature, and is on file with Seedburo when purchasing by open account. For cash orders include your certificate.



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**Dickey-john® Model GAC2500UGMA and GAC2500-INTL Grain Moisture Analyzers**

Dickey-john® is the leader in the development of grain moisture testing instruments to accurately and consistently provide grain moisture testing for the USDA official grain grading system, commercial grain trade, seed industry, feed mill and farmer/producer markets around the world. Dickey-john is an ISO-9000:2000 certified manufacturing company. Together, we are pleased to introduce the next generation in moisture analysis instrumentation that utilizes the new 149 MHz Unified Grain Moisture Algorithm (UGMA) technology. This UGMA-based technology was developed to expand the ranges of moisture, temperature and density (test weight) variations in crops being tested. This allows for more accurate results and more consistent (repeatable) results from your moisture analyzer.

The Dickey-john Model GAC®2500UGMA Grain Moisture Analyzer, offered by Seedbuero, is the latest in moisture testing technology. The UGMA has more accurate temperature sensing capabilities, allowing you to measure in extreme temperature conditions, including frozen and hot grains. In addition, the GAC2500UGMA has a quick and easy to use color touch screen interface.

Calibrations for the GAC2500UGMA are developed and validated in coordination with the USDA-AMS/FGIS and the NTEP programs. The GAC2500UGMA is the USDA approved moisture analyzer for official grain inspection and NTEP verified commercial grain operations for the standard crops regulated by these programs. Calibrations are also available for many specialty crops and seeds including: Almonds, Coffee and Edible Beans. Calibrations are loaded and updated through the USB ports via either a direct connection to a PC or via a memory stick providing for quick and accurate updates. We do our utmost to notify each customer, by email, when these calibrations change and how to download them.

- Grain Moisture Analyzer, 110/220V, 50/60Hz..... **No. GAC2500UGMA**
- International Grain Moisture Analyzer, 110/220V, 50/60Hz.....**No. GAC2500-INTL**
- Printer with Interface Cable, 110/220V, 50/60Hz.....**No. GAC-P25**
- Printer with USB Connection .....**No. GAC-P25/USB**

Moisture measurement remains one of the most important official and commercial grain inspection activities because of the impact of moisture contents on end-use value and storability of grain. The GAC2500UGMA technology will substantially reduce the effects of variables such as sample temperature, geographical origin, variety, crop year, density, and kernel moisture distribution. The UGMA-based technology provides moisture results that align more closely with results achieved through the USA official reference method, the air oven, and even better than any tester on the market today.

The GAC2500UGMA reduces the time of analysis at the grain terminal by using improved mechanics, an easy-to-use color touch screen, and an optional "pass-thru" drawer minimizing real-life run time in grain operations. The sample is loaded into the hopper without any pre-measurement or weighing, automatically dropped into the measurement test cell where the density, temperature, and moisture are calculated and displayed on the bright, 4-color display. The sample is then automatically discharged from the analyzer to the bottom drawer or into a receptacle below the unit when using the pass-thru drawer option. Results can be transmitted to an attached printer or data collection system via the various data connections available on the analyzer.

The GAC2500UGMA is now available for the international grain market, the No. GAC2500-INTL has the additional benefit of displaying results and instructions in multiple languages such as French, German, Italian, Polish, Russian, and Spanish just to name a few (See our website for a full listing). The GAC2500-INTL is the same technologically advanced moisture tester with the exception that it can display in different languages. It does not carry NTEP approval, but is as accurate and reliable as the GAC2500UGMA NTEP model.

Multiple USB connections (front and back on the instrument), along with the Type 9 and RS232 connections allow for a variety of data transfer and printer options. The GAC-Printer offered below is just one of the available options for data flow.

**Specifications**

- Moisture Range: determined by each grain calibration and harvest conditions, normally 5–45%
- Ambient (environment) Temperature Range: 36°F–113°F (2°C–45°C)
- Sample Temperature Range: -4°F to 113°F (-20°C to 45°C) depending on grain calibrations
- Difference (ambient to grain Sample) 72°F (40°C) below ambient and 36°F (20°C) above ambient
- NTEP Certificate: #12-070A4

**GAC2500UGMA and GAC2500-INTL:** Net wt: 30 lbs, Actual dims: 14" (L) x 19" (W) x 17" (H), Ship wt: 36 lbs, Ship dims: 24" (L) x 20" (W) x 21" (H).

**GAC-P25 Printer with Cable:** Net wt: 8 lbs, Actual dims: 8½" (L) x 6¼" (W) x 6¾" (H), Ship wt: 10 lbs, Ship dims: 15" (L) x 15" (W) x 11" (H).



- Printer Paper for GAC-P and GAC-P25/USB Printer ..... **No. GAC-PP**
- Replacement Printer Ribbon for GAC-P Printer ..... **No. GAC-PR**
- Replacement Interface Cable.....**No. GAC2500-CABLE**

**Dickey-john® Model GAC2500-AGRI**  
Grain Moisture Analyzers for The Farm

The GAC®2500-AGRI is an affordable moisture tester that provides elevator-like results on the farm. The GAC2500-AGRI uses the newest analysis technology (149 MHz) to provide repeatable results, just like the instruments at the elevator. One key benefit of 149 MHz technology is the reduction of grain calibrations required to deliver precise results. Additionally, the GAC2500-AGRI has more accurate temperature sensing capabilities, allowing you to measure in extreme temperature conditions including frozen and hot grain. Operation is also simplified with an intuitive color touchscreen, providing accurate results regardless of user skill level.

**Features and Benefits**

- Utilizes 149 MHz technology to provide elevator-like results
- Easy-to-use, intuitive color touchscreen eliminates operator training
- Accurate temperature-sensing capabilities allow you to measure frozen and hot grain
- Memory storage for up to 3000 measurements
- Multiple USB ports on the back of the unit for software upgrades, USB devices, printer and peripherals
- Additional USB ports located on the front of unit for easy calibration imports as well as keyboard and mouse plug-ins for inputting set-up data

When you buy a DICKEY-john GAC2500-AGRI you get all the dependability and value you expect from DICKEY-john products. GAC2500-AGRI is designed, manufactured and supported in the USA by Ag Point Precision, the service center of Seedburo Equipment Company.

With the myriad of applications in the industry, DICKEY-john understands the need to modify moisture testers to suit the requirements of your region and operation. That is why the GAC2500-AGRI is designed with a robust set of standard calibrations with the option of loading specialty crops.

**Specifications**

- Lowest legal temperatures, up to 20% moisture at -4°F (2°C)
- Highest moisture limit with unofficial hot grain calibrations is 113°F (45°C)
- Calibrations specifically developed for specialty crops such as Almonds, Peanuts and Popcorn
- Support backed by DICKEY-john’s on-site calibration laboratories
- Convenient, easy-to-download calibrations
- Custom calibration development available for unique crop and region attributes
- Service for all DICKEY-john testers available through Seedburo’s sister company, Ag Point Precision

Grain Moisture Analyzer, 110/220V, 50/60Hz.....No. **GAC2500AGRI**  
Printer with Interface Cable, 110/220V, 50/60Hz.....No. **GAC-P25**  
Printer Paper for GAC-P Printer..... No. **GAC-PP**



Standard calibrations are: Corn, Hard Red Spring Wheat, Hard Red Winter Wheat, Oats, Soft Red Winter Wheat, Soft White Wheat, Sorghum, and Soybeans. The GAC2500AGRI will hold 8 calibrations total, but it is not limited to those that are loaded at the factory. Contact us for a full list of available calibrations.

Operating temperature: 36–113°F (2–45°C)  
Power: 110/220V, 50/60Hz, 30/35 VA  
Humidity: 20–90% non-condensing  
Storage/transit temperature: -4 to 140°F (-20 to 60°C)  
Moisture range: 5–45% (grain dependent)

**GAC2500AGRI:** Net wt: 26 lbs, Actual dims: 16" (L) x 15¼" (W) x 14¾" (H), Ship wt: 32 lbs, Ship dims: 21" (L) x 21" (W) x 19" (H).

**GAC-P25 Printer with Cable:** Net wt: 8 lbs, Actual dims: 8½" (L) x 6¼" (W) x 6¾" (H), Ship wt: 10 lbs, Ship dims: 15" (L) x 15" (W) x 11" (H).

**GAC2500CLNKIT:** Electronic eye and temperature sensor cleaning kit for GAC2500 series testers only. Net wt: 2 lbs, Ship wt: 3 lbs, Ship dims: 13" (L) x 10" (W) x 6" (H).



GAC-P25



Replacement Interface Cable.....No. **GAC2500-CABLE**  
GAC2500 Cleaning Kit.....No. **GAC2500CLNKIT**

**DICKEY-JOHN® GAC2100 SERIES**  
MOISTURE TESTERS

The GAC2100 series grain moisture testers, offered by Seedburo, are economical non-NTEP devices. They offer precision, versatility and the accuracy of NTEP moisture testers formerly used by commercial grain facilities. The GAC2100 series displays moisture percentage, test weight or density, and temperature on a large LCD screen. Each model includes two standard RS232 printer ports. The moisture range is 5–45%, depending upon the grain type, and a grain temperature range of 32°F–122°F (0–50°C). The user can choose from over 450 grain calibrations which can be displayed in 8 different languages including: English, French, German, Italian, Portuguese, Spanish, Turkish, and other European languages.



★ MADE IN  
★ USA GAC2100GI

**GAC2100GI**

The GAC2100GI, gray in color, is a non-NTEP moisture tester which tests for moisture in 16 standard grains: Barley 2-Row, Barley 6-Row, Corn, Corn-High Moisture, Durum, Hard Red Spring Wheat, Hard Red Winter Wheat, Millet, Oats, Rapeseed, Rye, Safflower, Soft Red Winter Wheat, Sorghum, Soybeans, and Sunflower Oil. If you do not require a commercial, Legal for Trade instrument, the GAC2100GI is at a more economical price for you. These units provide moisture reading, sample weighing, estimated test weight or density, temperature compensation and moisture correction automatically. Net wt: 26 lbs, Actual dims: 16" (L) x 15¼" (W) x 14¾" (H), Ship wt: 36 lbs, Ship dims: 23" (L) x 22" (W) x 19" (H).

Dickey-john Moisture Tester, 110/220V, 50/60Hz.....**No. GAC2100GI**



★ MADE IN  
★ USA GAC2100BSA

**GAC2100BSA**

The GAC2100BSA, blue in color and is not NTEP approved. It has a built-in hopper sensor which senses when enough grain is present for testing. Simply fill the hopper, press the load button and the test is performed automatically. Moisture percentage, test weight or density, and temperature are displayed on a large LCD backlit display. It has a built-in memory for 64 standard grain calibrations and can display in 8 different languages. This tester can also be set-up to integrate with your automatic grain sampling system for smooth flow-through operation.

The GAC2100BSA has an option for removing the bottom of the drawer allowing grain to flow through the unit into a larger container of your choice. This feature was added to keep the operator(s) from spilling grain on their counter without having the drawer inserted. Simply fill the hopper, press the load button and the test is performed automatically. Net wt: 26 lbs, Actual dims: 16" (L) x 15¼" (W) x 14¾" (H), Ship wt: 36 lbs, Ship dims: 23" (L) x 22" (W) x 19" (H).

Dickey-john GAC Moisture Tester, 110/220V, 50/60Hz.....**No. GAC2100BSA**



★ MADE IN  
★ USA GAC2100AGRI

**GAC2100AGRI**

The GAC2100AGRI, orange in color, is a 'farm use' moisture tester, non-NTEP, and it is calibrated for 8 commodities: Corn, Corn-High Moisture, Sorghum, Soybeans, Hard Red Spring Wheat, Hard Red Winter Wheat, Oats, and Soft Red Winter Wheat. The readings are automatically displayed within 30 seconds. It is ideal for the larger farmer who stores his own grain and it is economically priced. Net wt: 26 lbs, Actual dims: 16" (L) x 15¼" (W) x 14¾" (H), Ship wt: 36 lbs, Ship dims: 23" (L) x 22" (W) x 19" (H).

Dickey-john GAC Moisture Tester, 110/220V, 50/60Hz .....**No. GAC2100AGRI**

**Accessories and Replacement Parts**

- Optional Printer, 110/220V, 50/60Hz ..... **No. GAC-P25**
- Paper for Printer ..... **No. GAC-PP**
- Bottomless Grain Drawer with Magnets for GAC2100 ..... **No. GAC-DRAWER**



GAC-P25



**Steinlite SL95 Moisture Meter**

The Steinlite SL95 NTEP Moisture Meter, distributed by Seedburo, is one of the most reliable and user-friendly moisture meters available. It is fully automatic and requires no pre-weighing of your product. The SL95 is approved for commercial use, is NTEP certified and produces a reading of moisture percentage, test weight and sample temperature within 8 seconds. The tester has two RS232 type serial communication ports and can be connected to both the SLPrinter and your desktop computer at the same time.



The Steinlite SL95 is factory calibrated for standard grains such as Barley, Corn, Oats, Soybean, Sunflower and Wheat. Over 1000 different calibrations of your choice can be loaded on the meter (please contact us or visit our web site for a list of these commodities) at the time of order. Simply turn the tester on, select the calibration or grain to be tested, pour in your sample (about 450 grams) and the infrared sensors in the hopper ensures sufficient sample size is used without any pre-weighing. Press the LOAD key and the moisture will be displayed from the LCD display within 8 seconds. The moisture range will read between 1–30% depending upon the product and grain temperature range is 35–110°F. The SL95 operates from 90–264 Volts, 43–66Hz AC grounded outlet. There is no need to select a voltage in order to operate this tester. **No. SL95:** Net wt: 30 lbs, Actual dims: 14" (L) x 12" (W) x 16" (H), Ship wt: 35 lbs, Ship dims: 19" (L) x 17" (W) x 21" (H). **No. SLPrinter:** Net wt: 3 lbs, Actual dims: 10" (L) x 12" (W) x 5" (H), Ship wt: 4 lbs, Ship dims: 12" (L) x 14" (W) 8" (H). **MADE IN THE USA.**

Steinlite Moisture Meter, 110/220V, 50/60Hz.....	No. SL95
SL-Printer, 110, 220V.....	No. SLPRINTER

**Steinlite SB900 Moisture Tester**

The Steinlite SB900 Moisture Tester, distributed by Seedburo, provides fast and accurate results for up to 500 different grains, seeds and nuts. The tester is pre-programmed at the factory to test common grains such as Barley, Corn, Flaxseed, Milo, Oats, Rice, Rye, Soybean, Sunflower and Wheat. An additional module, plugged into the side of the tester, can be calibrated to hold an additional 250 calibrations (visit our web site for the listing). The module is supplied at no charge if extra calibrations are specified at the time your order is placed.

Testing is simple. Turn the power on, wait for the unit to automatically balance itself, and select the commodity you want to test from the display, enter the commodity ID number and test weight (optional). Next, weigh your sample (150–250 gram sample is the norm) and place your product in the funnel. Release the grain into the test cell and measurement takes approximately 15 seconds. The tester automatically corrects for temperature. A compressor block, for lightweight or fluffy products such as Cottonseed, Wheat middlings and Sugar Beet pulp is also available as well as a funnel for Nuts. A printer for individual tickets can also be purchased. The SB900 will be supplied with the standard calibrations and grain funnel unless specified otherwise. Operates on 110/240V, 50/60Hz. Net wt: 35 lbs, Actual dims: 18" (L) x 10" (W) x 12" (H), Ship wt: 40 lbs, Ship dims: 27" (L) x 15" (W) x 17" (H). **MADE IN THE USA.**



Steinlite Moisture Tester, 110/240V, 50/60Hz.....	No. SB900
Additional Grain Calibration Module.....	No. SB-MODULE
Nut Funnel (Required with Some Calibrations).....	No. SB-NFUNNEL
Compressor Block and Funnel (Required with Some Calibrations).....	No. SB-BLOCK
Optional Printer, 110/220V, 50/60Hz.....	No. SB-PRINTER



**GAC500XT Manual Moisture Tester with Test Weight**

Seedbuero offers the Dickey-john Model GAC500XT Moisture Tester. The unit provides results that are comparable to commercial testers at an economical price for a variety of users — from farmers to seed companies. The unit holds 16 calibrations and the following are pre-programmed at the factory: Barley 2-Row, Barley 6-Row, Corn, Corn-High Moisture, Durum, Hard Red Winter Wheat, Hard Red Spring Wheat, Millet, Oats, Rapeseed, Rye, Safflower, Soft Red Winter Wheat, Sorghum, Soybeans, and Sunflower (Oil Type). There are 450 other calibrations available. The GAC500XT displays moisture percentage, temperature and approximate test weight readings.

Simple to use, turn the power on and the unit will display the last grain tested and a main selection menu. The operator can select a new grain or continue with the current selection. The GAC500XT will perform a self-test and then is ready to be loaded with the grain sample. Once the sample is manually loaded and leveled, the test is conducted. The GAC will display in a choice of 16 languages including: English, French, German, Italian, Portuguese, Spanish, Turkish, and other European languages.

The GAC500XT has a moisture range of approximately 5–45%, depending upon the commodity, a grain temperature range of 32–122°F (0–50°C), and a 36°F (20°C) instrument to grain sample temperature difference. The sample size is approximately 250 grams and the tester reads to 0.1% moisture. The unit operates on 110V or 220V with an optional 12V adapter. Net wt: 13 lbs, Actual dims: 14" (L) x 11" (W) x 14" (H), Ship wt: 20 lbs, Ship dims: 18" (L) x 18" (W) x 13" (H).

GAC500 Manual Moisture Tester, 110/220V, 50/60Hz.....	No. GAC500XT
Optional 12V Adapter.....	No. GAC500ADAPTER-M
Optional Printer, 110V, 60Hz.....	No. GAC-P25
Optional Printer, 220V, 50Hz.....	No. GAC-P/C
Paper for Printer.....	No. GAC-PP

**Seedbuero Model 1200D Digital Moisture Tester**



The Seedbuero Model 1200D, Digital Moisture Tester is easy to use. First, select the commodity to be tested, weigh a 250 gram sample (varies according to the commodity being tested) with a scale accurate to 0.5g, place sample in the dump cell and press the measure button.

The temperature will be automatically taken and applied to the final moisture value. The tester will display the percentage of moisture from 5%–40% (depending upon the commodity). Charts are programmed into the 1200D include the common grains of Barley, Corn (Maize), Milo (Sorghum), Oats, Rice, Soybean, and Wheat. Additional grains and commodities can be loaded by the user from our website in a Chartloader program file. Charts are available for over 150 commodities. Net wt: 11 lbs, Actual dims: 10" (L) x 9.9" (W) x 11" (H), Ship wt: 16 lbs, Ship dims: 19" (L) x 15" (W) x 14" (H).

**Features**

- Full-featured backlit graphic LCD display
- Built-in temperature probe
- Single button operation
- Connects to optional printer or PC
- Universal power supply and optional 12V battery adapter
- Internal calibrations available for over 100 commodities
- Single or average measurements for improved accuracy
- English or Spanish display
- Available with Canadian grain charts

Digital Moisture Tester with U.S. Calibrations, 110/220V, 50/60Hz.....	No. 1200D
Digital Moisture Tester with Canadian Calibrations, 110/220V, 50/60Hz.....	No. 1200D-CAN
Digital Moisture Tester with Readout in Spanish, 110/220V, 50/60Hz.....	No. 1200DS
Optional Adapter for 12V Battery Operation.....	No. 1200D-ADP

**DICKEY-JOHN®**  
HANDHELD MOISTURE TESTERS

**GAC Mini 2500 Portable Grain Moisture Analyzer**

The most accurate handheld moisture tester that provides fast and easy results. Now with 149 MHz – UGMA technology to match the new GAC2500UGMA moisture testers at the elevator (see **page 2**) for farmers that are conditioning their own grain and need the accuracy of a commercial meter at an affordable price. GACMINI2500 matches existing meter readings, but is completely portable, and Bluetooth enabled! Simply add the free app to your mobile device and test results are transmitted there (Bluetooth only available for USA, Canada, Japan, Hong Kong and European Union). The app allows you to record moisture, temperature, test weight, sample ID, date and time.

For farmers who have adapted precision farming into your operations, you can reliably and accurately pull moisture data from the GACMINI2500. This will allow you to use data from the mini to create accurate field maps, increase the accuracy of yield maps and track moisture field-by-field, year-over-year to evaluate moisture trends and field conditions. The GACMINI2500 will provide continuity from the field to the elevator by providing consistent results.

Unit can be programmed to read in English, Spanish, German, French, Italian, and Chinese.

The GACMINI2500 includes: tester, funnel, 9V battery, carrying case, belt clip, instruction manual and 1 year manufacturer’s warranty. Net wt: 3 lbs, Actual dims: 8.3" (L) x 4.8" (W) x 11.9" (H), Ship wt: 8 lbs, Ship dims: 19" (L) x 13" (W) x 8" (H).



GACMINI2500

**Features and Benefits**

- Simplifies operation with menu-driven interface
- Eliminates pre-weighing with an internal scale
- Avoids cumbersome screw caps that can damage grain and tests whole grains
- Measures over 250 types of grains and products
- Easily load calibrations with a USB or USB cable to your computer (cable included)
- Tests hot or cold grain between 32–122°F (0–50°C)
- Durable carrying and storage case with shoulder strap included

Hand Held Moisture Analyzer, 149 MHz with Bluetooth.....	No. GACMINI2500
Hand Held Moisture Analyzer, 149 MHz without Bluetooth.....	No. GACMINI2500NBT

**GAC Mini and GAC Mini Plus Portable Grain Moisture Tester**

The mini GAC® technology is based on the commercial and laboratory moisture tester Series GAC2100. This whole grain moisture tester includes an internal scale to eliminate pre-weighing and it has no screw caps to deal with. The moisture range is 5–45%, depending upon the grain type, a grain temperature range of 32–122°F (0–50°C). The sample size is approximately 1 pint and can hold 20 twenty-grain calibrations: Corn, Corn-High Moisture, Barley 6-Row, Barley 2-Row, Durum, Hard Red Winter Wheat, Hard Red Spring Wheat, Millet, Oats, Rapeseed, Rye, Safflower, Soft Red Winter Wheat, Sorghum, Soybeans, Sunflower Oil and four (4) empty calibrations, but the user can choose from over 450 calibrations. The tester can display in a choice of 16 languages including: English (US, UK, and AU), Spanish, French, Italian, German, Portuguese, Turkish, and other European languages (specify when ordering).

Available in two models, the Model GACMINI-P displays moisture percentage, temperature and approximate test weight readings. Each unit includes a 9V battery, carrying case, funnel assembly, belt clips, and instruction manual. The Model GACMINI-L displays moisture and temperature readings. The USB cable allows for the user to directly download alternate calibrations from the manufacturer website. Each unit includes a 9V battery and funnel assembly. Net wt: 2 lbs, 7 oz, Ship wt (with case): 8 lbs, Ship wt (without case): 7 lbs, Actual dims: 8.3" (L) x 4.8" (W) x 11.9" (H), Ship dims: 8" (L) x 12" (W) x 16" (H).



GACMINI-P

Hand Held Moisture Tester Plus Test Weight and Case....	No. GACMINI-P	Replacement Funnel Assembly.....	No. GACMINI-FUNNEL
Hand Held Moisture Tester without Case .....	No. GACMINI-L	USB Download Cable for GACMINI .....	No. GAC-CABLE
Carrying Case.....	No. GACMINI-CASE		

**OHAUS**  
**MOISTURE ANALYZER SERIES**



The MB Series Moisture Analyzers combine high quality and durable construction into sleek, compact designs. The MB Series offer dependable, accurate results for a wide variety of applications.

Designed to quickly, effectively and affordably measure moisture content by incorporating a halogen heating element or an infrared coil in the case of the MB23, with precision weighing to give a fast and accurate moisture content determination. Temperature calibration is easy with the optional calibration kit. They are ideal for the pharmaceutical, chemical and food industries and are designed for continuous operation. Manufactured to ISO 9001 specifications.

The process of performing a test with the MB Series Moisture Analyzers is by placing a representative sample in the tray of the

analyzer, weighing this sample before drying the moisture out of the sample, then reweighing the sample after you have dried as much moisture out of the sample before volatile oils are lost or the sample burns. The difference in weight from before and after the test is completed is your moisture percentage.

The MB120 is the standard in high performance moisture content determination. This model has a sample capacity of 120g with a readability of 0.001 gram, multi-language display text (English, Spanish, French, Italian and German), an integrated database to store up to 50 drying procedures and four selectable automatic drying programs for easy one step drying. Simply recall the test from memory and begin. Operating temperature range from 40°–230°C in 1° increments.

The MB90 has a sample capacity of 90g, with a readability of 0.001 gram, intuitive software that establishes a simple user interface with simple 3 key navigation; just enter the time, temperature and begin the test. The MB90 operating temperature range is 40°–200°C in 5° increments.

The Ohaus MB23 and MB27 Moisture Analyzers combine high quality durable construction and easy one button setup, making them ideal for operators of all skill levels. With a large backlit LCD crystal display, standard RS232 port, readabilities from 0.1%–0.05% and a choice of halogen on the MB27 or infrared heating on the MB23. These models offer flexibility for any budget (Models are CE, UL listed, CSA and FCC approved). Models **MB120, MB90, and MB27**: Net wt: 15 lbs, Ship wt: 19 lbs, Ship dims: 21" (L) x 16" (W) x 19" (H). Model **MB23**: Net wt: 7 lbs, Ship wt: 11 lbs, Ship dims: 20" (L) x 15" (W) x 16" (H).

Model	No. MB23	No. MB27	No. MB90	No. MB120
Readability	10mg/0.1%	1mg/0.01%	1mg/0.01%	1mg/0.01%
Capacity (g)	110	90	90	120
Heating Element	Metal (IR)	Halogen	Halogen	Halogen
Measurement Temperature (°C)	50–160	50–160	40–200	40–230
Drying Profiles/ Heating Programs	Standard	Standard	Standard, fast	Standard , fast, ramp, step
Shutoff Criteria	Manual, Timed or Auto (A60)	Manual, Timed or Auto (A60)	Manual, Timed or Auto (A60)	Manual, Timed, Auto (A30, A60, A90), AutoFree mg/s, or AutoFree %/s
Displayed Results	% Moisture (% MC), % Solids (% DC), weight (g)	% Moisture (% MC), % Solids (% DC), weight (g)	% Moisture (% MC), % Solids (% DC), weight (g)	% Moisture (% MC), % Solids (% DC), % Regain (% RG), weight (g)
Method Storage	1	1	2	100
Display	Backlit Segment	Backlit Segment	4.3' QVGA color, touch screen	4.3' QVGA color, touch screen
Languages	1	1	13	13
Interface	RS232	RS232	RS232, USB hostx2, USB device	RS232, 2 USB hostx2, USB device

$%RG = (Weight\ Loss) / Final\ Weight *0100$

**MB Series Moisture Analyzers**

- Digital Moisture Analyzer, 120V, 50/60Hz.....**No. MB120**
- Digital Moisture Analyzer, 220V, 50/60Hz..... **No. MB120/A**
- Digital Moisture Analyzer, 120V, 50/60Hz.....**No. MB90**
- Digital Moisture Analyzer, 240V, 50/60Hz.....**No. MB90/A**
- Digital Moisture Analyzer, 220V, 50/60Hz..... **No. MB27/A**

**Accessories**

- Digital Moisture Analyzer, 220V, 50/60Hz.....**No. MB23/A**
- Temperature Calibration Kit ..... **No. 11113857**
- Disposable Sample Pans, Qty. 50..... **No. 80850086**
- Reusable Sample Pans, Qty. 3 ..... **No. 80850088**
- Pads, Glass Fiber, Qty. 200 ..... **No. 80850087**



### All Purpose Laboratory Ovens

These ovens are competitively priced and offer exceptional value and reliability. They are fully equipped and designed to meet the laboratory needs of research organizations and schools. These low cost ovens are great for sample drying, conditioning, sterilizing, dehydrating, moisture testing and other general laboratory work.

Product description: sturdy steel construction, two nickel plated wire shelves adjustable at 1/2" increments (maximum), full-length, continuous hinge, 1" industrial rockwool insulation, thermostatically controlled, over-temperature protection, damper controlled induced air circulation, brushed stainless steel exterior, corrosion resistant galvanized steel interior. Red pilot light to indicate heater operation. Top mounted dial thermometer. Maximum temperature 200°C (392°F). See chart below for inside and outside dims.



LO201C

Model	Work Space		Outside Dimensions (W x D x H)	Max Temp	Shelves	Insulation	Watts	Approximate Ship Weight
	Dimensions (W x D x H)	Volume (Cubic Feet)						
No. LO201C*	12" x 10" x 10"	0.7	14" x 12" x 19"	200°C	2	1"	800	38 lbs
No. LW201C*	18" x 12" x 16"	2	20" x 14" x 25"	200°C	2	1"	1600	72 lbs

\*Not for use with flammable solvents or vapors.

#### Laboratory Oven Options

- Small Laboratory Oven, 120V, 50/60Hz..... No. LO201C
- Small Laboratory Oven, 240V, 50/60Hz.....No. LO201C/A
- Large Laboratory Oven, 120V, 50/60Hz.....No. LW201C
- Large Laboratory Oven, 240V, 50/60Hz.....No. LW201C/A

#### Accessories and Replacement Parts

- Additional Shelf for LO201C .....No. LO201CS
- Additional Shelf for LW201C..... No. LW201CS
- Heating Element, 120V..... No. L120
- Heating Element, 240V..... No. L240
- Replacement Dial Thermometer, 10°–290°C (50°–550°F).....No. L201CT
- Thermostat .....No. THRMSTT

### Mechanical Convection Ovens

Seedburo microprocessor-controlled ovens are ideally suited for routine day to day work, providing the ideal drying solution for research institutions. These forced air convection ovens feature a multispeed fan system for improved performance. Excellent choice when temperature uniformity and control are important considerations. Featuring an easy-to-use touch button control with a large digital display, able to store up to 10 programs, built in timer, RS232 output, stainless steel interior and powder-coated steel exterior, high-quality insulation of 2" thickness and an airtight design that prevents the escape of vapors and heat loss. Over temperature shutoff sounds an audible alarm to ensure samples will never overheat, supplied with two (2) stainless steel wire shelves. All models provide temperature uniformity of ±2.0°C and temperature stability of at least ±0.25°C. Temperature range 50°C–330°C (122°F–626°F). Available in 120V/60Hz or 230V, 50–60Hz, CE marked. See chart below for inside and outside dims.



FAA330

Model	Work Space		Outside Dimensions (W x D x H)	Max Temp	Shelf Positions	Insulation	Watts	Approximate Ship Weight
	Dimensions (W x D x H)	Volume (Cubic Feet)						
No. FAA330*	14" x 13" x 20"	2.2	21" x 28" x 28"	330°C	13	2"	1400	126 lbs
No. FAC330*	18" x 20" x 28"	5.9	25" x 29" x 36"	330°C	19	2"	3060	190 lbs

\*Other sizes and styles available, please call us for more information.

- Mechanical Convection Oven, 1400 Watt, 2.2 Cubic Feet, 120V, 60Hz ..... No. FAA330
- Mechanical Convection Oven, 1400 Watt, 2.2 Cubic Feet, 230V, 50/60Hz.....No. FAA330/A
- Additional Shelf for FAA330.....No. FAA330S
- Mechanical Convection Oven, 3060 Watt, 5.9 Cubic Feet, 230V, 50/60Hz.....No. FAC330
- Additional Shelf for FAC330..... No. FAC330S



### Hay, Grain and Silage Moisture Testers

Excellent system to determine moisture and dry matter content in hay, haylage, silage, high-moisture grains, nuts, total mixed rations, wet distiller's grains, wood chips and much more. Most drying times vary from 15–85 minutes, depending on commodity. Forage tests are normally taken in under 30 minutes. Accurate to 0.1% moisture content from 0–85%; operates by removing moisture from original sample and weighing the product to determine moisture loss. A complete package consist of a stainless steel testing unit that furnishes controlled heat and a built-in auto shut-off timer, a specimen container to dry the sample, a clear-plastic sample bowl to weigh all samples and a digital scale that reads in grams. Operates on 3-AA batteries (included) AC adapter 120V or 220V, 50/60Hz (included). Net wt: 6 lbs, Actual dims: 8" (L) x 8" (W) x 9" (H), Ship wt: 13 lbs, Ship dims: 26" (L) x 12" (W) x 12" (H).

- Silage Tester Complete Package, 110V/60Hz .....**No. BHT6071**
- Silage Tester without Scale and Bowl, 110V/60Hz.....**No. BHT6071-L**
- Silage Tester Complete Package, 220V/50Hz .....**No. BHT6072**
- Silage Tester without Scale and Bowl, 220V/50Hz.....**No. BHT6072-L**
- Replacement Digital Scale, 2000g x 1g, 120V or 220V, 50/60Hz .....**No. CS2000**
- Replacement Blue Triangular Sample Pan .....**No. 64BP**



### Drill and Push Type Hay Samplers

The last hay and forage probe you will ever need! The Hay Bale Probe is used to obtain samples of forage and crops from bales and baleage. The stainless steel probe includes a cleverly designed bagging system and custom clean-out rod. You simply attach your 1/2" corded or cordless drill for aggressive cutting action of the serrated tip on the 18", 24" or 36" sampler. The cleanout rod pushes approximately 20" long core samples into a 1 gallon zip-lock bag, which is suspended from the durable ABS collection shield included with your sampler. Sampling rods are made of stainless steel with a serrated cutting tip that can be re-sharpened. (Samplers do not include drills). **No. BHP550C and No. BHP550CP:** Ship wt: 4 lbs, Ship dims: 24" (L) x 9" (W) x 6" (H). **No. BHP550C24:** Ship wt: 5 lbs, Ship dims: 30" (L) x 9" (W) x 6" (H).

- Bale/Hay Drill Probe Type Sampler, 18" .....**No. BHP550C\***
- Bale/Hay Drill Probe Type Sampler, 24" .....**No. BHP550C24\***
- Bale/Hay Push Type Sampler, 18" ..... **No. BHP550CP**
- Replacement Tip, Stainless Steel..... **No. BHPT**

*\*Probe available in 36"; please call us for more information.*



### Seedbuero Desiccators

Seedbuero desiccators are used for fast, efficient drying of prepared samples and as anaerobic culture jars. Desiccants such as sulfuric acid, phosphorous pentoxide, calcium chloride and silica gel can be used repeatedly and safely in our jars. For sustained vacuum storage, all of the lid and jar ground contact surfaces should be cleaned thoroughly and greased with a silicone-based vacuum grease, offered below.

Each desiccator is supplied with a porcelain plate. Ship wt: 23 lbs, Ship dims: 15" (L) x 15" (W) x 19" (H). **Plate only:** Ship wt: 3 lbs, Ship dims: 15" (L) x 15" (W) x 4" (H).

Inside Diameter	Approximate Height	Approximate Depth	Plate Diameter	Catalog No.
200mm	315mm	125mm	190mm	<b>No. SD200</b>
250mm	315mm	130mm	230mm	<b>No. SD250</b>
Plate Only	--	--	190mm	<b>No. SD200P</b>
Plate Only	--	--	230mm	<b>No. SD250P</b>
Silicone Grease	--	--	5.3 oz Tube	<b>No. SD200G</b>

### Drierite Indicating Desiccant

This desiccant is made from gypsum (calcium sulfate) and is designed as an all-purpose drying agent. As it absorbs moisture, the desiccant changes from blue to pink in color and can absorb 6–10% of its weight in water, depending upon the relative humidity. **No. SD1:** Ship wt: 4 lbs, Ship dims: 13" (L) x 11" (W) x 7" (H). **No. SD5:** Ship wt: 10 lbs, Ship dims: 13" (L) x 13" (W) x 13" (H).

- Seedbuero Drierite Indicating Desiccant, 1 lb Jar, 8 Mesh..... **No. SD1**
- Seedbuero Drierite Indicating Desiccant, 5 lb Jar, 8 Mesh..... **No. SD5**



### Seedbuero Sample Containers, Gill Style

Ideal for sample preparation while performing oven drying procedures, sample storage and various other applications. Made of tin plate, seamless, with slip-on cover. SSC4 is 4 oz capacity, 2 3/8" (D) x 1 3/4" (H). (60mm x 40mm) SSC6 is 6 oz capacity, 2.9" (D) x 1.9" (H) (73.6mm x 48.26mm). Ship wt: 3 lbs, Ship dims: 11" (L) x 11" (W) x 4" (H).

- Gill Style Container, 4 oz (pkg./12) ..... **No. SSC4**
- Gill Style Container, 6 oz (pkg./12) ..... **No. SSC6**



### Seedbuero Tongs

All-purpose laboratory tongs for holding, manipulating and pouring, as well as for picking up hot objects, such as Gill Containers. Ship wt: 1 lb, Ship dims: 11" (L) x 6" (W) x 5" (H).

- Tongs, 9" Stainless Steel Serrated Points with Long Neck ..... **No. 57085**

### Ohaus HT Bead Lysing Mill Homogenizer

The bead mill homogenizer is a great piece of equipment to quickly and accurately prepare your samples for testing. The HT lysing homogenizer has 5 preset programs on the control panel for efficiently and actually running the same style of tests or in the same sequence. This is a great tool for training temporary employees or simplifying the process for full-time employees. The HT Lysing Bead Homogenizer is flexible in handling multiple Ohaus sample tubes as well as other brands. Up to 4 microplates at a time or 1 deep-well plate can also be used in the homogenizer. The speed range is 300–1600 RPM with a motion reciprocal of 31mm. The timer goes to 10 minutes in 1-second increments, and the maximum capacity is 300g. Net wt: 59 lbs, Actual dims: 17.5" (L) x 11.3" (W) x 20.4" (H), Ship wt: 84 lbs, Ship dims: 23" (L) x 17" (W) x 26" (H).



HT Lysing Bead Mill Homogenizer ..... No. HOHTDG

#### Accessories (Optional)

Green, Plant, 2 ml skirted tube, DNase/Rnase free, 3mm Zirconium Beads, 100/Box ..... No. 30391408  
 Brown, Environmental, 2 ml skirted tube, Dnase/Rnase free, 3mm Zirconium Beads, 100/Box ..... No. 30391410  
 Tube Rack, 25 x 2 ml Tubes, 2 per pack..... No. 30391431

### Frontier 5000 Series Multi Pro Centrifuges

The 5000 series centrifuges are powerful, versatile and can be used in every lab application. These multi purpose centrifuges offer a high-speed centrifugation platform, which can be customized to fit workflow needs using a wide variety of rotors and accessories. Some applications for the centrifuges would be chemical separation, diagnostics, centrifugal separation, cell pelleting, general sample preparation, protein separation, nucleic acid separation and much more. All of the centrifuges come with a backlit liquid crystal display (LCD), corrosion-resistant stainless steel chamber with a polycarbonate ABS plastic lid. The centrifuges have ten acceleration and deceleration rates, selection of running time from 10 seconds to 99 hours 59 min or continuous, quick spin, CFC-free refrigeration system, sample temperature.



FC5515

Model	Speed Range	Temperature Range	Max G-Force	Capacity	Dimensions (LxWxH)
No. FC5515	200–15,200 RPM	Air Cooled	21,953g	12 x 5 ml; 4x8 place PCR Strips	15.43" x 11.3" x 11.5"
No. FC5515R	200–15,200 RPM	20–40°C	21,953g	12 x 5 ml; 4x8 place PCR Strips	21.85" x 11.3" x 11.5"
No. FC5714	200–14,000 RPM	Air Cooled	18,624g	4 x 100 ml	19.4" x 14.25" x 14.25"
No. FC5718	200–18,000 RPM	Air Cooled	23,542g	4 x 100 ml	19.65" x 16.06" x 13.82"
No. FC5718R	200–18,000 RPM	20–40°C	23,542g	4 x 100 ml	28.78" x 16.02" x 14.13"
No. FC5816	200–15,000 RPM	Air Cooled	21,379g	6 x 250 ml	21.18" x 21.18" x 13.94"
No. FC5816R	200–16,000 RPM	20–40°C	24,325g	6 x 250 ml	21.18" x 28.46" x 28.46"

Accessories	Model	Accessories (Continued)	Model
Rotor, Swing out, 4 x 250 ml, ID	No. 30314820	Rotor Swing out, 4 x 100ml, ID, Sealable	No. 30314823
Rotor Swing out, 4 x 100 ml, ID	No. 30314822	Rotor, Angle, 4 x 85 ml RB, ID	No. 30314827
Rotor, Swing out, 2 x 3MTP, ID	No. 30314824	Rotor, Angle, 10 x 50 ml FA, ID	No. 30314829
Rotor, Angle, 6 x 85 ml RB, ID	No. 30314826	Rotor, Angle, 6 x 50 ml RB/FA, ID	No. 30314830
Rotor, Angle, 30 x 15 ml RB/FA, ID	No. 30314832	Rotor, Angle, 24 x 1.5/2.0 ml, ID, Sealable	No. 30304361
Rotor, Angle, 24 x 1.5/2.0 ml, ID	No. 30314838	Rotor, Angle, 30 x 1.5/2.0 ml, ID, Sealable	No. 30314836

**Seedbuero Computer Grain Scale**



★ MADE IN USA

9000AG with 64BP sample pan



The Seedbuero 9000AG, Digital Computer Grain Scale is the industry leader in grain grading scales. The 9000AG balance appears on the USDA-AMS/FGIS approved equipment list. With the 9000AG you can calculate dockage (foreign material) percentage, test weight results in pounds per bushel or kilograms per hectoliter and gram weight. The scale has a built-in memory that allows sample weights to be stored and recalled, which makes calculation of percentage effortless. The scale has a capacity and readability of 2000g x 0.2g and can read to 0.01" lbs/bu, kg/hl and % mode. Other features on the 9000AG let the user set-up procedures of standard or reciprocal percentage modes, cups selection (quart, pint or liter), active/frozen percent and test weight selection. The 9000AG is NTEP certified and features a serial interface which lets you connect it to your printer or computer. Scale includes a **No. 64BP** blue plastic triangular sample pan and has a smaller foot print than past models. The 9000AG comes with a 2-year manufacturers' warranty. Net wt: 7.2 lbs, Actual dims: 11 1/4" (L) x 8 1/4" (W) x 3 5/8" (H), Ship wt: 10 lbs, Ship dims: 14" (L) x 12" (W) x 9" (H).

Computer Grain Scale, 115V, 50/60Hz .....	<b>No. 9000AG</b>
Computer Grain Scale, 220V, 50/60Hz .....	<b>No. 9000AG/A</b>
Calibration Weight Set (Includes Two 1000 gram Stainless Steel Weights).....	<b>No. WT88</b>
Replacement Sample Pan .....	<b>No. 64BP</b>

**Ohaus Grain Grading Scales**



AX4202N/EGN



The Ohaus Adventurer Pro Grain Grading Scale has been designed to provide a durable, high-precision testing scale for use in both commercial and FGIS applications. The AX4202N/EGN is NTEP certified and features functions for test weight and dockage (FM) readability to 0.01%.

Standard features include easy to use operation with full color graphic LCD, English prompts and simple four key operation. The test weight and dockage modes have dedicated key functions to speed use. The Adventurer Pro can be used for simple weighing, test weight, and both standard and reciprocal dockage modes. The AX4202N/EGN will read in pounds per bushel with a quart or pint cup and kilos per hectoliter with a liter or half-liter cup. Capacity 4200g x 0.01g (non-approved mode) or 0.0[1] for approved applications. Scale includes **No. 64BP** blue plastic triangular sample pan. Net wt: 8.6 lbs, Actual dims: 9.1" (L) x 13.9" (W) x 4.0" (H), Ship wt: 13 lbs, Ship dims: 16" (L) x 22" (W) x 12" (H).

Also available is the **No. AX622N/E** Adventurer Pro, which is NTEP certified and approved for use by FGIS for large and small grains damage use. Capacity is 620g x 0.01g with a 7.7" x 6.9" pan size. Net wt: 11 lbs, Actual dims: 10" (L) x 7.6" (W) x 2.8" (H), Ship wt: 14 lbs, Ship dims: 22" (L) x 16" (W) x 13" (H).

Ohaus Grain Grading Scale, 110V, 50/60Hz .....	<b>No. AX4202N/EGN</b>
Ohaus Grain Grading Scale, 220V, 50/60Hz .....	<b>No. AX4202N/EGNA</b>
Ohaus Grain Damage Scale, 120/240V, 50/60Hz .....	<b>No. AX622N/E</b>
Replacement Sample Pan .....	<b>No. 64BP</b>

**Seedbuero Filling Hopper and Stand**



★ MADE IN USA

151 with optional cups and strike-off stick

The Seedbuero Filling Hopper and Stand is designed for the accurate filling of volumetric cups for bulk density measurement. The 151 meets the specifications of the USDA-AMS/FGIS for official inspection. The filling hopper is a heavy gauge brass spinning with a slide gate valve for instant release of grain. The opening is a standard 1 1/4" diameter. Adjustment of the hopper can be made to the proper 2" height above any cup. The heavy cast base has wide spread legs that allow for the overflow pan and provide stability. Unit includes **No. 64P** plastic triangular sample pan. Cups sold separately. Ship wt: 15 lbs, Ship dims: 14" (L) x 14" (W) x 16" (H).

Seedbuero Filling Hopper and Stand (with 64P Pan and Strike-Off Stick).....	<b>No. 151</b>
Quart Cup (Official) .....	<b>No. 204</b>
Pint Cup .....	<b>No. 104</b>
Liter Cup .....	<b>No. 203</b>
Half Liter Cup (Canadian Standard) .....	<b>No. 103</b>
Strike-Off Stick (Official) .....	<b>No. 65</b>



### Portable Hectoliter Test Weight Kit

The Portable Hectoliter Test Weight Kit utilizes the European standard principal of weighing a known volume of grain and determining its bulk density in kilograms per hectoliter (kg/hl). The grain sample is dropped down a stainless steel chondrometer under the restriction of a falling weight. The sample is weighed and converted to kg/hl by use of a conversion chart (Rye, Barley, Oats, and Wheat only).

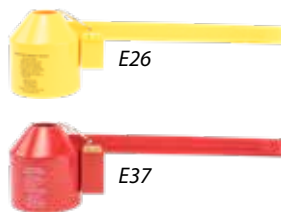
Each kit includes: stainless steel chondrometer (half liter), cylindrical weight (4.5Kg), digital balance, sample container, cut-off slide, conversion chart and instructions. Net wt: 7 lbs, Ship wt: 10 lbs, Ship dims: 21" (L) x 15" (W) x 11" (H).



Portable Hectoliter Test Weight Kit ..... **No. 1745**

### Seedburo Hand Type Density Testers

The Seedburo "Economy" Test Weight Scales are used to determine grain yield, bin capacities and feed and milling quality. Made of a durable molded plastic these units are ideal for on-farm and in the field use. Net wt: 2 lbs, Ship wt: 3 lbs, Ship dims: 20" (L) x 9" (W) x 9" (H).



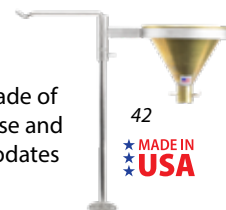
Seedburo hand testers give fast, accurate bulk density readings. Equipped with a sliding beveled poise and a heavy gauge cast anodized aluminum cup. Built to withstand rough use with constant accuracy. Cups should be filled using one of the filling devices shown below. Each unit includes a **No. 65** Strike-Off Stick. Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 6" (L) x 6" (W) x 15" (H).



Grain Test Weight Scale (lb/bu and kg/hl) ..... **No. E26**  
 Fertilizer Density Scale (lb/cubic ft. and kg/cu dm) ..... **No. E37**  
 One Quart Weight per Bushel Tester (lb/bu) ..... **No. 26**  
 One Liter Kilograms per Hectoliter Tester (kg/hl) ..... **No. 26M**  
 One Pint Weight per Cubic Foot Tester (lb/cubic ft.) ..... **No. 37F**

### Anchor Grain Testing Hopper

The Anchor Hopper provides an alternative method of filling density cups for testing. The hopper and cut-off valve are made of solid brass with a standard 1 1/4" grain stream opening. The main post can be fastened to table or counter for permanent use and centering of hopper over cup. Thumbscrew provides ready adjustment to proper 2" discharge height. A hanger accommodates the hand-held devices shown above. Net wt: 5 lbs, Ship wt: 6 lbs, Ship dims: 19" (L) x 13" (W) x 10" (H).



Anchor Grain Testing Hopper ..... **No. 42**

### Seedburo Cox Funnel

Funnel provides for uniform "fall" of grain into a density cup at the proper 2" height for standard bulk density. Funnel is placed on the lip of the cup and filled. Slide gate lets grain fill and overflow the cup for strike-off. Seedburo offers the USA cox funnel as well as the Canadian cox funnel. Made of powder coated mild steel. Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 15" (L) x 15" (W) x 9" (H).



US Cox Funnel with 1 1/4" Diameter Opening ..... **No. 29**  
 Canadian Version Cox Funnel with 1 1/2" Diameter Opening ..... **No. 29-CAN**

### Seedburo Digital Hand Type Density Tester

The HARVEST SMART Hand Held Digital Weight per Bushel Scale provides a portable and accurate method of measuring the density of your product right at the tailgate or directly from the bin. The built in scale allows the operator to see the digital display of the density in pounds per Winchester bushel (USA), pounds per Avery bushel (Canadian), kilograms per hectoliter (European), or pounds per cubic foot. Scale capacity of 3.0 lbs x 0.1 oz (1350g x 2.0g) provides a reliable and repeatable scale for easy test weight measurement. 9 volt alkaline battery included. Net wt: 6 lbs, Actual dims: 12" (L) x 4" (W) x 4" (H), Ship wt: 5 lbs, Ship dims: 15" (L) x 15" (W) x 5" (H).



Hand Held Digital Test Weight Scale ..... **No. 26HS**  
 Hands Free Stand ..... **No. 26HST**

**DELMHORST**  
TEMPERATURE AND MOISTURE TESTERS



G7

★ MADE IN  
★ USA

**Grain and Hay Moisture Tester**

The G7, distributed by Seedbuero, is a rugged moisture meter for testing grain at harvest time or while in storage. It has built-in correction factors for Barley, Coffee, Corn, Flax, Hay, Oats, Rapeseed, Rough Rice, Rye, Sorghum, Soybeans, and Wheat. The integral double-disc electrode cup holds 3–4 grams, allowing for more uniform sampling and providing accurate and repeatable readings. The G7 measures moisture content over the range of 9%–30%, depending upon the grain, and corrects for temperature over the range of 32°F–160°F (0°C–70°C). You can even attach optional accessories to check moisture in bulk material like hay or granular material like flour. The G7 also stores up to 150 readings in memory and provides useful statistics like the average or highest readings, as well as standard deviation and co-efficient of variance. Finally, the meter has

a programmable offset in order to match other moisture testers and an adjustable audible alarm. Uses 9V battery. Actual dims: 7¼" (L) x 6" (W) x 5½" (H), Ship wt: 7 lbs, Ship dims: 15" (L) x 15" (W) x 9" (H).

Moisture Meter with Sample Cup for Grain .....	No. G7
Optional Case .....	No. G7/CASE
Optional Smooth Disc Upper Electrode Assembly for Testing Flour .....	No. 315ELE-0024
Optional Sample Cup for Flour.....	No. 313CUP-006
Brush for Cup Cleanout.....	No. 303BRU-0002
Replacement Heavy Duty Upper Electrode Assembly (Serrated Disc) .....	No. 1900

**Optional Electrodes**

Electrode Handle Must Be Used with the Following Prods.....	No. H4	Short Pin Prod (for Chopped Hay, Windrows) .....	No. 831
10" Prod – Not Attachable Directly to Meter (for Baled Hay).....	No. 830-2	Long Pin Prod (for Seed and Grain in Bags) .....	No. 832



C2000

★ MADE IN  
★ USA

**Cotton Moisture Tester**

The C2000 tests moisture content in lint cotton, seed cotton or bales. It is compact, portable and easy to use. Ideal for determining moisture content not only during the ginning process, but also when buying or selling cotton. The C2000 measures moisture in ranges: 4–16% for lint cotton and 6–20% in seed cotton. Finally, the meter has an audible, adjustable alarm and stores up to 150 readings in memory. Tester operates on one 9V battery (included). **Meter:** Actual dims: 8" (L) x 3" (W) x 1½" (H).

**With All 3 Electrodes:** Ship wt: 6 lbs, Ship dims: 15" (L) x 15" (W) x 6" (H).

Cottonseed Tester (Less Electrodes) with Carrying Case .....	No. C2000
Cup Electrode for Lint or Seeds.....	No. 52EC
Long Pin Electrode, 2-pin Electrode, Used for Bales, 9½" Insulated Pins, with 8¼" Penetration .....	No. 30EC
Short Pin Electrode, 8-pin Electrode, Used for Yarn, 1½" Pins with 1" Penetration.....	No. 37EC
Electrode, 36" Long with T-handle .....	No. 830TC



★ MADE IN  
★ USA

Back: 324CAS-0085,  
Front (from left to right): TM100,  
SH44, TS107

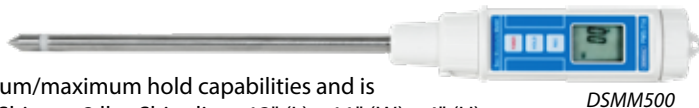
**Digital Electronic Thermometer**

The TM100 is ideal for penetrating samples in bins, trucks or any receiving vessel. This dual range digital thermometer measures temperature from -40°F to 300°F (-40°C to 150°C). Response time is fast, needing only 2 minutes for 63% excursion and 4–5 minutes for full excursion. Unit features 3½" LCD readout and membrane switches with positive tactile feel. The TM100 comes complete with: one TM100 meter, one TS-107 sensor, one SH44 handle, three PE22 3 ft. extensions, carrying case and 9V battery. Actual dims: 2¾" (L) x 1¾" (W) x 4¾" (H), Ship wt: 7 lbs, Ship dims: 41" (L) x 9" (W) x 9" (H).

Digital Thermometer Complete .....	No. TM100
Extra 3 Foot Extension .....	No. PE22
Extra Handle .....	No. SH44
Extra Sensor, 3½" Aluminum with Stainless Steel Tip (for Solids).....	No. TS107
Optional Sensor, 5" Stainless Steel Tip (for Liquids) .....	No. TS102
Carrying Case for TM100 .....	No. 324CAS-0085

### Seedburo Precision Soil Moisture Probe

This heavy-duty, easy to use moisture meter provides accurate moisture content on soils in a range of 0–50%. The unit is 14.7" long overall, with a durable stainless steel 8" probe tip, easy to read digital LCD display, minimum/maximum hold capabilities and is IP-65 water resistant. Meter is powered by 4-AAA batteries (not included). Ship wt: 2 lbs, Ship dims: 13" (L) x 11" (W) x 4" (H).

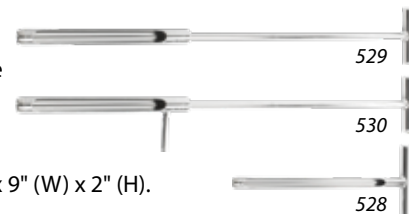


DSMM500

Precision Digital Soil Moisture Probe .....No. DSMM500

### Seedburo Soil Samplers

The Seedburo Soil Samplers draw a soil core approximately 3/4" in diameter using a tapered cutting tip. This enables the core to rise in the tube without breakage as the sampler is pushed into the soil. Both the cutting tip and the tube are heat-treated to increase rigidity and strength of the probe. This keeps the cutting edge from bending when hitting hard objects. Each probe is supplied with a replaceable, screw-on cutting tip (S-2) other types of tips available. Model 530, foot rest is about 10 1/4" from tip. **Model 528:** Ship wt: 2 lbs, Ship dims: 20" (L) x 8" (W) x 2" (H). **Models 529 and 530:** Ship wt: 3 lbs, Ship dims: 37" (L) x 9" (W) x 2" (H).



#### Sampler Options

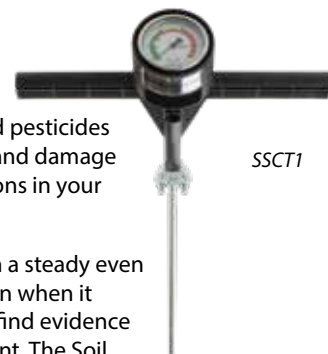
Soil Sampler, 19" Overall Length.....No. 528  
 Soil Sampler, 36" Overall Length.....No. 529  
 Soil Sampler with Footstep, 36" Overall Length.....No. 530

#### Replacement Tips

For Dry Soils.....No. S-1  
 For Moist Soils (Supplied with All Models).....No. S-2  
 For Wet Soils .....No. S-3  
 For Wet and Stony Soils (Heavy Duty).....No. S-4  
 Serrated Tip .....No. S-5

### Soil Compaction Tester

Soil compaction can be a serious and expensive problem. Severely compacted soil is difficult to work with and can lead to poor root and plant development. Compaction restricts efficient water management by limiting the ability of plants to take up water and nutrients from the soil. A compacted zone can also make fertilizers and pesticides difficult to utilize. If not absorbed, they can easily wash away. If trapped near the surface, they can concentrate and damage crops. The Seedburo Soil Compaction Tester enables you to identify areas of compaction and recognize conditions in your field. You get quick answers about your tillage program.



SSCT1

Test soil in early spring when moisture content is relatively high and drive the tester slowly into the ground with a steady even pressure. Record the pressure at different levels, specifically noting the levels where pressure increases and again when it decreases. Perform several tests in the same area for better results and test in several different areas. When you find evidence of compaction, dig to the depth of the indicated compaction to find any evidence of abnormal root development. The Soil Compaction Tester is constructed of a rugged molded housing and handle with an easy-to-read, color-coded stainless steel dial that's liquid filled to reduce shock. Stainless steel rod has depth markings at 3, 6, 9, 12, 15 and 18 inches. Measures in pounds per square inch. Net wt: 3 lbs, Ship wt: 5 lbs, Ship dims: 42" (L) x 13" (W) x 4" (H).

Soil Compaction Tester.....No. SSCT1

### Soil Moisture Meter

Our Soil Moisture Meter and Gypsum Blocks accurately indicate the soil moisture available to your plants. This system eliminates guesswork so that irrigation can be effectively scheduled according to the plants requirements. The KSD1 reads moisture over a range of 0.1–15 Bars Tension. The unit features a built-in calibration check and rugged construction that incorporates transistorized circuitry for long battery life and reliability. Blocks are made of gypsum, cast around two concentric, stainless steel electrodes. GB-1 measures 7/8" (D) x 1 1/8" (H). Operates on a single 9V battery (included). Tester is provided with carrying case. Net wt: 12 oz, Actual dims: 2 3/4" (L) x 4 3/4" (W) x 1 3/4" (D), Ship wt: 3 lbs, Ship dims: 13" (L) x 11" (W) x 7" (D).



Left to right: KSD1, GB1

Soil Moisture Tester and Case .....No. KSD1  
 Gypsum Block with 6 Foot Lead Wire, Each .....No. GB1  
 Gypsum Block with 25 Foot Lead Wire, Each.....No. GB2  
 Gypsum Block with 50 Foot Lead Wire, Each.....No. GB3



### UDY Cyclone Sample Mill

The UDY Mill is designed for rapid uniform grinding of a wide variety of feeds, grains, fertilizers and forages with complete recovery of the sample and no thermal degradation. The air flow provides self cleaning action and minimum temperature rise. The Cyclone Mill is shipped complete with 3 collection bottles with snap caps, 2 hex wrenches, anti-static solution, clean-out brushes and 0.5mm screen. Also available is a forage cover, which permits feeding forages, leaves and wood chip samples directly into the mill without preliminary grinding. Net wt: 28 lbs, Actual dims: 10<sup>1</sup>/<sub>3</sub>" (L) x 10<sup>1</sup>/<sub>3</sub>" (W) x 18<sup>1</sup>/<sub>2</sub>" (H), Ship wt: 37 lbs, Ship dims: 15" (L) x 15" (W) x 20" (H).

- UDY Mill, ¾HP, 110V, 50/60Hz, Joined Belt Drive..... No. 3010SM/B
- UDY Mill, ¾HP, 220V, 50/60Hz, Joined Belt Drive..... No. 3010SM/C
- UDY Mill, with Forage Cover Included, 110V, 50/60Hz, Joined Belt Drive..... No. 3010SM-F/B
- UDY Mill, with Forage Cover Included, 220V, 50/60Hz, Joined Belt Drive..... No. 3010SM-F/C



### Sample Feed Controller

The Feed Controller introduces coarse sample material into the Cyclone Sample Mill. A 30–40 gram sample is poured into the hopper and is immediately conveyed, by a rotating screw, into the mill. Larger quantities (several pounds) may be handled by using a poly bag in place of the regular sample bottle. The switch has both a forward and reverse rotation control and a neutral or off position. Feed rate is 3 grams per second. The Feed Controller is designed to fit on all UDY Mills and can be installed without tools. Net wt: 3.3 lbs, Ship wt: 5 lbs, Ship dims: 10" (L) x 10" (W) x 6" (H).

- Sample Feed Controller, 13 RPM, 115V/60Hz (for Soybeans)..... No. 3010FC/B
- Sample Feed Controller, 53 RPM, 115V/60Hz..... No. 3010FCS/B
- Sample Feed Controller, 42 RPM, 220V/50Hz..... No. 3010FC/C

### Accessories and Replacement Parts

Screens are available in steel and stainless steel with a range of sizes from .25mm to 3.00mm

- |   |   |
|---|---|
| Screen Steel, 1.00mm.....No. 30-0302  | Air Outlet Filter Assembly.....No. 30-0307          |
| Screen Steel, 2.00mm.....No. 30-0318  | Air Outlet Filter Media .....No. 30-0308            |
| Screen Stainless Steel, 0.5mm .....No. 30-0499                              | Joined Belts (Set of 2).....No. 35-0433             |
| Plastic Collection Bottle, 150ml.....No. 35-0463                            | Impeller Aluminum Finished.....No. 30-0316          |
| Glass Collection Bottle, 120ml (36 per Case) .....No. 35-0390               | Copper Grinding Ring.....No. 30-0335                |
| Collection Bottle Kit (2ea Glass 120ml & 1ea Plastic 150ml).... No. 30-0387 | Forage Cover with Gasket and O-Ring.....No. 30-0367 |



### Stein Mill

The Stein Mill is a powerful, high speed grinder extractor for lab use. The mill features a direct top drive ½HP motor with a speed of approximately 15,000 RPM, 700 watt, no load. The cutter blade is machined cast aluminum with carbide cutting surface. The cutter blade and shaft are easily accessible and may be washed and dried quickly without removal from the mill. The blade may be removed and replaced when dulled. It also includes a 15 minute automatic reset timer with auto cut-off safety feature. Usable Cup Capacity - grinding solids: 20cc–500cc. Blending solids and liquids: 40cc–400cc. **Cup Size:** 3<sup>1</sup>/<sub>2</sub>" x 3<sup>5</sup>/<sub>8</sub>". **No. M2/B:** Net wt: 26 lbs, Actual dims: 19" (H), Ship wt: 52 lbs, Ship dims: 17" (L) x 17" (W) x 24" (H), Shipped in a wooden crate.

- Stein Mill, ½HP, 110V, 60Hz..... No. M2/B
- Stein Mill, ½HP, 220V, 50Hz..... No. M2/C
- Replacement Cup.....No. 196
- Replacement Blade, ½" Carbide Surface ..... No. 1975
- Replacement Blade, 1" Carbide Surface.....No. 1975-1



### Perten Laboratory Mill 3100

The Lab Mill 3100 is a hammer type cyclone mill, built into a soundproof casing. An airflow feeder regulates feeding of a sample into a metallic grinding chamber. A hardened steel hammer rotates at high speed, forcing the sample through a stainless steel sieve. The fine, homogeneous sample is separated from the air in a cyclone and collected in a quick release stainless steel container. The cyclone principle makes the mill self-cleaning and thus cleaning between samples is not normally required. Included is the standard sieve (0.8mm) which is used for Falling Number, Glutomatic/Gluten Index and NIRanalyses. Sieves are available from 0.5–2.0mm.



The standard mill is approved for three major tests:

**Falling Number Test:** To determine the alpha-amylase activity in wheat and rye.

**Glutomatic/-Gluten Index Test:** To determine wet gluten quantity and quality.

**NIR-Analysis:** To determine protein, fat, hardness, ash and moisture after grinding.

Operation is belt drive, 1:6, 16,800 RPM. Capacity is 300g in 30–50 seconds depending on moisture content. Net wt: 115 lbs, Actual dims: 22" (L) x 21" (W) x 25" (H), Ship wt: 147 lbs, Ship dims: 25" (L) x 19" (W) x 27" (H).

Perten Lab Mill 3100 115V, 60Hz, 1PH .....	No. PLM3100/B	Sieve .8mm .....	No. PLM310230
Perten Lab Mill 3100 230V, 50Hz, 1PH .....	No. PLM3100/C	Sieve 1.0mm .....	No. PLM310231
Sieve .5mm .....	No. PLM310234	Sieve 2.0mm .....	No. PLM310233

### Perten Laboratory Mill 3600

Laboratory Mill 3600 is a disc type mill designed to grind pellets and large size grains for oven and NIR moisture tests. The sample is rapidly crushed between sharp steel discs and collected in a quick release plastic sample cup. The disc design and the rapid grinding minimize heat development. Loss of water is thus virtually eliminated. Typical sample size is 10–250g. Sample cup size 500ml. Laboratory Mill 3600 is delivered with Type 1 standard disc. Disc diameter 100mm. Net wt: 75 lbs, Actual dims: 18" (L) x 8" (W) x 23" (H), Ship wt: 90 lbs, Ship dims: 20" (L) x 16" (W) x 21" (H).



Perten Lab Mill 3600 115V, 60Hz, 1PH .....	No. PLM3610/B
Perten Lab Mill 3600 230V, 50Hz, 1PH .....	No. PLM3610/C
Extra Cup with Lid .....	No. PLM3600EC
Type 1 Standard Disc .....	No. PLM3610T1
Type 4 Coarse Disc .....	No. PLM3610T4
Type 5 Fine Disc .....	No. PLM3610T5

### Romer Sampling Mills

The durable lab mill is designed to subsample each kernel or coarse feed particle as it is ground. This is the only mill available that combines these two steps into one patented labor saving piece of equipment. The simultaneous process ensures proper sample preparation which is essential to obtaining accurate test results. Both mills can grind and subsample a 2 lb sample per minute. Easy cleaning prevents sample cross-contamination.

Series II Mill is a long lasting powerful mill developed specifically for Mycotoxin analysis. It can also be used for preparation of samples prior to analysis of moisture, proteins, fat, fiber and pesticides. This mill is referenced by USDA-AMS/FGIS as an Approved Equipment for sample preparation. Specifically designed for grains and small pellet feeds. Net wt: 68 lbs, Actual dims: 18" (L) x 12" (W) x 26" (H), Ship wt: 76 lbs, Ship dims: 24" (L) x 15" (W) x 36" (H).



RAS Mill special features include the availability of 2 chute options, a standard single chute for collection of total sample or the "V" chute to split the sample into two sample streams for separate portions. Standard deflector chute included with mill. Specifically designed for products that are difficult to grind due to high moisture +/- or high oil content, such as cottonseed, tree nuts, peanuts or for most pet/animal feed pellets or raw ingredients. CE marked. Net wt: 125 lbs, Actual dims: 28" (L) x 18" (W) x 25" (H), Ship wt: 137 lbs, Ship dims: 32" (L) x 21" (W) x 29" (H).



Series II Mill, 115V .....	No. EQMMS2010
Series II Mill, 230V .....	No. EQMMS2015
RAS Mill, 115V .....	No. EQMMR1010
Optional V Chute for RAS Mill .....	No. EQMMP1240



**Bunn® Grinding Mill**

The Bunn Grinder is used for the preparation of corn and other grain samples for procedures such as Mycotoxin testing. The large capacity hopper holds up to 3 lbs of Corn for efficient grinding of large sample lots. The turbo action draws the sample through the grinding chamber for greater grinding efficiency and will process approximately two pounds of corn per minute. Selectable grind range from coarse to fine. A convenient cleaning lever ensures complete clean out from the grinding chamber. The Bunn Grinder is built with a dependable ¾HP motor which powers the heavy duty precision fine burrs for a quality grind that cuts the kernel rather than crushes it. Burrs carry a 4-year warranty. Unit draws 9 amps and therefore power requirements are for a minimum 15 amp circuit. Net wt: 50 lbs, Actual dims: 17" (L) x 8" (W) x 28" (H), Ship wt: 56 lbs, Ship dims: 23" (L) x 14" (W) x 33" (H).

- Bunn Grinding Mill, HD Black Commercial, 120V, 60Hz..... **No. 22100**
- Burr Set Kit, Complete ..... **No. 5861**

22100 with Corn sample

**Seedbuero Electric Grinding Mill**

Seedbuero's Electric Grinding Mill offers a fast means for grinding your product. The unit is powered by a 1/3HP motor with an output speed of 90 RPM. Ideal for the laboratory or mill house, this grinder features the same type of "grinding head" as the Seedbuero hand grinder mounted on a high speed motor for faster and more consistent results. Output capacity of most products is 40 lbs/hour. The maximum fineness depending on product and moisture content: 100 mesh. Hopper size: 4½" W x 5" D. Counter top to discharge height: 6". (230V model with gear box drive).



**115V Unit:** Net wt: 55 lbs, Actual dims: 25" (L) x 8" (W) x 12" (H). Ship wt/dims: **Carton 1 (Base):** 51 lbs, 20" (L) x 12" (W) x 12" (H). **Carton 2 (Head):** 12 lbs, 14" (L) x 11" (W) x 11" (H).



**230V Unit:** Net wt: 65 lbs, Actual dims: 28" (L) x 8" (W) x 12" (H). Ship wt/dims: **Carton 1 (Base):** 71 lbs, 24" (L) x 12" (W) x 12" (H). **Carton 2 (Head):** 12 lbs, 14" (L) x 11" (W) x 11" (H). Also Available in Stainless Steel.

- Grinding Mill with Both Feeds, 115V, 60Hz.....**No. 438B/B**
- Grinding Mill with Tooth Feeds, 115V, 60Hz.....**No. 438T/B**
- Grinding Mill with Worm Feeds, 115V, 60Hz..... **No. 438W/B**

- Grinding Mill with Both Feeds, 230V, 50Hz.....**No. 438B/C**
- Grinding Mill with Tooth Feeds, 230V, 50Hz.....**No. 438T/C**
- Grinding Mill with Worm Feeds, 230V, 50Hz..... **No. 438W/C**



**Seedbuero Hand Grinder**

The Seedbuero Hand Grinder features an adjusting screw to set the grinder to a wide range of fineness. The unit is made of high grade cast iron with an approximate capacity hopper of 2 lbs. Interchangeable feeds available. Tooth feed for dry grinding or worm feed for wet and/or oily grinding. This grinder is ideal for preparing soft or hard grains for cereal and bread, grinding Corn for Aflatoxin testing or for general purpose grinding on a wide variety of commodities such as commercial grains, Coffee beans, Peanuts and other nuts, meats, etc. Seedbuero Hand Grinders are used by government experiment stations, research laboratories and many grain elevators, feed mills and flour mills. Net wt: 12.5 lbs, Ship wt: 16 lbs, Actual dims: 14" (L) x 7" (W) x 15" (H), Ship dims: 13" (L) x 13" (W) x 13" (H).

- Hand Grinder with Both Feeds.....**No. 438HB**
- Hand Grinder with Tooth Feeds.....**No. 438HT**
- Hand Grinder with Worm Feed..... **No. 438HW**
- Tooth Feed only .....**No. 438TF**
- Worm Feed only..... **No. 438WF**

## ULTRAVIOLET LAMPS FOR AFLATOXIN AND RODENT CONTAMINATION DETECTION

UV light is a convenient screening procedure for detecting Aflatoxin and rodent contamination in food materials. The detection of bright greenish-yellow fluorescence indicates there may be mold present that can produce the toxic Aflatoxin. Rodent hair and urine also fluoresce under UV light.

Aflatoxins are a family of toxins produced by certain fungi that are found on agricultural crops such as Corn, Cottonseed, Peanuts and Tree Nuts. A little as 20 parts per billion of Aflatoxin is sufficient to render Corn unfit for human

consumption. It is necessary to grind (or crack) the materials before the sample is scanned with the UV light (see pages 16–18 for grinders and mills). The samples should be fresh because the fluorescence is not stable and will eventually disappear although the toxin itself remains.

Additionally, there are other molds and fungi which can produce fluorescence and further tests should be conducted to determine the presence of Aflatoxin levels (see pages 20–21 for Mycotoxin test kits).

### High Intensity Ultraviolet Lamp

The Seedburo High Intensity UV-365 series are ideal to use in any inspection application that requires a handheld UV-A light for indoor and outdoor environment. Recommended to detect at the range of low-level fluorescence or for use in brightly lit areas. All models provide a concentrated beam with a steady-state 7,000  $\mu\text{W}/\text{cm}^2$  at 15" (38cm) with an increased coverage area of 7" (17.78cm) at 15" (38cm). In addition, the lamps can be used in nondestructive evaluation, forensics, and security inspections.

Each unit features three (3) powerful UV-A LEDs for fluorescence detection and one (1) white light LED for the visual inspection. Unique engineered polymer housing makes this lamp extremely impact resistant and dentproof. The fanless design keeps LEDs cool to maintain optimum light output during extended use and the grip-mounted on/off rocker switch is great for control of the light source.

Each lamp is fitted with a heavy-duty 8 ft. (2.4 m) AC power cord, FP-600 borofloat filter protector, UVS-30 spectacles and a soft carrying case. The battery operated lamp includes a 12V, NiHM rechargeable battery that last approximately 3.5 hours of continuous use. CE approved and meets ISO 3059 Standards. Net wt: 2 lbs, Ship wt: 5 lbs, Ship dims: 13" (L) x 11" (W) x 9" (H).



UV-365MEH

High Intensity UV-365 with 8 Foot Cord, 100–120V, 50–60Hz.....	No. UV-365EH
High Intensity UV-365 with 8 Foot Cord, 220V, 50Hz.....	No. UV-365EH/C
High Intensity UV-365 with BP-30 NiMH Battery Pack and 8 Foot Cord, 100–120V, 50–60Hz.....	No. UV-365MEH
Optional Bench Mount.....	No. UV-365BM
Optional Wall Mount.....	No. UV-365WM
Optional Wall Mounting Bracket.....	No. UV-365WB

### Hand-held Ultraviolet Lamp

The handheld UV light is compact and lightweight for on-site or field inspections. Provides four to six hours of use on 1.5V alkaline (AA) batteries (not included), or unlimited use when powered by an AC adapter. The unit features a self-filtered, long-wave UV tube that provides a concentrated beam of 365 nm. All units feature sliding light shield for trouble-free tube changing and effortless battery replacement. Each unit includes AC adapter, nylon carrying strap, and nylon travel pouch. UL listed and CE approved. Net wt: 11 oz, Ship wt: 2 lbs, Actual dims: 2¼" (L) x 1" (W) x 9" (H), Ship dims: 11" (L) x 11" (W) x 6" (H).



B200

Handheld UV Lamp with AC Adapter .....	No. B200	Replacement Bulb, 5 Watt .....	No. B200B
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### AFLATOXIN, VOMITOXIN, ZEARALENONE AND FUMONISIN TEST KITS

Aflatoxin is a naturally occurring carcinogen and is a by-product of mold growth in a wide range of commodities. It can be produced pre-harvest in the field and post-harvest in storage. Stress conditions on the plant during high heat and drought conditions contribute to the development of these molds. It is essential that grain handlers know what levels of Aflatoxin might be present in the grain they are receiving. As an example, the maximum allowable limit set by the USDA is 20 ppb for dairy.

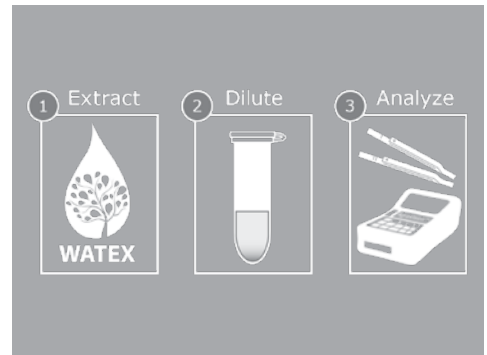
Seedburo provides the following test kits for the detection of mycotoxins: AgraStrip® and AgraStrip® WATEX® lateral flow devices.

The AgraStrip® test kits are ready-to-use lateral flow devices (LFD) for on-site testing. These allow a rapid analysis of a wide range of food and feed samples with an assay time of three minutes. Available for aflatoxins (B1, B2, G1, G2), deoxynivalenol, zearalenone and fumonisins (B1, B2, B3).

The AgraStrip® WATEX® is a fast and reliable water-based mycotoxin test kit that enables the testing for multiple mycotoxins from the same sample extract.

Quantitative (ppb or ppm readings) are used with the Agra Vision™ reader to provide consistent results for documentation. These test kits come complete with strips, antibody-coated microwells, an assay buffer, pipette tips and Whirl-Pak® bags.

Please consider the following points to find out which Mycotoxin testing solution is best suited for you.	
What is the commodity(ies) being tested?	
Which Mycotoxin are you concerned about?	
Which method? Qualitative or Quantitative?	
If Qualitative, what is the cut off level: 4ppb, 10ppb, 20ppb?	



The fast and simple AFLA, DON, ZON, and FUM method.

#### Aflatoxin Test Kits (STORE TEST KITS AT 2–25°C)

##### Qualitative Kit Recommendation (Screening for Pass/Fail):

AgraStrip® for Aflatoxin Screens at 4 ppb, 24 Tests.....	No. COKAS1100U	Single Tube Holder for Vortex Mixer.....	No. EQOLE1336
AgraStrip® for Aflatoxin Screens at 10 ppb, 24 Tests...	No. COKAS1200U	Digital Scale, 420g x 0.1g, AC Power Supply Included.....	No. SPX421
AgraStrip® for Aflatoxin Screens at 20 ppb, 24 Tests...	No. COKAS1000U	Graduated Cylinder, 100ml.....	No. EQOLE1050
4L Extraction Solution, 70/30 Methanol/Water.....	No. COSST7004 <sup>3</sup>	Digital Timer.....	No. EQOLE1302
1L Extraction Solution, 70/30 Methanol/Water.....	No. COSST7001 <sup>3</sup>	Mini Pipette, 50µL.....	No. COOLS1153
20L Extraction Solution, 70/30 Methanol/Water.....	No. COSST7020 <sup>3</sup>	Filter Paper, pkg. 100.....	No. COOLS1080
Vortex Mixer with Timer, 120V.....	No. EQOLE1335	Mill Series II, 115V.....	No. EQMMS2010

*Optional Substitute for Hand Shaking*

##### Quantitative Kit Recommendation (Actual ppb Reading):

AgraStrip® WATEX® for Aflatoxin Screens at 0–500 ppb, 10g extraction, 24 Tests.....	No. COKAS1600WS <sup>1</sup>
AgraStrip® WATEX® for Aflatoxin Screens at 0–500 ppb, 50g extraction, 24 Tests.....	No. COKAS1600W <sup>1,2</sup>

<sup>1</sup>Agravison Reader required    <sup>2</sup>USDA/AMS approved    <sup>3</sup>Flammable, ships ground only



### DON Test Kits (STORE TEST KITS AT 2–25°C)

DON (Vomitoxin) is chemically known as Deoxynivalenol, DON is produced most commonly by the pink mold *Fusarium Graminearum*. It can cause gastrointestinal illness in humans. In animals, it can cause vomiting, feed refusal, immune suppression, and weight loss, especially in swine. *Fusarium* species can mainly affect Corn, Wheat, Oats and Barley.

#### Quantitative Kit Recommendation (Actual ppb Reading):

AgraStrip® DON WATEX® Range 0–30 ppb, 10g extraction, 24 Tests .....	No. COKAS4000WS <sup>1</sup>
AgraStrip® DON WATEX® Range 0–30 ppb, 50g extraction, 24 Tests .....	No. COKAS4000W <sup>1,2</sup>

### Zearalenone Test Kits (STORE TEST KITS AT 2–25°C)

Zearalenone is known to cause estrogenic effects such as precocious development in swine. The toxin is formed by the *Fusarium* species and mainly affects Corn, Wheat, Sorghum, Barley and Rye. These kits allow a rapid analysis of a wide range of food and feed samples with assay times of three minutes.

#### Quantitative Kit Recommendation (Actual ppb Reading):

AgraStrip® WATEX® Zearalenone, Range 0–1 ppb, 10g extraction, 24 Tests .....	No. COKAS5000WS <sup>1</sup>
AgraStrip® WATEX® Zearalenone, Range 0–1 ppb, 50g extraction, 24 Tests .....	No. COKAS5000W <sup>1,2</sup>

### Fumonisin Test Kits (STORE TEST KITS AT 2–25°C)

Fumonisin are tumor promoters and are known to cause total carcinogenesis and liver diseases in both humans and animals. Fumonisin (FB1, FB2, and FB3) commonly infect Corn, Rice, Sorghum and Barley. The FDA/USDA Working Group on Fumonisin advises less than 4 ppm for products for human consumption, less than 5 mg/kg in horse feed, less than 10 mg/kg for swine feed, and less than 50 mg/kg for cattle feed. It is recommended to harvest grain without kernel damage and store them under moisture levels below 14% to avoid contamination.

#### Quantitative Kit Recommendation (Actual ppb Reading):

AgraStrip® Total Fumonisin WATEX® Range 0–30 ppb, 10g extraction, 24 Tests .....	No. COKAS3000WS <sup>1</sup>
AgraStrip® Total Fumonisin WATEX® Range 0–30 ppb, 50g extraction, 24 Tests .....	No. COKAS3000W <sup>1,2</sup>

## Accessories

#### Recommended Accessories for Aflatoxin, Vomitoxin, Zearalenone, and Fumonisin Kits:

AgraVision™ Reader Set-Up with Printer, Mycotoxin Tray and Incubator, 110V .....	No. EQASR1010
Digital Scale, Capacity: 420g x 0.1g, AC Power Supply Included .....	No. SPX421
Digital Timer .....	No. EQOLE1302
Mill Series II, 115V .....	No. EQMMS2010
Blender Extraction Jars, 8oz, Pkg of 12 .....	No. EQOLE1025
Graduated Cylinder 100ml .....	No. EQOLE1050
StatPet, 1ml Fixed (Tan) .....	No. EQOLE1142
Mini pipette, 50uL (Green) .....	No. COOLS1153
Mini pipette, 100uL (Blue) .....	No. COOLS1254
4L Distilled Water .....	No. COSST2038
Forcep, 6" Length, Blunt Point, Nickel Plated .....	No. 662
U.S. Testing Sieve, 20 Mesh, 8" Diameter, Full Height, Brass .....	No. 20BB8F
Bottom Pan for U.S. Sieve, Brass .....	No. PB8F
Cover with Ring for U.S. Sieve, Brass .....	No. CB8W/R

<sup>1</sup>Agravisision Reader required    <sup>2</sup>USDA/AMS approved

**GMO Test Kits**

Seedburo offers the AgraStrip® GMO testing kits from Romer Labs. These kits are ready-to-use lateral flow devices (LFD) for on-site testing. With over 60 test kits, it is possible to detect 16 different traits that occur in Corn, Soybean, Canola, Cotton, Sugarbeet, Alfalfa and Rice in various combinations within only 6 minutes (including extraction).

The test kits are available in a qualitative or semi-quantitative format depending on the specific product. While qualitative LFDs can be read visually, semi-quantitative tests are used with the AgraVision™ reader, to provide consistent results for documentation.

TraitChek® kits are designed to test bulk grain, single seed, and/or leaf tissue. The kits come complete with strips, microtubes, transfer pipettes (for bulk grain kits), weigh papers (for seed/leaf kits), and leaf stirrers (for seed/leaf kits). The blender and jars are sold separately. Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 11" (L) x 7" (W) x 4" (H).

Please consider the following points to find out which GMO testing solution is best suited for you.	
What is the raw commodity?	
What trait(s)? Example: RUR or LL	
Single trait or Comb?	
Semi-quantitative (AgraVision Reader, required) or Qualitative	

**AgraStrip® Lateral Flow Devices: TraitCheck®** (STORE TEST KITS AT 2–25°C)

**Qualitative Kit:**

AgraStrip® RUR-HS for Corn 0.125%, Canola 0.1%, Alfalfa 0.167%, 100 Test Kit .....	<b>No. TR-RRC1</b>
AgraStrip® RUR for Soy and Sugarbeets 0.1% in 5 min., Soy 0.143% In 3 min., 100 Test Kit.....	<b>No. TR-RRSG1</b>
AgraStrip® RUR for Seed and Leaf, 100 Test Kit.....	<b>No. TR-RRSL1</b>
AgraStrip® RUR for Toasted Meal Soy 0.9%, 100 Test Kit.....	<b>No. TR-RRSM1</b>
AgraStrip® Cry1Ab for Corn 0.9%, 100 Test Kit.....	<b>No. TR-BT1G1</b>
AgraStrip® Cry1Ab for Corn, Seed and Leaf, 100 Test Kit.....	<b>No. TR-BT1L1</b>
AgraStrip® Cry3Bb for Corn 0.125%, 100 Test Kit .....	<b>No. TR-CRY3YG</b>
AgraStrip® LL for Corn, Seed and Leaf, 100 Test Kit.....	<b>No. TR-LLL1</b>
AgraStrip® LL for Corn and Sugarbeet 0.9%, Canola 2%, 100 Test Grain Kit .....	<b>No. TR-LLG1</b>
AgraStrip® Cry1F for Corn 0.9%, 100 Test Kit .....	<b>No. TR-BT1F</b>
AgraStrip® Corn 0.9% Comb 2 Traits (Cry1Ab and LL), 100 Test Grain Kit .....	<b>No. TR-BTLL</b>
AgraStrip® Corn Comb with VIP3A, 20 Test Kit.....	<b>No. TR-COMB</b>
AgraStrip® Soy Comb 2 Traits (RUR and LL), 20 Test Kit .....	<b>No. TR-COMB2</b>
AgraStrip® Corn Triple Trait, 20 Test Kit.....	<b>No. TR-COMB3</b>
AgraStrip® Corn Triple Trait, Seed and Leaf, 100 Test Kit.....	<b>No. TR-COMB3GL</b>

**Semi-quantitative Kit (Reader, Result Ranges: <0.5% Trait, 0.5–1.0% Trait, 1.0–5.0% Trait, >5% Trait):**

AgraStrip® RUR HS for Corn and Canola 100 Test Kit .....	<b>No. TR-RRC1</b>
AgraStrip® RUR for Soy, 100 Test Kit.....	<b>No. TR-RRSG1</b>
AgraStrip® Cry3Bb1 for Corn, 100 Test Kit.....	<b>No. TR-CRY3YG</b>
AgraStrip® LL for Corn and Canola, 100 Test Kit .....	<b>No. TR-LLG1</b>
AgraStrip® Cry1F for Corn, 100 Test Kit.....	<b>No. TR-BT1F</b>
AgraStrip® Corn Comb, 20 Test Kit.....	<b>No. TR-COMBC</b>
AgraStrip® 4 Strip Corn Comb, 20 Test Grain Kit.....	<b>No. TR-COMBC4</b>
Agra Vision™ Reader with Printer and Drawer for Single GMO Strips .....	<b>No. EQASR1000</b>

## GMO Test Kits (Continued)

### Recommended Accessories for AgraStrip® GMO TraitChek® Test Kits:

Paddle for 60 Count Soybean .....	No. SP60
Cottonseed Seed Crusher.....	No. EQOLE1473
Tips for 200–1000 uL.....	No. COOLS1134
Microcentrifuge Tubes, 1.5 mL .....	No. COOLS2005
Microcentrifuge Tubes Rack .....	No. EQOLE1215
Transfer pipettes, Graduated.....	No. COOLS2010
Graduated Cylinder, 100 mL.....	No. EQOLE1050
Blender for Grinding Samples (Less Jars), 110V/60Hz.....	No. BLEND/B
Small Blender Jars, 4 oz, Carton of 12 .....	No. BLEND-J4
Medium Blender Jars, 8 oz, Carton of 12 .....	No. BLEND-J8
Large Blender Jars, 16 oz, Carton of 12.....	No. BLEND-J16
Digital Scale, Capacity 400g x 0.1g, AC Power Supply Included .....	No. SPX421
Digital Timer .....	No. EQOLE1302
Conical Microtube Rack .....	No. EQOLE1215
Cubitainer, 4 L with Spigot.....	No. COSST5094
Sampler Buffer Concentrate (Serves for 2 Liter Buffer) .....	No. 7903505
Sampler Buffer Concentrate (Serves for 5 Liter Buffer) .....	No. 7000006
Sampler Buffer Concentrate (Serves for 500 mL Buffer).....	No. 7000010
AgraVision™ GMO Comb Drawer.....	No. EQASR1033
AgraVision™ GMO Drawer .....	No. EQASR1023

## Sequential Precision Divider

Some grain inspection tests require a very small sample but a faultless analysis is closely linked to accurate sample handling and only a fully representative sample of the initial material can provide meaningful analysis results.

The Sequential Precision Divider ensures a fully representative sample of the entire quantity of a sample and thus the reproducibility of the analysis. This divider is ideal for Mycotoxin testing, performing visual grain inspection, malt germination test, or any other application where a small representative sample is required. Not suitable for large grain such as Corn, Sunflower or edible Beans.

The divider consist of five high-precision divider sections that each split the sample into two halves providing a sub-sample of 3.125% of the original sample size to be used for a variety of tests and analyses. The top funnel holds up to 1 liter (33.81 oz) and is it is suitable for small grains such as Rice, Wheat, Barley, Rapeseed (Canola) or Oats. If a larger sub-sample is desired, the divider can be used with fewer divider sections and if additional sub-samples are required, run the sample again after removing the first sub-sample. The system is gravity driven and has no moving parts.

The transparent divider sections make it easy to verify that no sample is remaining in the divider removing the risk of sample cross-contamination. The divider is fast, easy to use and easy to clean.

The representative sub-sample for grain quality testing is obtained in less than 15 seconds. Simply pour in the sample into the top funnel, open the shutter to let the sample fall through the divider by gravity, when ready, open the receiving tray to retrieve the representative sub-sample from the measuring cup. The rest of the product passes into the receiving tray.

Net wt: 8.82 lbs, Actual dims: 11.5" (L) x 11.5" (W) x 24" (H), Ship wt: 15 lbs, Ship dims: 27" (L) x 16" (W) x 12" (H).

Sequential Precision Divider .....	No. PSPD4200
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**SEEDBURO GRAIN PROBES**

The first essential step in grain grading is to obtain a correct and representative sample. Rail cars, trucks, wagons or barge loads should be sampled with a double tube probe in five or more places.

Seedbuero partitioned probes are made to conform to USDA specifications. They are constructed from extra heavy gauge tubing for durable, time-tested sampling. All probes on this page have an outside diameter of 1 3/8", are of double-tube construction and have a heavy bronze point (unless otherwise stated). Openings are 3 3/8" (L) x 7/8" (W). All Seedbuero grain probes are **MADE IN USA**.



**Partitioned Probes with Wooden Handles**

Partitioned grain probes are used by the U.S. Department of Agriculture and by all grain inspectors. There is a divider between each opening to create a separate compartment for each individual opening. Samples from these probes can be emptied on a grain sampling canvas or open tray.

- 63" Brass Probe, 10 Openings, Ship wt: 10 lbs, Ship dims: 65" (L) x 4" (W) x 4" (H) ..... **No. 22P**
- 72" Government-Approved Brass Probe, 12 Openings, Smooth Bronze Point, Ship wt: 11 lbs, Ship dims: 75" (L) x 4" (W) x 4" (H).... **No. 281-GB**
- 8' Brass Probe, 16 Openings, Ship wt: 20 lbs, Ship dims: 98" (L) x 3" (W) x 3" (H)..... **No. 815**
- 10' Government-Approved Barge Probe, Brass, 20 Openings, Ship wt: 22 lbs, Ship dims: 124" (L) x 4" (W) x 4" (H) ..... **No. 230**
- 12' Brass Barge Probe, 20 Openings, Ship wt: 24 lbs, Ship dims: 148" (L) x 4" (W) x 4" (H) ..... **No. 230-A**

**Open-Handled Probes**

Open-ended probes without partitions are more convenient to empty and are widely used by the grain elevator operators for obtaining samples from truck loads. After sample is obtained, probe is held handle down and sample is dumped from the open handle.

- 40" Brass Probe, 6 Openings, Ship wt: 7 lbs, Ship dims: 43" (L) x 4" (W) x 4" (H) ..... **No. 20-OH**
- 51" Brass Probe, 8 Openings, Ship wt: 8 lbs, Ship dims: 54" (L) x 4" (W) x 4" (H) ..... **No. 21-OH**
- 63" Brass Probe, 10 Openings, Ship wt: 9 lbs, Ship dims: 65" (L) x 4" (W) x 4" (H) ..... **No. 22-OH**
- 72" Aluminum Probe, 12 Openings, Smooth Point, Ship wt: 5 lbs, Ship dims: 75" (L) x 4" (W) x 4" (H) ..... **No. 18-OH**
- 72" Brass Probe, 12 Openings, Ship wt: 12 lbs, Ship dims: 75" (L) x 4" (W) x 4" (H) ..... **No. 16-OH**
- 72" Brass Probe With T-Handle, Ship wt: 12 lbs, Ship dims: 75" (L) x 4" (W) x 4" (H) ..... **No. 16-OHT**
- 8' Brass Probe, 16 Openings, Ship wt: 24 lbs, Ship dims: 98" (L) x 3" (W) x 3" (H)..... **No. 815-OH**
- 8' Brass Probe With T-Handle, Ship wt: 24 lbs, Ship dims: 99" (L) x 5" (W) x 4" (H) ..... **No. 815-OHT**
- 10' Brass Barge Probe, 20 Openings, Ship wt: 22 lbs, Ship dims: 124" (L) x 4" (W) x 4" (H) ..... **No. 230-OH**
- 12' Brass Barge Probe, 20 Openings, Ship wt: 24 lbs, Ship dims: 147" (L) x 3" (W) x 3" (H) ..... **No. 230A-OH**
- Sample Probe Carrying Case With Handle (Please Specify Size of Your Probe)..... **No. SP-CASE**

**Seedbuero Custom Probes**

*Need a special size probe for your specific application? Call or email with your specifications for a price quote.*

**Open-Handled Spiral Probes**

39C-OH



The openings on the inside tube are machined so that when rotated it opens first at the bottom and then in gradual steps to the top. This assures a fair proportion of grain samples from the bottom levels as well as from the top. The Spiral Probe is highly recommended for sampling grains when foreign material is apt to be heaviest near the bottom of a truck. The construction of the probe is a double-tube brass with a 1 3/8" outside diameter and heavy brass point. Openings are 3 3/8" (L) x 7/8" (W).

- 40" Spiral Probe, 6 Openings, Net wt: 6 lbs, Ship wt: 7 lbs, Ship dims: 43" (L) x 4" (W) x 4" (H) ..... **No. 39-OH**
- 51" Spiral Probe, 8 Openings, Net wt: 7 lbs, Ship wt: 8 lbs, Ship dims: 54" (L) x 4" (W) x 4" (H) ..... **No. 39A-OH**
- 62" Spiral Probe, 10 Openings, Net wt: 8 lbs, Ship wt: 9 lbs, Ship dims: 65" (L) x 4" (W) x 4" (H)..... **No. 39B-OH**
- 72" Spiral Probe, 12 Openings, Net wt: 9 lbs, Ship wt: 10 lbs, Ship dims: 73" (L) x 4" (W) x 4" (H) ..... **No. 39C-OH**

**Grain Sampling Canvas**

In compliance with the specifications of the U.S. Department of Agriculture, the sampling canvas is used with partitioned grain probes. After the probe is withdrawn, the grain is emptied upon the canvas for examination. Made of durable, flat duck material.

- Sampling Canvas, 30" (W) x 63" (L) ..... **No. 320-63G**
- Sampling Canvas, 30" (W) x 73" (L) ..... **No. 320-73G**
- Sampling Canvas, 30" (W) x 10' (L) ..... **No. 320AG**
- Sampling Canvas, 30" (W) x 12' (L) ..... **No. 320BG**



### SEEDBURO PLATED PROBES AND TRIERS

#### 18" Nickel Plated Trier

Double-tube construction with 1/2" outside diameter and 5 openings 5/16" (W) x 1 3/4" (L). Open-handled. Net wt: 7 oz, Ship wt: 2 lb, Ship dims: 20" (L) x 4" (W) x 4" (H). **MADE IN USA.**



18" Nickel Plated Trier ..... No. 235

#### 30" Nickel Plated Trier

Double-tube construction with 1/2" outside diameter and 9 openings. 5/16" (W) x 1 3/4" (L). Open-handled or Partitioned versions. Net wt: 11 oz, Ship wt: 2 lbs, Ship dims: 32" (L) x 4" (W) x 4" (H). **MADE IN USA.**



30" Nickel Plated Trier ..... No. 236

30" Partitioned Nickel Plated Trier ..... No. 236-P

#### 39" Chrome Plated Trier - 3 Long Openings

Double-tube construction, 7/8" outside diameter, 3 long openings, 8" (L) x 3/4" (W). Open-handled. Recommended for sampling cereal seeds with long straws present. Net wt: 2 lbs, Ship wt: 3 lbs, Ship dims: 43" (L) x 4" (W) x 4" (H). **MADE IN USA.**



39" Chrome Plated Trier ..... No. 79A-OH

#### 39" Chrome Plated Trier - 6 Openings

Double-tube construction with a 7/8" outside diameter and 6 openings 3/4" (W) x 2 1/2" (L). Open-Handled. Net wt: 2 1/2 lbs, Ship wt: 3 lbs, Ship dims: 43" (L) x 4" (W) x 4" (H). **MADE IN USA.**



39" Chrome Plated Trier ..... No. 78-OH

#### Stainless Steel Sample Probes

Has 6 openings with the same structural design as the No. 78-OH (pictured above). Probe is designed for use with chemicals, corrosives, pharmaceuticals and fertilizers. Open-Handled Probe: Net wt: 2 1/2 lbs, Ship wt: 4 lbs, Ship dims: 45" (L) x 4" (W) x 4" (H). Partitioned Probe: Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 45" (L) x 4" (W) x 4" (H). **MADE IN USA.**



Stainless Steel Open Handled Probe ..... No. 65-OH

Stainless Steel Partitioned Probe ..... No. 65-P

#### Auger-Tip Partitioned Probe

This brass partitioned probe has a wooden handle with two removable galvanized metal handles that form a 12" T-Handle below. It has 11 openings and an auger point to aid sampling wet or closely packed material. Net wt: 10 lbs, Ship wt: 11 lbs, Ship dims: 65" (L) x 4" (W) x 4" (H). **MADE IN USA.**



63" Auger-Tip Partitioned Probe ..... No. 552

### Ellis Sampler

This is used to obtain a sample from a moving belt conveyor or a falling stream of grain. Mouth dims: 6" (W) x 1" (D), Overall dims: 15" (L) x 8 1/2" (W), Net wt: 2 lbs, Ship wt: 4 lbs, Ship dims: 18" (L) x 12" (W) x 4" (H).

**MADE IN USA.**



Ellis Sampler ..... No. 23

Go/No Go Gauge ..... No. GNG

### Special Truck Sampler

This sampler is used for catching samples of falling grain from trucks during unloading. To obtain a sample, cut through a falling stream of grain several times. Round steel container dims: 12" (L) x 4 1/2" (D), 2 qt. sample capacity. Complete with 36" wooden handle. Net wt: 5 lbs, Ship wt: 6 lbs, Ship dims: 45" (L) x 7" (W) x 7" (H). **MADE IN USA.**



Seedburo Special Truck Sampler ..... No. 525

### Pelican Grain Sampler

Used for obtaining sample from a falling stream of bulk grain. Pouch is approximately 18" (L) x 6" (D) x 2" (W) made of russet top grade cowhide hand riveted to the frame. Meets USDA specifications. Net wt: 3 lbs, Ship wt: 5 lbs, Ship dims: 19" (L) x 13" (W) x 6" (H). **MADE IN USA.**



Pelican Grain Sampler (Without Handle) ..... No. 24

### Seedburo Level Yoke

The Seedburo Lever Yoke uses an interlocking fulcrum principle to wrap around the outside of any probe with 1 3/8" diameter, forming a T-handle. Each handle is 17" long and has a hand grip. Net wt: 10 lbs, Ship wt: 11 lbs, Ship dims: 21" (L) x 15" (W) x 11" (H). **MADE IN USA.**



Seedburo Lever Yoke ..... No. 90

Replacement Pads for Lever Yoke ..... No. 90-RP

**SEEDBURO BIN PROBES AND THERMOMETERS**

**Thermo Sampler**

Brass thermo sampler combines the function of a bin thermometer and a deep bin cup. Operates like the Deep Bin Cups in extracting a sample, with the exception of the added twist-off tip enclosing a spirit-filled thermometer. Extension rods and T-handle required. Net wt: 2 lbs, Ship wt: 3 lbs, Ship dims: 20" (L) x 8" (W) x 8" (H). **MADE IN USA.**

372



- Thermo Sampler, 200 gram Capacity for Corn, -15 to 120°F.....**No. 372**
- Thermo Sampler, -20 to 220°F (-10 to 110°C).....**No. 372D**
- Refill Thermometer, -15 to 120°F .....**No. 212R**
- Dual Range Refill Thermometer, -20 to 220°F (0 to 110°C).....**No. 212DR**
- Carrying Case (Holds Up to 15 Extensions w/ T-handle and Sampler)... **No. 372DB**

**Deep Bin Cups**

These brass cups can be used with only 4 ft. of headroom at the top of your bin. The cup remains closed as long as the probe is being pushed down. Opens when probe is being pulled out. It is available in two sizes, 12" and 15". Both sizes have an outside diameter of 1½". Extension rods and T-handle required. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 12" (L) x 9" (W) x 5" (H). **MADE IN USA.**

233



- 12" Deep Bin Cup (185 gram Capacity for Corn).....**No. 233**
- 15" Deep Bin Cup (265 gram Capacity for Corn).....**No. 234**

**Special Bin Thermometers**

An 8¼" solid brass cover encases a 5⅜" glass spirit-filled thermometer protected by a plastic cover. The unit takes grain temperatures in bins. Three temperature ranges available. Attaches to standard 3 ft. extensions and T-handle. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 12" (L) x 9" (W) x 5" (H). **MADE IN USA.**

213



- Special Bin Thermometer, -15 to 120°F, 2° Divisions.....**No. 213**
- Special Bin Thermometer, -20 to 220°F, 2° Divisions.....**No. 213H**
- Dual Range Bin Thermometer, -20 to 220°F (0 to 110°C), 2° Divisions...**No. 213D**
- Refill Thermometer, -15 to 120°F .....**No. 212R**
- Refill Thermometer, -20 to 220°F .....**No. 212HR**
- Refill Thermometer, -20 to 120°F (0 to 110°C).....**No. 212DR**

**Extension and T-Handle**



- 3-Foot Extensions.....**No. STD-3**
- T-Handle ..... **No. STD-T**
- Carrying Case.....**No. 372DB**

**Seedbuero Grip Handled Bag Triers**

Grip-handled Bag Triers from Seedbuero are ideal for obtaining samples from bags for all varieties of seeds and grains. Made of Stainless steel with a molded grip handle for sure-handed sampling, these triers are available in three sizes. See below for specifications. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 12" (L) x 9" (W) x 3" (H).



- Peanut Bag Trier SS with Sheath 18½" x 1⅜" .....**No. TRIER-1**
- Sunflower Seed Bag Trier SS with Sheath 18⅞" x 1¼" .....**No. TRIER-2**
- Corn Bag Trier SS with Sheath 17½" x 1⅞" .....**No. TRIER-3**

**Seedbuero Nobbe Triers**

The Nobbe type seed trier is used for sampling free-flowing, small seeded crops in bags or penetrable containers. It is ideal for clovers, timothy, brassicas, fine grasses such as bluegrass, and small vegetable seeds. It is inserted horizontally into the seed bag and the sample pours out of the open end. Seedbuero's Nobbe trier available in a ½" or ¾" diameter version; Options for either 20" or 30" overall length. The one opening starts 2⅜" from the tip and is 2½" long. Available in Brass or Stainless Steel. Ship wt: 1 lb, Ship dims: 21" (L) x 4" (W) x 4" (H). **MADE IN USA.**



- Brass Nobbe Trier ¾" OD x 20" Single Tube w/ 1 Opening ..... **No. 223**
- Stainless Steel Nobbe Tier ¾" OD x 20" Single Tube w/ 1 Opening .. **No. 223S**
- Stainless Steel Nobbe Tier ¾" OD x 30" Single Tube w/ 1 Opening ..**No. 223S-30**
- Brass Nobbe Trier ½" OD x 20" Single Tube w/ 1 Opening .....**No. 222**
- Stainless Steel Nobbe Trier ½" OD x 20" Single Tube w/ 1 Opening ..**No. 222S**

### Keystone Carbon Sampling Probe

This probe features double tube construction, with a 1" outside diameter and a total length of 40½". There are 13 openings along the side of the probe with partitions separating each compartment. An auger vane with an outside diameter of 2⅝" is brazed on to the outer tube and extends ⅓ of the length of the probe. A fixed "T" handle is welded on to the top end for augering into powdery materials. The Keystone Probe is made of chrome-plated steel. Net wt: 9 lbs, Ship wt: 11 lbs, Ship dims: 45" (L) x 12" (W) x 4" (H).



Keystone Carbon Sampling Probe ..... No. 1185

### Stainless Steel Fertilizer Probe

36½" Fertilizer Probe, stainless steel, single tube construction. This probe is open-handled and has a single slot of 32" (L) x ⅝" (W). To help take accurate, consistent samples, the probe is scored at 28" and 31" from the tip end. Net wt: 1½" lbs, Ship wt: 3 lbs Ship dims: 44" (L) x 4" (W) x 4" (H).



Stainless Steel Fertilizer Probe.....No. 158

### Seedburo Flour Slick

Made of thin spring steel; one edge is as thin as a razor blade. A must for every flour mill or processor. Net wt: 3 oz, Actual dims: 7¾" (L) x 3" (W). Ship wt: 2 lbs, Ship dims: 10" (L) x 5" (W) x 4" (H).



Seedburo Flour Stick.....No. 471

### Flour Trier

34" Flour Trier, 20 gauge stainless steel construction; tapers from 1"-1¼" outside diameter, wooden handle. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 44" (L) x 4" (W) x 4" (H).



Flour Trier.....No. 240A

### Seedburo Bag Patch

The Seedburo Bag Patch provides an effective seal after using a bag trier to take a sample. The "Super-Tak" adhesive backs the 3" dia. patch to show that the bag has been QUALITY CHECKED. Contact our sales staff regarding Custom bag patches available with your name and logo or in different diameters or shapes. Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 12" (L) x 10" (W) x 5" (H). **MADE IN USA.**



SBP

Bag Patch (Roll of 1000) .....No. SBP

Custom Bag Patch .....No. SBPC

### SPECIAL PURPOSE TRIERS

#### 13" Peanut and Rice Trier

Black anodized aluminum; 1½" outside diameter at large end. The slot is 7⅜" long with a top slot width of 1¼" tapering down to ¼". Includes protective sheath. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 13" (L) x 11" (W) x 3" (H). **MADE IN USA.**



Peanut and Rice Trier..... No. 76

#### 6" Nickel-Plated Bag Trier

½" outside diameter at large end. Complete with protective sheath. Net wt: 8 oz, Ship wt: 1 lb, Ship dims: 10" (L) x 5" (W) x 4" (H). **MADE IN USA.**



6" Bag Trier ..... No. 77

#### 11⅝" Rice Trier

Nickel-plated steel; ¾" outside diameter at large end. Complete with protective sheath. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 13" (L) x 11" (W) x 3" (H). **MADE IN USA.**



Rice Trier ..... No. 158R

#### 12" Nickel-Plated Bag Trier

1" outside diameter at large end. Complete with protective sheath. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 13" (L) x 11" (W) x 3" (H). **MADE IN USA.**



12" Bag Trier..... No. 79



**Weighted Beaker**

Designed for use as a beaker sampler for tank cars, tank trucks, shore tanks, ship tanks and barge tanks. Copper construction with lead-weighted bottom. Includes handle and chained cork. Takes all level samples, running samples, and top, upper, middle, lower and outlet samples. Select 3/4" opening for light crude oils, light lubricating oils, edible oils, molasses, diesel fuel oils, and distillates, or 1 1/2" for heavy crude and fuel oils, heavy lubricating oils and non-transparent gas oils. Capacity of 32 oz. Net wt: 4 lbs, Ship wt: 6 lbs, Ship dims: 21" (L) x 9" (W) x 9" (H).

Weighted Beaker with 3/4" opening ...**No. K27600**    Weighted Beaker with 1 1/2" opening .....**No. K27610**



**Liquid Zone Sampler**

The basic process of using the zone sampler is to allow the product to pass through the sampler as it descends through the liquid. The top and bottom valves open with the pressure of the liquid against the descending sampler allowing the liquid to pass through the sampler. When the instrument is brought to a stop, the valves close. Capacity of 800 milliliters. 304 Stainless steel construction. Net wt: 3 lbs, Actual dims: 15" (L) x 3" (W), Ship wt: 4 lbs, Ship dims: 21" (L) x 9" (W) x 9" (H).

Zone Sampler, Stainless Steel.....**No. ZS-S**



**Sample Collection Bucket and Chain**

Extra large 22 ga. stainless steel bucket with long sturdy handle for carrying or hanging. This aids in the collection and mixing of the sample. 13" diameter at top tapers to bottom 10.25" diameter. Stainless steel link chain in 25 ft. length with clips on each end to attach to the sampler or beaker. **Bucket:** Net wt: 3 lbs, Ship wt: 5 lbs, Ship dims: 15" (L) x 15" (W) x 15" (H).

**ZB**    Stainless Steel Bucket, 3 Gallon .....**No. ZB**    Stainless Steel Chain, 25 ft. with Clips.....**No. ZC**

**Tank Car Oil Sampler**

Used to obtain representative samples of various edible oils for lab analysis. Sampler is a 10' long aluminum tube with plug valve at lower end, 2" inner diameter. Operating rod with handle at top extends full length of trier. Constructed in accordance with specifications of the A.O.C.S. Net wt: 18 lbs, Ship wt: 35 lbs, Ship dims: 128" (L) x 9" (W) x 9" (H). Wood frame crate.



Tank Car Oil Sampler .....**No. 571**



**Bacon Liquid Samplers**

This popular sampler is used to obtain bottom, near bottom and average samples from tanks, tank cars and drums. Constructed of nickel plated brass, valve lifts when bottom of tank is reached. Can be manually lifted by a cord attached to the valve plunger if intermediate level samples are desired.

4 oz Capacity 9 1/4" (L) x 1 1/2" (W), Ship wt: 3 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H) .....**No. 572-1**  
 4 oz Capacity, Pencil Thin, 12 3/4" (L) x 4 1/2" (W), Ship wt: 3 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H) .....**No. 572-4P**  
 8 oz Capacity, 10 5/32" (L) x 2 5/16" (W), Ship wt: 5 lbs, Ship dims: 13" (L) x 10" (W) x 6" (H).....**No. 572-8**  
 16 oz Capacity 12 1/32" (L) x 2 3/4" (W), Ship wt: 6 lbs, Ship dims: 13" (L) x 10" (W) x 6" (H) .....**No. 572-3**  
 32 oz Capacity 15" (L) x 3 3/8" (W), Ship wt: 9 lbs, Ship dims: 21" (L) x 9" (W) x 9" (H).....**No. 572-2**

**Drum Thief**

Choice of plated brass or stainless steel construction, this tube is used for sampling from barrels and drums. Take bottom samples or all-level samples. 40" (L) x 1 1/4" (W). Maximum sample capacity of 24 oz. Ship wt: 7 lbs, Ship dims: 44" (L) x 4" (W) x 4" (H).



Drum Sample Thief, Stainless Steel.....**No. 5735**  
 Drum Sample Thief, Plated Brass.....**No. 573B**



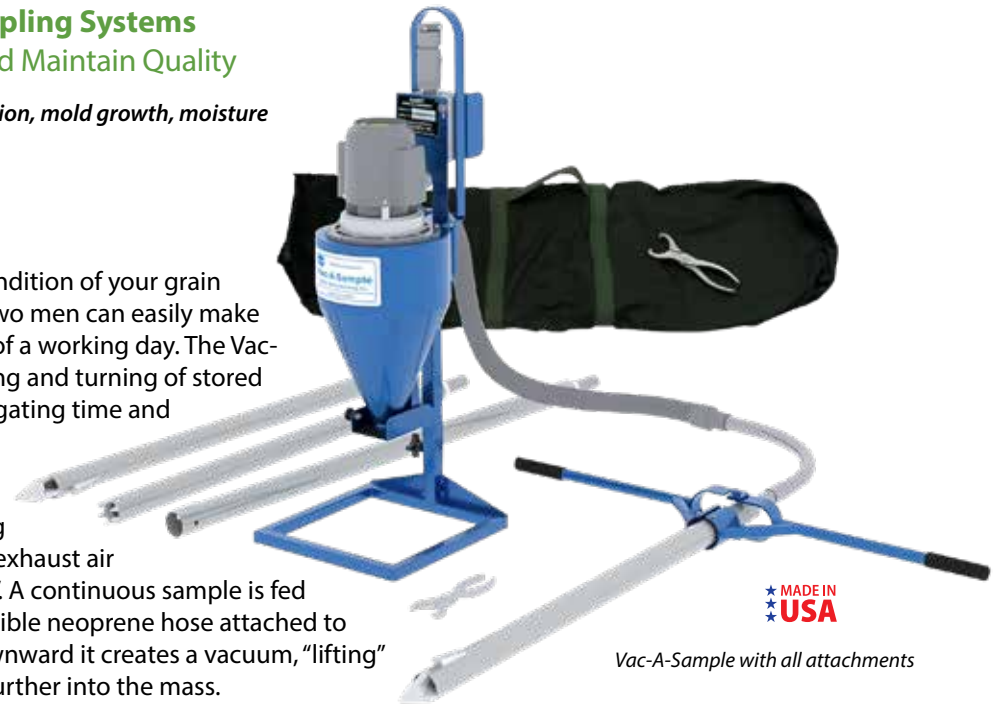
**Vac-A-Sample® Pneumatic Sampling Systems**  
 A Fast and Easy Way To Sample and Maintain Quality

*Be sure your grain is free from insect infestation, mold growth, moisture pockets and uncertain aeration.*

**Sampling**

The Vac-A-Sample lets you know the condition of your grain from top to bottom, up to 60 ft. deep. Two men can easily make six or seven 60-foot probes in the span of a working day. The Vac-A-Sample eliminates unnecessary shifting and turning of stored grain, shortens the sampling time, fumigating time and the handling hours.

Not only can the Vac-A-Sample be used in grain, but all kinds of dry, free-flowing materials. The cyclone is engineered to exhaust air as it deposits the sample from the "core". A continuous sample is fed into the cyclone collector through a flexible neoprene hose attached to the probe. As the air flow is moving downward it creates a vacuum, "lifting" the sample upward, forcing the probe further into the mass.



Vac-A-Sample with all attachments

The probe itself is a series of sections of inner and outer tubes. The chamber formed between these two tubes allows air to pass downward to the tip of the probe where the pneumatic action takes place.

**Fumigation**

The Vac-A-Sample is also an effective instrument for distributing insecticides. When hot spots occur, due to insect infestation or moisture accumulation, treatment is made easy by inserting the Vac-A-Sample into the suspected area and pouring the insecticide or dropping the insecticide tablets into the probe. This application should be made with either the burr tip section or with no tip section at all. The type of infestation, the size and specific location of the hot spot can be determined by successive probes. Treatment can then be made locally, eliminating the need for treating the entire bin or having to move the grain.

For a complete system you will need: A base unit, hose, lever yoke, gooseneck connector, pliers, a tip section and various probe sections based upon the depth you need to probe.

Estimated Ship wt/dims: **Carton 1** (with cyclone only): 54 lbs, 18" (L) x 18" x (W) x 48" (H). **Carton 2** (with accessories of up to 10 probe sections, lever yoke, pliers, gooseneck, one tip section and 50 ft. hose): 58 lbs, 49" (L) x 17" (W) x 17" (H). (These are estimates only. This will vary depending upon which accessories you choose.)

Vac-A-Sample, Base Unit Includes 110V, 50/60Hz, 1PH, 7/8HP, Class II, Group G Motor, Cyclone and Protective Screen.....No. Q71P1000  
 Vac-A-Sample, Base Unit Includes 230V, 50/60Hz, 1PH, 7/8HP, Class II, Group G Motor, Cyclone and Protective Screen.....No. Q71P1001

10' x 1½" Flexible Vinyl Hose.....No. Q71P1300	Replacement Rubber Spacer (for Inside of Tube).....No. Q71P1180
20' x 1½" Flexible Vinyl Hose.....No. Q71P1310	Tube Connector Pliers.....No. Q71P1600
30' x 1½" Flexible Vinyl Hose.....No. Q71P1320	Canvas Tube Carrier (Holds 9 Sections).....No. Q71P1700
40' x 1½" Flexible Vinyl Hose.....No. Q71P1330	4 Foot Aluminum Grain Probe Section.....No. Q71P1100
50' x 1½" Flexible Vinyl Hose.....No. Q71P1340	Burr Tip Section (Hard Packed Materials).....No. Q71P1400
Grain Lever Yoke Handle.....No. Q71P1800	Fine Tip Section (Barley, Milo, Rice, Wheat).....No. Q71P1410
Gooseneck Connector.....No. Q71P1200	Coarse Tip Section (Corn, Soybeans).....No. Q71P1420



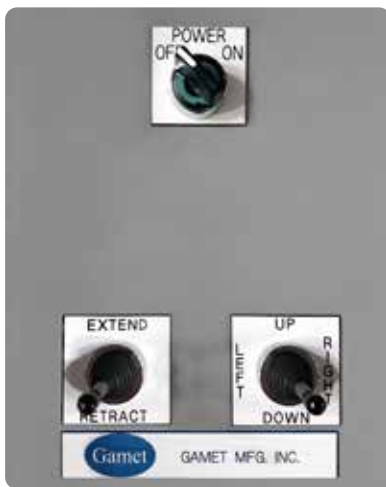
Apollo 17 truck probe

**The Apollo Line of Truck Probes**

From its origins in the 1960's, the Apollo line of truck probe samplers has been on the cutting edge. Originally manufactured in Des Moines, Iowa, the Apollo line has evolved from the earliest light duty units to today's heavy duty, highly dependable versions. Today the Apollo line features two models. The Model 610A is ideal for use in country elevator and large farm applications. The Model 17 is perfect for mid to large sized elevators and processing plant applications. Both feature very rugged and durable construction with four bolt flange bearings at the major wear points. Both Gamet truck probe samplers are hydraulically driven; this ensures the most powerful and longest lasting drive mechanisms available. Both are equipped with counter balance valves ensuring smooth operation of the up/down movement of the sample probe.

The Apollo line is available with both core and compartment style sample probes. Core style probes feature a single opening for sampling in the tip of the probe. This is the fastest and most cost effective way of obtaining a representative sample. Compartment style probes work the same as a hand held brass probe. Once the probe is inserted into the load the operator opens and closes the sample ports with the joystick operator.

Other standard features include joystick controls for all movement of the sample probe, vacuum motor shutoff timer, and the use of aviation grade hydraulic oil allowing for use in cold weather applications without the use of tank heaters.



Gamet probe joystick panel

	<b>Apollo 610A</b>	<b>Apollo 17</b>
<b>Electric Options</b>	2HP, TEFC 1/60/220 2HP, TEFC 1/50/220 2HP, TEFC 3/60/230-460 2HP, TEFC 3/50/190-380	5HP, TEFC 1/60/220 5HP, TEFC 1/50/220 5HP, TEFC 3/60/230-460 5HP, TEFC 3/50/190-380
<b>Hydraulic Pump Data</b>	Gear Pump, 850 PSI 3.6 GPM 5 Gallon Reservoir	Gear Pump, 950 PSI 4.0 GPM 10 Gallon Reservoir
<b>Control Circuits</b>	1/50-60/110 1/50-60/220	1/50-60/110 1/50-60/220
<b>Vacuum</b>	Two Stage Bypass 7/8HP, 1/50-60/110-220 104 CFM 110" Waterlift	Two Stage Bypass 7/8HP, 1/50-60/110-220 104 CFM 110" Waterlift
<b>Concrete Base</b>	36" Square x 60" Deep	44" Square x 60" Deep
<b>Trucks Per Day</b>	50 or Less	50 or More

**Gamet Manufacturing: A Tradition Of Quality**

Gamet truck probe samplers can be supplied as stand-alone systems or as part of a complete sampling system solution. Standard units are supplied with vacuum systems capable of transporting product up to 100 ft. from the sampling probe to the sample collection point. Samples requiring longer conveying distances can be accommodated through the use of high- powered vacuum pumps. To make your sampling system complete, Gamet also offers grain return systems (short and long distance models), scale ticket conveying systems, closed circuit camera systems, intercom systems, gravity dividers, signal alarms, traffic lights and tubing support structure systems. Gamet's complete line of truck probe sampling systems remain the highest quality and most dependable available.

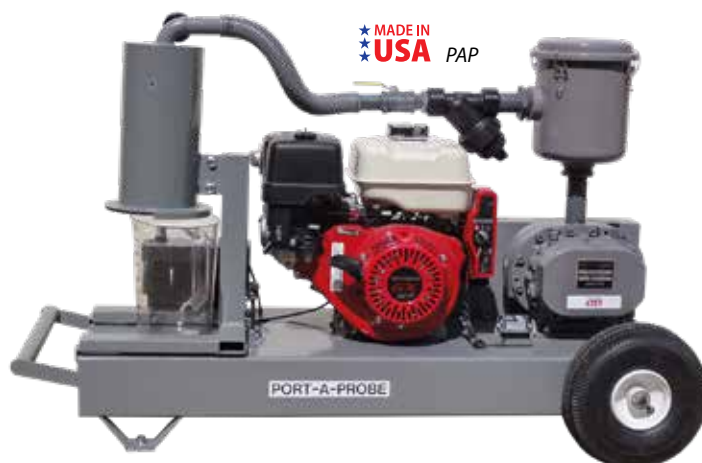


## Port-A-Probe Sampler

The Port-A-Probe offered by Seedburo is a unique portable sampling system that is ideal for grain storage of all sizes and types. The Port-A-Probe is used to sample grain bins, flat storage, grain piles and any grain container. Commonly used in remote locations, the Port-A-Probe is powered by a 270cc (9HP) Honda gas engine eliminating the need for electric current and explosion proof fittings. Samples are obtained without dragging heavy equipment to the top of bins or over flat storage areas. The special suction hose and the lightweight aluminum probe sections are all you need at the grain surface. Samples are contained within the system and can be collected at ground level outside the bin.

Changing times are requiring more emphasis on quality, sanitation and minimizing chemical treatment. The use of the Port-A-Probe has many benefits. It takes the sample when the grain is not moving. The grain is securely held in a bin and the identity is preserved. The grain can be repeatedly sampled and inspected for changes. This is a critical control point for a hazard analysis. Moving or turning grain is costly. It causes kernel breakage, dust and shrinkage. It spreads insects that work 24/7. The Port-A-Probe puts management in control to make the best decisions.

The Port-A-Probe PAP and PAP-HES can reach depths of 120 ft. (36.6m). The Model PAP-5.5H is a smaller and lighter unit and reaches depths of 60 ft. This unit has a recoil start engine. Temperature cables can be inserted in grain bins with these system. The high strength, thick wall aluminum probe section are attached by machine threads designed for heavy duty use.



The Port-A-Probe base units features a movable cyclone receiver with a clear plastic sample collection pitcher, a positive displacement vacuum pump and the 270cc (9HP) Honda gas engine, hose reel, vacuum gauge, hour meter, tachometer, and key start. Hose reel holds six (6) 50 ft. hoses. **No. PAP and No. PAP-HES (Base Unit):** Ship dims: 52" (L) x 48" (W) x 34" (H). **No. PAP and No. PAP-HES (Hose and Accessories):** Ship dims: 42" (L) x 42" (W) x 30" (H). **No. PAP and No. PAP-HES (Base Unit, Hose, and Accessories):** Ship wt: 500 lbs, Export wt: 575 lbs, Export dims: 60" (L) x 48" (W) x 42" (H). **No. PAP-5.5H:** Ship/export wt: 300 lbs, Ship/export dims: 42" (L) x 42" (W) x 42" (H).

For a complete system you will need: A base unit, hose, lever yoke, the aluminum threaded tip and various probe sections based upon the depth you need to probe.

Port-A-Probe Base Unit with Recoil Start Engine.....	<b>No. PAP</b>
Port-A-Probe Base Unit with Electric Start Engine .....	<b>No. PAP-ES</b>
Port-A-Probe Base Unit with Recoil Start Engine for Sampling Up to 60 ft.....	<b>No. PAP-5.5H</b>
Hose, 50 ft. Section with Connectors, 1¼" ID .....	<b>No. PAP-H</b>
Lever Yoke .....	<b>No. PAP-LT</b>
Aluminum Threaded Probe Sections, 4 ft. with Protective Cap (1.315" Outside Diameter).....	<b>No. PAP-P4T</b>
Aluminum Threaded Tip, 4" with Protective Cap.....	<b>No. PAP-TT</b>
Nylon Carrying Bag, Holds 13 Sections .....	<b>No. PAP-CB</b>
Replacement Filter Canister Assembly .....	<b>No. PAP-CANISTER</b>
Replacement Receiver Pitcher.....	<b>No. PAP-CP</b>
Gear Jack for Sampling Bins Over 120 ft.....	<b>No. PAP-GJ</b>
Export Crate.....	<b>No. PAP/EX</b>

*Probe sections available in other materials — Call for Quote.*

**Seedburo Stowage Exam Camera System**



Seedburo Equipment Company, in conjunction with several federally licensed grain inspectors, has assembled a video camera system for the purpose of Stowage Exams for loading facilities. A high definition video camera will help keep inspectors off rail cars, trucks, barges and vessels. This may reduce some of the fees from your inspection agency, and can reduce the overall time for loading through your facility.

USDA-AMS/FGIS has issued Program Notice FGIS-PN-09-03

which provides guidelines on the use of closed circuit camera/monitor packages. There are many challenges with the proper selection of the appropriate camera, correct and sufficient lighting system, clarity of the monitors, and specific site installation. This system, when installed properly will meet the USDA-AMS/FGIS requirements for Stowage Exams. This collaboration is exactly how and why licensed grain inspectors helped us put this package together!

Installation is not included in this product package. All you will need to do is have your local electrician or maintenance staff mount the light(s) and camera(s), route the cabling to your inspection office, install the monitor and a simple A/B switch so the inspector can toggle between inspecting the interior of the railcars and, (depending upon whether you have ordered more than one camera) a wide angle view of the cars with hatches closed, a view under the cars, or even to a diverter sampler - the choice is yours!

Multiple mounting options for the camera and spotlights should be determined on site to best suit your particular needs in your facility.

**SEC-1 Kit** includes: **A)** SEC-M Monitor, **B)** SEC-WM Wall Mount, **C)** SEC-C Camera, **D)** SEC-TRANS Transformer, **E)** Two SEC-L Spotlight Fixtures, **F)** Two SEC-B Bulbs, **G)** SEC-CABLE cable with connectors.

**SEC-2 Kit** includes: **A)** SEC-M Monitor, **B)** SEC-WM Wall Mount, **C)** Two SEC-C Cameras, **D)** Two SEC-TRANS Transformers, **E)** Two SEC-L Spotlight Fixtures, **F)** Two SEC-B Bulbs, **G)** SEC-CABLE cable with connectors.

**SEC-BARGE Kit** includes: One portable barge hatch mount, high-resolution digital camera, battery LED spotlight, bulbs, universal camera mount with remote controls and display.

Stowage Exam Kit with One Camera.....	<b>No. SEC-1</b>
Stowage Exam Kit with Two Cameras.....	<b>No. SEC-2</b>
Stowage Exam Kit with One Camera.....	<b>No. SEC-BARGE</b>

**Alternate, Build Your Own Package From The Following Individual Components:**

Outdoor Day/Night Color Hi Resolution Camera .....	<b>No. SEC-C</b>
Transformer for Camera .....	<b>No. SEC-TRANS</b>
17" LCD Color Monitor.....	<b>No. SEC-M</b>
Wall Mount for Color Monitor.....	<b>No. SEC-WM</b>
High Intensity Spotlight Fixture (Less Bulbs) .....	<b>No. SEC-L</b>
High Intensity 70 Watt Bulb with 12,500 Hour Average Life.....	<b>No. SEC-BULB</b>
500' Coaxial Cable with Connectors .....	<b>No. SEC-CABLE</b>
Zoom Lens, 1/3", 6-48mm, A/I Lens, DC .....	<b>No. SEC-ZOOM</b>
Cable for Zoom Lens Controller .....	<b>No. SEC-ZCABLE</b>



### Seedburo Canola Counting Paddle

The Seedburo Canola/Rapeseed Counting Paddles perform quick counts of canola seeds and help detect damaged seeds (distinctly green or heat damaged). The paddles are used with masking tape and a roller to crush the seeds. The paddles are made of acrylic and are pre-drilled with 100 or 500 depressions. **No. CP100:** Actual dims: 9" (L) x 1 1/4" (W). **No. CP500:** Actual dims: 18" (L) x 2 1/4" (W).



CP500

When detecting for seed damage, first a 10g portion is hand-picked to determine content of visibly damaged seeds. The remaining portion is analyzed with the aid of the Canola Paddle. The sample is poured over the paddle until each depression fills with seeds. A piece of masking tape is placed evenly over the top of the paddle, enclosing the seeds. The tape is then removed with seeds stuck to it and laid face up on the counter. The small roller is then used to crush the seeds. Make one pass of the roller under firm pressure. The sample is then ready for visual inspection of damaged seed (distinctly green in color). A minimum of 5 sets of samples should be crushed. If indication of heat damage is present, 5 more sets should be made. The 500 count paddle increases crushing speed by completing 5 sets of samples with one test. **MADE IN USA.**

Canola Counting Paddle, 100 Count .....	No. CP100
Canola Counting Paddle, 500 Count .....	No. CP500
Canola Crushing Roller .....	No. CPR

### Seedburo Canola Counting Kit

The Seedburo Canola Counting Kit comes complete with one 8 1/2" (L) x 19" (W) canvas bag, one each of the **No. CP100** and **No. CP500** counting paddles, one each of the 1" and 2" masking tapes, a crushing roller and a 7x lighted pocket magnifier. Ship wt: 3 lbs, Ship dims: 26" (L) x 6" (W) x 6" (H).



Canola Counting Kit .....	No. CPKIT
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### S/J Sorghum Bleach Kit

The S/J Sorghum Bleach Kit is used for the detection of germ damaged Sorghum, class determination (mixed Sorghum) and detection of Tannin (or brown Sorghum). Tannin Sorghum is a variety that is bad in taste and undesirable to feeding animals. This bleaching process removes the seed coat from the germ area for visual inspection.

The bleaching method follows the official procedure used by USDA-AMS/FGIS. The process involves weighing a 15g sample of Sorghum combined with 40ml of household bleach and 15g of potassium hydroxide\* pellets (for germ damage) or 5g for mixed Sorghum and Tannin. The combined sample is then mixed for 3 minutes then removed from the jar and placed in a strainer where it is rinsed under tap water. The sample may be dried by natural air or an external dryer or blower. Net wt: 5 lbs, Actual dims: 7" (L) x 5 1/2" (W) x 9" (H), Ship wt: 8 lbs, Ship dims: 9" (L) x 9" (W) x 13" (H). \*Potassium hydroxide is a hazardous and toxic chemical, handle accordingly. **MADE IN USA.**



SJ Mixer

Bleach Test Mixer with One Mixing Jar, 115V, 60Hz .....	No. SJ MIXER
Replacement Mixing Jar and Paddle Assembly .....	No. SJ JAR
O Ring for SJ Jar .....	No. SJ JAR/RING

### Seedburo Dual Range Light Meter

The Huygen Digital Light Meter features dual range, hold function for each range, automatic zeroing, plus improved resolution and accuracy. The electronics are mounted in an anodized aluminum case. To ensure accuracy, every Huygen light meter is calibrated at multiple points to NIST traceable secondary standards for luminous intensity and color temperature. Meter reading extends well beyond the upper calibrated range.

The meter has a multi-element glass filter that does not fade or change spectral transmission characteristics over long periods of time. With a stable and accurate life that typically exceeds 40 years, it is far superior to plastic and gelatin filters. It has been coupled with a cosine filter that corrects the instrument for true foot-candle or lux measurements when significant side light is present (e.g. light from fluorescent tubes or multiple sources such as a long hallway). Such meters accurately measure all types of lighting as the human eye would, including fluorescent, incandescent, halogen, sodium, and mercury vapor.



703D-250VC

The meter is designed for interior illumination with a range of 0–50.0/250 foot-candle. Approved by the USDA-AMS/FGIS for use by licensed grain inspectors. Check testing certificate available for official agencies (only) on request from USDA-TSD, Kansas City, MO. Net wt: 13.7 oz (with 9V battery inserted), Actual dims: 3.1" (W) x 6.01" (L) x 1.28" (H), Ship wt: 3 lbs, Ship dims: 12" (W) x 9" (L) x 5" (H). Battery not included.

Huygen Dual Range Digital Light Meter .....	No. 703D-250VC
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Large inspection board with Corn

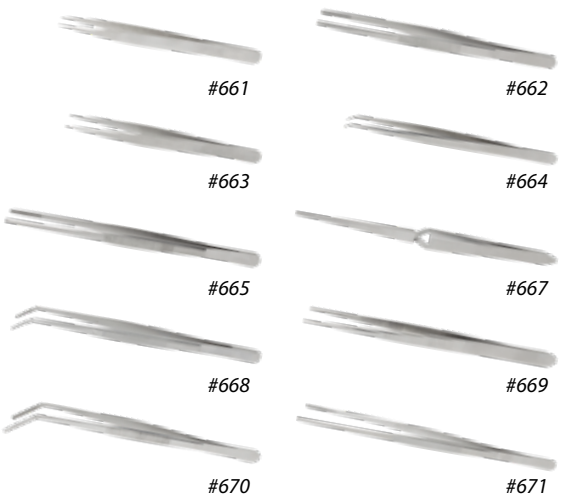
### S/J Picking Tray

The S/J Picking Tray was designed to make the job of a grain grader easier by turning all kernels over at one time. The grain is placed on the corrugated half of the tray and with a few short, quick shakes the grain is spread in one layer. With the use of tweezers, kernels can be "plucked" from the formed rows without disturbing the kernels on either side of the one being removed. After all rows have been reviewed, the second half of the picking tray (foam side) is now placed on top of the first half (corrugated half). Holding the two trays tightly together, the user turns the trays over and now places the foam side of the tray on the bottom. The kernels remain lined-up and the opposite side of the grain can now be viewed for further grading. **SIB-L:** Ship wt: 6 lbs, Ship dims: 24" (L) x 19" (W) x 4" (H). **SIB-S:** Ship wt: 3 lbs, Ship dims: 16" (L) x 11" (W) x 4" (H).

- Seedburo Inspection Board – Large 18 $\frac{1}{8}$ " (L) x 11 $\frac{5}{8}$ " (W) (Corn, Soybean, Sunflower).....**No. SIB-L**
- Seedburo Inspection Board – Small 11 $\frac{1}{8}$ " (L) x 8 $\frac{7}{8}$ " (W) (Barley, Lentils, Wheat).....**No. SIB-S**

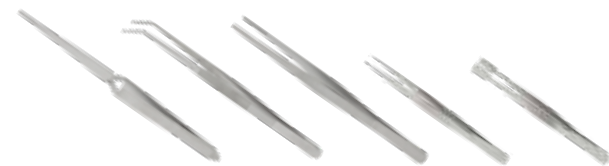
### Seedburo Forceps

Our forceps are used for analyzing grain or seed and can be used in conjunction with our inspection boards as featured above. Our medium-serrated points are suggested for use with larger seed and the fine points for more delicate seed.



- Nickel Plated, 5 $\frac{1}{4}$ " Medium Sharp Point.....**No. 661**
- Nickel Plated, 6" Blunt Point .....**No. 662**
- Stainless Steel, 4 $\frac{3}{4}$ " Sharp Point .....**No. 663**
- Stainless Steel, 5 $\frac{1}{2}$ " Sharp Point with Curved Tip .....**No. 664**
- Nickel Plated, 8" Blunt Point .....**No. 665**
- Nickel Plated, 6 $\frac{1}{2}$ " Sharp Serrated Point, Cross Locking.....**No. 667**
- Nickel Plated, 6" Sharp Serrated Point with Curved Tip.....**No. 668**
- Chromium Plated, 6 $\frac{3}{8}$ " Serrated Medium Sharp Point .....**No. 669**
- Nickel Plated, 10" Blunt Point with Curved Tip .....**No. 670**
- Nickel Plated, 10" Blunt Point.....**No. 671**

### Five Piece All-Purpose Tweezers Kit



Forceps in kit #672 differ from the Seedburo forceps

A complete, basic tweezers set. An ideal way to sample and select the proper type tweezers for most applications. Multiple tips available for the task at hand. Includes deluxe vinyl pouch for handy storage. Ship wt: 2 lbs, Ship dims: 13" (L) x 11" (W) x 3" (H).

- Five Piece All-Purpose Tweezers Kit.....**No. 672**

### Seedburo Razor Blades

These stainless steel, single edge, 3 facet razor blades are a "must have" for any seed technologist. Features an aluminum back, PTFE (Teflon) coating and are individually protected. Length: 1.56" (39.6mm), Cutting Edge Length: 1.527" (38.8mm), Width: 0.77" (19.6mm), Thickness: 0.009" (.220mm). Sold in box of 100 blades. wt: 1 lb.

- Single Edge, PTFE Coated Stainless Steel Blades, 100/box .....**No. 121-3**

### Medium and Heavy Duty Bench Knives



39110 heavy duty knife

A handy tool for cutting seeds, digging under seed coats and many other uses. These bench knives are available in medium and heavy duty (two sizes). Blade is firmly set in hardwood handle.

- Medium Duty Bench Knife, 1 $\frac{3}{4}$ " Slim Blade, 5" Overall.....**No. 39180**
- Heavy Duty Bench Knife, 1 $\frac{3}{4}$ " Blade, 5 $\frac{3}{4}$ " Overall.....**No. 39105**
- Heavy Duty Bench Knife, 2 $\frac{5}{8}$ " Blade, 6 $\frac{5}{8}$ " Overall.....**No. 39110**

### Seedburo Digital Fractional Caliper

These rugged stainless steel calipers have a tri-mode digital display that measures in decimal inches, millimeters, and fractional inches and are ideal for accurate seed measurement or quick screen perforation verification. The units feature a free-wheeling friction roller that advances and retracts the slide bar, scale is graduated in inches and millimeters, auto on/off and includes an Alkaline LR44/257 battery. Accuracy: ±0.001" (±0.02mm). Resolution and Repeatability: 0.0005" or 0.01mm or 1/64". Available in 3 sizes: 6" (153mm), 8" (203mm), 12" (305mm).



147-6

Digital Fractional Caliper, 6" .....	No. 147-6
Digital Fractional Caliper, 8" .....	No. 147-8
Digital Fractional Caliper, 12" .....	No. 147-12

### Seedburo Lighted Tweezers

Shed some light on your seeds with these Lighted Tweezers. The tweezers feature a push-button on/off powerful LED light, non-slip comfort grips, heat-treated steel tooling and corrosive resistant non-glare black finish.



Left to right: 70401, 70403, 70408

Lighted Tweezers, 6 1/4" (159mm) Smooth Sharp Point .....	No. 70401
Lighted Tweezers, 6 1/4" (159mm) Serrated Blunt Point .....	No. 70403
Lighted Tweezers, 6 1/4" (159mm) Serrated Medium Point with Curved Tip .....	No. 70408

### Seedburo Pocket Lighted Magnifier

This powerful magnifier with optional light (via on/off switch) is ideal for today's seed analyst or grain inspector. The unit features an unbreakable, scratch resistant 1 1/2" lens with 7x magnification, an LED light source and fits comfortably in your pocket. The magnifier light requires 3-AAA batteries (not included). Ship wt: 1 lb, Ship dims: 7" (L) x 5" (W) x 3" (H).



Pocket Lighted 7x Magnifier .....	No. PLM7X
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### Seedburo Tweezer Magnifier

This tweezer magnifier is useful for detailed projects. The unit has a 5-power lens, stainless steel tweezer and double hinged adjustable arm. Made with a durable plastic handle and frame with a fine tip. Tweezer length 2 1/4".



Tweezer Magnifier .....	No. TWEEZEMAGNIFIER
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### Seedburo Lighted Magnifier

This lighted magnifier puts the light directly on your subject to be viewed. The unit has two magnifications, 3x and 6x, as well as an integrated stand for hands-free use. Push on/Push off powerful LED light, contoured handle for handheld use. 3 1/2" diameter lens. 3x magnification (6x inset lens). Operated by 2-AA batteries included. Includes protective pouch.



Lighted Magnifier .....	No. LIGHTMAGNIFIER
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**GRAIN INSPECTION VISUAL REFERENCE IMAGES**

The USDA-AMS/FGIS Federal Grain Inspection Service (FGIS) has developed a variety of educational content for use by the grain industry for the purpose of standardizing the commercial inspection of U.S. grain. Whether you need to develop new knowledge or just want an update to stay aware of current standards and procedures in US grain marketing, Seedbuero offers these FGIS resources you need. Visual Reference Images (VRI) are used to ensure consistent and uniform application of grading lines and illustrate types of damage in conjunction with written descriptions. The grain grading aids are each printed on 300gsm blue-core smooth playing card stock. Cards and decks are available in several languages for the major grains.



**Grain Grading Cards**

Grain grading cards are an aid for use in commercial inspection. Each 3.5" x 5.75" card contains the grade requirements table on the obverse and the principal damage references on the reverse.

English (Barley, Corn, Sorghum, Soybeans, Wheat, Oats, Rye, Oilseeds, Dry Beans, Peas, Lentils, Rice) ..**No. VRICARD-CORN**  
 All cards follow the same sequence with the grain listed after the VRICARD.

Spanish (Barley, Corn, Sorghum, Soybeans, Wheat) .....**No. VRICARD-CORN-S**  
 All cards follow the same sequence with the grain listed after the VRICARD.

VRICARD-CORN



**Pocket References**

Pocket References are an aid for use in commercial inspection. Each 3.5" x 3.5" card shows a visual reference with guidance for interpretation. We suggest that you order the Grain Starter set, Extension set and one of the Inspection Boards to provide a starter basic system.

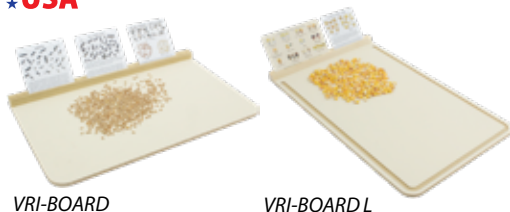
VRIDECK-GS

Grain Starter Set (24 Cards).....**No. VRIDECK-GS**  
 This starter set contains the primary references for Barley, Corn, Soybeans, Sorghum and Wheat plus the complete Canola and Sunflower seed sets.

Extension Sets include the remaining pocket reference aids not included in the starter set:

- |  |  |
|--|--|
| Corn/Soybean Extension Set (24 Cards)..... <b>No. VRIDECK-CORN/SOY</b>                                   | Peas References (20 Cards) ..... <b>No. VRIDECK-PEAS</b>                     |
| Wheat/Sorghum Extension Set (24 Cards)..... <b>No. VRIDECK-WHEAT/SOR</b><br>also Includes Safflower Seed | Lentils References (9 Cards) ..... <b>No. VRIDECK-LENTILS</b>                |
| Barley/Flaxseed/Oats/Rye Extension Set (24 Cards)..... <b>No. VRIDECK-BARLEY</b>                         | Rice References (9 Cards)..... <b>No. VRIDECK-RICE</b>                       |
| Dry Beans References (21 Cards) ..... <b>No. VRIDECK-DRY BEAN</b>  | Stored Grain Insects References (24 Cards ) ..... <b>No. VRIDECK-INSECTS</b> |
|  | Other Factors References (24 Cards) ..... <b>No. VRIDECK-OTHER FACTORS</b>   |

★ MADE IN USA



VRI-BOARD

VRI-BOARD L

**Grain Grading Inspection Board**

These laminated inspection boards are covered in the USDA-AMS/FGIS approved color laminate and includes a hard wood rail to support the Deck or Card References. These inspection boards hold the VRI Reference above the work space providing a quick reference for those common damages or factors during their inspection process. The small board has a work surface of 8" (L) x 15.5" (W) and is the size for the smaller portions needed in Wheat, Barley, Oats or Rye. The large board has a work surface of 12" (W) x 18" (L) with the support rail on the 12" width. The large board includes a routed trough around the edge to catch seed roll.

Small Inspection Board .....**No. VRI-BOARD**  
 Large Inspection Board .....**No. VRI-BOARD L**

**Official Visual Reference Images**

Official Visual reference images (VRI) are used exclusively by all USDA-AMS/FGIS inspection sites and their authorized, delegated or designated state or private official grain inspection offices. Each image is produced digitally and available only on the USDA-AMS/FGIS website. Approved by USDA-AMS/FGIS Board of Appeals and Review and dated with a validity date, they are only available on the internet.



### Grain Grading Mats

Seedburo offers Grain Grading Mats, produced by USDA-AMS/FGIS, which are used in training sessions for grain industry inspectors. The mats are double sided with the commonly shared production area crop. (Corn-Soybean, Rye-Oats, etc) Included on the mat are the grade requirements chart, official "wheat" colored picking surface and many of the principal damage images. The mats measure 10" (L) x 16" (W) and are printed on 300gsm blue-core smooth playing card stock for extended wear.

These are often used as grading aids for in-house inspectors, but do not replace the official Visual Reference Images (VRI) for official grain inspection. In addition, some of the VRI Mats are available in Spanish or other languages. Please contact us for these part numbers as new mats are added based on market demand.

**Catalog No.**

**Description**

- No. VRIMAT-BARLEY/OIL .... Training Mat for Barley & Oilseeds-Canola, Flax, Sunflower (English)
- No. VRIMAT-CORN/SOY ..... Training Mat for Corn and Soybean (English)
- No. VRIMAT-PEAS/LENTILS ..... Training Mat for Peas and Lentils (English)
- No. VRIMAT-RICE ..... Training Mat for Rice (English)
- No. VRIMAT-RYE/OAT ..... Training Mat for Rye and Oats (English)
- No. VRIMAT-WHEAT/SOR ..... Training Mat for Wheat and Sorghum (English)
- No. VRIMAT-CORN/SOY-S ..... Training Mat for Corn and Soybean (Spanish)
- No. VRIMAT-WHEAT/SOR-S ..... Training Mat for Wheat and Sorghum (Spanish)
- No. VRI-TRAININGMAT ..... Picking Surface, Double Sided (Plain) 10" x 16"



VRIMAT-CORN/SOY (showing both sides)

### Grading Work Surface

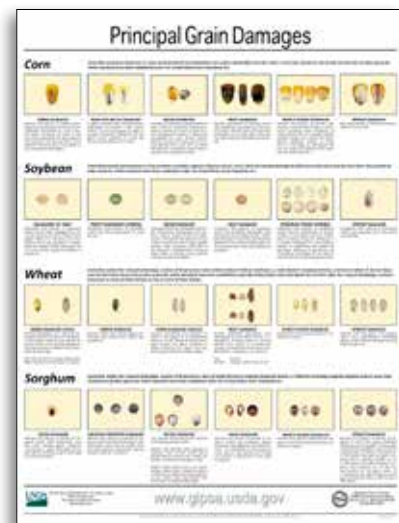
This Formica™ brand laminate work surface is the approved color and style by USDA-AMS/FGIS for official use in the inspection of all grains, edible Beans, Peas and Lentils. The laminate is applied to countertop with standard contact center spray adhesive (not included). The sheet measures 4 ft x 8 ft with a thickness of .030". Ship wt: 25 lbs, Ship dims: 25" (L) x 25" (W) x 62" (H).

- Laminate Sheet, 4' x 8' ..... No. FGIS-LAMINATE

### Grain Quality Posters

These Grain Quality Posters will help explain grain damage to your customers, along with the Visual Reference Cards, Decks and Visual Reference Mats. The full-color poster measures 24" x 32" and can be hung on your office wall to aid in comparing quality grain from damaged grain. All images are provided by USDA-AMS/FGIS, but since they have been enlarged, are not approved for official inspection like the Visual Reference Images (VRI).

**GQP-MAJOR** includes images of the "major" grains: Corn, Soybeans, Sorghum, and Wheat along with a brief description of the damage. **GQP-MINOR** includes images of the "minor" grains: Barley, Oats, Rye, Canola, Sunflower and Flaxseed. The insect poster includes images of the most common stored grain insects. The Grain Requirements posters include the specific limits for grain grades with the grade requirement chart and several common types of damage images. Additional posters available for other grains upon request.



GQP-MAJOR

- Grain Quality Poster Major Grains (Corn, Soybean, Wheat & Sorghum)..... No. GQP-MAJOR
- Grain Quality Poster Major Grains (Corn, Soybean, Wheat & Sorghum) Spanish..... No. GQP-S
- Grain Quality Poster Minor Grains (Barley, Oats, Rye, Canola, Sunflower & Flaxseed)... No. GQP-MINOR
- Principle Stored Grain Insects Poster (24" x 28") ..... No. GQP-INSECTS
- Corn Grade Requirements Poster (20" x 24")..... No. GRP-CORN
- Rice Grade Grain Requirements Poster (20" x 24") ..... No. GRP-RICE
- Soybean Grade Requirements Poster (20" x 24")..... No. GRP-SOYBEAN
- Wheat Grade Grain Requirements Poster (20" x 24") ..... No. GRP-WHEAT



**Heavy Duty Boerner Divider**

Our Boerner divider reduces the size of a grain sample while maintaining the equal distribution of the original sample. It is the standard divider for all federal, state, and local grain inspection offices. Built to meet USDA-AMS/FGIS specifications for official inspections.

The No. 34 divider is gravity-operated. Sample is placed in the hopper and released by moving a slide gate located in the hopper throat. The product is evenly dispersed over a cone that has 38 pockets. The grain, after initial separation, is rejoined into two chutes which empty out of the bottom hopper. The Boerner is calibrated to provide accurate splits of +/- 1% on a 1000g sample. Hopper holds approximately 1500 grams.

The Seedburo Boerner divider is made from brass and copper, which makes it rust resistant. The legs and supports are powder coated mild steel. Entire bottom section is removable to facilitate cleaning if necessary.

Model 34 is supplied with two brass pans with handles for easy transport of divided samples. The No. 34 stands 31" high with 3" clearance under the spouts. Net wt: 32 lbs, Ship wt: 36 lbs, Ship dims: 18" (L) x 18" (W) x 39" (H).

Boerner Divider.....	No. 34
Divider less Pans.....	No. 34L
Extra Pans.....	No. 34P



**Boerner Extension Accessory**

The Boerner can be converted to a larger capacity divider with a top hopper and leg extension kit. Hopper is spun copper and the leg extensions are powder coated mild steel. Extension kit adds 9" under the spouts allowing for larger sample collection containers. Hopper capacity is approximately five gallons, or a minimum of 5,000 grams. Increases divider height to 42". Ship wt: 14 lbs, Ship dims: 18" (L) x 18" (W) x 12" (H). **MADE IN USA.**



**Boerner Sound Abatement Kit**

The Sound Abatement Kit reduces unhealthy noise levels in the lab by as much as 80% when properly applied to the Boerner Divider. Noise reduction is accomplished with a plastic collar and die-cuts of heavy gauge aluminum foil alloy sound dampening material. The foil has a self-adhesive back that attaches directly to the No. 34 Boerner Divider. Meets USDA-AMS/FGIS specifications for official inspection. Ship wt: 6 lbs, Ship dims: 15" (L) x 15" (W) x 6" (H). **MADE IN USA.**

Boerner Divider Extension Kit.....	No. 34E	Boerner Sound Abatement Kit.....	No. 34S
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**Boerner Dust Filter Kit**

The Dust Filter Unit is designed to remove airborne dust caused by the Boerner Divider. It consists of two components: the main filter unit and the dust hood. The main filter mounts under a table or counter. The dust hood, located behind the Boerner pans, removes the dust during a sample. The unit is easily installed and operates quietly. The filter hood can be purchased and installed under an existing countertop or we can supply a completely assembled dust filter unit with a freestanding table. **Dust Collector:** Net wt: 32 lbs, Actual dims: 14" (L) x 14" (W) x 19" (L). **Hood:** Net wt: 5 lbs, Actual dims: 12" (L) x 12" (W) x 6" (L).

The 34D Ships in two cartons: **Carton 1 (Dust Collector):** Ship wt: 34 lbs, Ship dims: 17" (L) x 17" (W) x 27" (H). **Carton 2 (Hood):** Ship wt: 7 lbs, Ship dims: 15" (L) x 12" (W) x 10" (H).

The 34DT Ships in two cartons: **Carton 1 (Dust Collector):** Ship wt: 42 lbs, Ship dims: 25" (L) x 25" (W) x 11" (H). **Carton 2 (Table and Hood):** Ship wt: 36 lbs, Ship dims: 26" (L) x 26" (W) x 12" (H). **MADE IN USA.**

Boerner Dust Filter Unit.....	No. 34D
Boerner Dust Filter Unit with Free Standing Table.....	No. 34DT
Dust Filter Replacements, Box of 6.....	No. 34RF



**Cargo Type Divider**

The Cargo Type Divider is a high capacity splitter made to meet USDA-AMS/FGIS specifications for official inspections. Great where portability is necessary. The Cargo is also used for dividing samples obtained from Gamet automatic samplers or when large amounts of sample are collected. The 292 is provided with sturdy 18" legs that accommodate larger buckets under the spouts, which have 14½" clearance. The Cargo divider is ruggedly constructed of brass, with powder-coated mild steel legs, has 20 divider pockets, and stands 33" high. Ship wt: 26 lbs, Ship dims: 15" (L) x 15" (W) x 35" (H). **MADE IN USA.**



**Mini Cargo Type Divider**

The Mini Cargo Divider, made to the same exacting standards as the full sized 292 Cargo but in a smaller version. The 292-M measures 23½" high x 9" in diameter with a 12" square footprint.

Ideal for use in offices with limited counter space. Just as effective as the full-sized Cargo, but with a 1500g capacity, and used for sub-dividing samples for additional testing. Net wt: 13 lbs, Ship wt: 16 lbs, Ship dims: 13" (L) x 13" (W) x 31" (H). **MADE IN USA.**

Cargo Type Divider.....	No. 292	Mini Cargo Type Divider.....	No. 292-M
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### Riffle Dividers

The Riffle Divider is used for halving dry materials. These splitters are easy to use and easy to clean. As the product is poured in the hopper it is divided into two equal portions by a series of chutes which discharge alternately in opposite directions into separate pans.

MADE IN USA



Prices include stainless steel dividers, pans, scoop and cleaning brush. The R75 is an enclosed splitter recommended for dusty samples, all other splitters are open style as shown in the photograph. Extra scoops, brushes and other styles are available from Seedburo, please contact us for prices.

Number of Chutes	Width of Chutes	Pans Furnished	Hopper Size	Extra Pans	Model Number	Ship Dimensions	Approximate Ship Weight
14	1/2"	4	11" x 6 3/4"	No. R64P	No. R64	16" x 14" x 13"	18 lbs
14	3/4"	4	14 3/4" x 6 3/4"	No. R66P	No. R66**	22" x 17" x 20"	27 lbs
24	3/8"	4	11" x 4 1/2"	No. R75P	No. R75*	19" x 19" x 15"	25 lbs
16	1"	4	20" x 9"	No. R87P	No. R87	22" x 17" x 20"	38 lbs
8	2"	4	19 1/2" x 9 1/2"	No. R89P	No. R89	22" x 17" x 20"	37 lbs
10	1 1/2"	4	20" x 9"	No. R90P No. R90PS	No. R90	22" x 17" x 20"	37 lbs
8	2 1/2"	4	24" x 9"	No. R92P	No. R92*	26" x 17" x 17"	39 lbs

\*Splitters come with stainless steel Pans. \*\*Recommended for corn and soybean.

### Seedburo Precision Divider

Seedburo offers the traditional positive action divider that handles seed, grain and feed. The Precision Divider has repeatedly demonstrated its ability to precisely divide larger samples into working size samples in a matter of seconds. Ideal for smaller seeded crops.

MADE IN USA



The dividing and mixing are accomplished by the centrifugal action of a motor driven revolving neoprene disc positioned under the hopper. A smooth inside finish virtually eliminates any of the sample sticking to the inner surfaces. Both the hopper and cylinder top lift off to provide easy access to the interior of the dividing chamber. Also available, a 5" x 5" graduated aluminum cup, fits nicely under the 106 spouts and holds approximately 1 quart/1 liter. The cup is graduated with 1/4, 1/2, and 3/4 marks. Net wt: 35 lbs, Actual dims: 9" (L) x 12" (W) x 20" (H), Ships in 2 cartons: **Carton 1 (Base):** Ship wt: 47 lbs, Ship dims: 21" (L) x 17" (W) x 21" (H). **Carton 2 (Hopper):** Ship wt: 7 lbs, Ship dims: 16" (L) x 16" (W) x 12" (H). **K22 Transformer:** Ship wt: 7 lbs, Ship dims: 12" (L) x 10" (W) x 6" (H).

Precision Divider, 1/12HP, 115V, 60Hz, 1PH Motor, 500 RPM Motor..... **No. 106**  
 5" x 5" Graduated Beaker, Aluminum Capacity, 1 quart/liter..... **No. 106-CUP**  
 Transformer for 220V Operation..... **No. K22**

### Laboratory Rotary Dividers

The Gamet Rotary Dividers are fast and accurate to within 1/10th of 1% of the total sample by weight. Minimum sample size is 1000 grams. These dividers can significantly reduce the length of time it takes one employee to handle and divide larger samples. These dividers eliminate the need to divide samples many times as with the traditional gravity type dividers. Our models **4203** and **4304** have 10 rotary divisions. When placing an order, please specify the divisions you require. Model **4303** divides the sample into three (3) portions. Use any combination of three numbers adding up to 10. For example a division of 3-4-3 or 4-2-4. Model **4204** divides the sample into four (4) portions. Use any combination of four numbers adding up to 10, for example a division of 4-3-2-1 or 5-1-1-3. All models meet USDA-AMS/FGIS specifications for an official inspection. Net wt: 85 lbs, Ship wt: 160 lbs, Ship dims: 25" (L) x 25" (W) x 39" (H), Export wt: 160 lbs, Export dims: 35" (L) x 35" (W) x 41" (H).

MADE IN USA



3-Way Laboratory Rotary Divider, 1/4HP, 110V, 60Hz, 1PH... **No. R4203/B**  
 3-Way Laboratory Rotary Divider, 1/4HP, 220V, 50Hz 1PH.... **No. R4203/C**  
 3-Way Laboratory Rotary Divider, 1/4HP, 220V, 60Hz, 1PH... **No. R4203/E**  
 4-Way Laboratory Rotary Divider, 1/4HP, 110V, 60Hz, 1PH... **No. R4204/B**  
 4-Way Laboratory Rotary Divider, 1/4HP, 220V, 50Hz, 1PH... **No. R4204/C**  
 4-Way Laboratory Rotary Divider, 1/4HP, 220V, 60Hz, 1PH... **No. R4204/E**  
 Required Domestic Crating ..... **No. R4200/DOM**  
 Required Export Crating ..... **No. R4200/EX**



No. 1 Corn Set

**Official Grain Dockage Sieves**

Seedbuero Dockage Sieves are manufactured to comply with the specification of the U.S. Department of Agriculture. They are regularly used by federal grain supervision offices, state grain inspection departments and licensed grain inspectors. Most sieves are available in commercial grade only, unless otherwise noted. All federal grain inspectors use precision sieves where available, but for most applications the commercial sieves will suffice. Sieves should be replaced when the perforations show wear in order to maintain accurate results. Slotted sieves used in sizing Rice, Barley and Oats need to be replaced regularly since these grains are highly abrasive. A worn sieve lets too much material pass through, giving inaccurate results. Damaged or dented sieves should always be replaced.

All of the sieves with an alphabetical part number (A, B, C, etc.) are made with 20 gauge B & S aluminum. Sieves with numerical designations (0022, 0021, 0019, etc.) have No. 20 gauge B & S aluminum sides and 20 gauge cold-rolled steel perforated plates. Decimal equivalents of diameter or width are shown in parentheses. Actual dims: 13" Diameter x 2<sup>3</sup>/<sub>8</sub>" Deep, **Sieves A, N and H:** 13" Diameter x 2" Deep, **Pan E:** 13" Diameter x 3" Deep. See **page 41** to find perforation sizes for numerical sieves like **No. 0105** or **No. 0155**. **MADE IN USA.**

Sieves Sets	Commerical	Precision	Individual Sieves	Commerical	Precision
<b>Corn</b>			1 <sup>7</sup> / <sub>64</sub> " Round (0.1875") Scalper .....	<b>No. A</b> .....	<b>No. A-P</b>
Includes A, Y and E .....	<b>No. 1 Set</b> .....	<b>No. 1P Set</b>	5 <sup>5</sup> / <sub>64</sub> " Single Triangle (0.0781") .....	<b>No. B</b> .....	<b>No. B-P</b>
<b>Wheat, Rye and Oats</b>			1 <sup>1</sup> / <sub>2</sub> " Round (0.0833") .....	<b>No. C</b> .....	<b>No. C-P</b>
Includes A, B, C, D, W and E .....	<b>No. 2D Set</b> .....	<b>No. 2DP Set</b>	4 <sup>5</sup> / <sub>64</sub> " x 1 <sup>1</sup> / <sub>2</sub> " Oblong (0.0703") .....	<b>No. D</b> .....	<b>N/A</b>
Includes A, B, C, F, W and E .....	<b>No. 2F Set</b> .....	<b>No. 2FP Set</b>	.064" x 3 <sup>3</sup> / <sub>8</sub> " Oblong (0.0703") .....	<b>N/A</b> .....	<b>No. F-P</b>
<b>Soybean</b>			9 <sup>5</sup> / <sub>64</sub> " Dbl. Triangle (0.1406") .089" Inscribed Circle .....	<b>No. G</b> .....	<b>N/A</b>
Includes H, I and E .....	<b>No. 3 Set</b> .....	<b>No. 3P Set</b>	10 <sup>1</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Oblong (0.1563") Scalper .....	<b>No. H</b> .....	<b>N/A</b>
<b>Cottonseed</b>			8 <sup>5</sup> / <sub>64</sub> " Round (0.1250") .....	<b>No. I</b> .....	<b>No. I-P</b>
Includes A and E .....	<b>No. 4 Set</b> .....	<b>No. 4P Set</b>	10 <sup>1</sup> / <sub>64</sub> " Round (0.1563") .....	<b>No. J</b> .....	<b>N/A</b>
<b>Barley</b>			2 <sup>5</sup> / <sub>64</sub> " Round (0.0391") .....	<b>No. K</b> .....	<b>N/A</b>
Includes B, L and E .....	<b>No. 5L Set</b> .....	<b>No. 5LP Set</b>	5 <sup>5</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Slot (0.0781") .....	<b>N/A</b> .....	<b>No. L</b>
Includes B, M and E .....	<b>No. 5M Set</b> .....	<b>No. 5MP Set</b>	5 <sup>5</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Slot (0.0859") .....	<b>N/A</b> .....	<b>No. M</b>
<b>Flax</b>			10 <sup>1</sup> / <sub>64</sub> " Round Scalper (0.1563") .....	<b>No. N</b> .....	<b>N/A</b>
Includes T, U and E .....	<b>No. 6 Set</b> .....	<b>N/A</b>	6 <sup>5</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Slot (0.0938") .....	<b>N/A</b> .....	<b>No. P</b>
<b>Canola</b>			6 <sup>5</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Slot (0.1016") .....	<b>N/A</b> .....	<b>No. Q</b>
Includes R, S, T, V, Y and E .....	<b>No. 7 Set</b> .....	<b>N/A</b>	.028" x 1 <sup>5</sup> / <sub>32</sub> " Slot .....	<b>No. R</b> .....	<b>N/A</b>
<b>Rice</b>			.0395" x 1 <sup>5</sup> / <sub>32</sub> " Slot .....	<b>No. S</b> .....	<b>N/A</b>
Includes X, Y, Z and E .....	<b>No. 8 Set</b> .....	<b>N/A</b>	3 <sup>3</sup> / <sub>64</sub> " x 3 <sup>3</sup> / <sub>8</sub> " Oblong (0.0469") .....	<b>No. T</b> .....	<b>N/A</b>
<b>Sorghum</b>			4 <sup>5</sup> / <sub>64</sub> " Round (0.0703") .....	<b>No. U</b> .....	<b>N/A</b>
Includes B, K and E .....	<b>No. 9 Set</b> .....	<b>No. 9P Set</b>	.035" x 1 <sup>5</sup> / <sub>32</sub> " Slot .....	<b>No. V</b> .....	<b>N/A</b>
<b>Weevil</b>			5 <sup>5</sup> / <sub>64</sub> " Round (0.0781") .....	<b>No. W</b> .....	<b>N/A</b>
Includes C and E .....	<b>No. 10 Set</b> .....	<b>No. 10P Set</b>	5 <sup>5</sup> / <sub>64</sub> " Round (0.0859") .....	<b>No. X</b> .....	<b>N/A</b>
<b>Sunflower Seed (Confectionery)</b>			6 <sup>5</sup> / <sub>64</sub> " Round (0.0938") .....	<b>No. Y</b> .....	<b>N/A</b>
Includes A, B, J and E .....	<b>No. 11 Set</b> .....	<b>No. 11P Set</b>	6 <sup>5</sup> / <sub>64</sub> " Round (0.1016") .....	<b>No. Z</b> .....	<b>N/A</b>
<b>Lentils</b>			Solid Bottom Pan (for Use with All Sieves) .....	<b>No. E</b> .....	<b>N/A</b>
Includes 0032, A, 0050 and E .....	<b>No. 12 Set</b> .....	<b>N/A</b>			
<b>Whole Dry Peas</b>					
Includes 0105, H, 0110, 0115, and E .....	<b>No. 13 Set</b> .....	<b>N/A</b>			
<b>Split Peas</b>					
Includes A, I, J, K, Y and E .....	<b>No. 14 Set</b> .....	<b>N/A</b>			



ST-SS

**Seedbuero Sieve Shaker**

The Seedbuero Sieve Shaker is adaptable for use with the Seedbuero Official Grain Dockage Sieves as shown above. The ST-SS will hold one bottom pan with one sieve or one bottom pan, one sieve and one scalping sieve. A light jarring action keeps material moving over sieves and helps keep the sieve opening clean. The unit is equipped with a timer preset to the USDA-AMS/FGIS specified 30 strokes, however it can be set between 5–100 strokes. Drive components are covered with ABS guard. Net wt: 34 lbs, Actual dims: 23" (L) x 10<sup>1</sup>/<sub>2</sub>" (W) x 8<sup>1</sup>/<sub>2</sub>" (H), Ship wt: 39 lbs, Ship dims: 27" (L) x 17" (W) x 12" (H).

Seedbuero Sieve Shaker, 110V, 60Hz..... **No. ST-SS**  
 Transformer for 220V Operation..... **No. K22**



**Special Perforation Sieves**

Seedburo offers these special perforation sieves with cold-rolled 20ga steel perforated discs spun into standard aluminum sides. We offer the following perforations: round, oblong (rounded ends), slotted (square ends), and herringbone patterns. In addition, we have some perforations available in millimeters. Please request other sizes that may not be listed. These dockage sieves are recommended for use with the Seedburo Sieve Shaker found on **page 40. MADE IN USA.**



**Round**

Perforation Size	Part No.	Perforation Size	Part No.	Perforation Size	Part No.	Perforation Size	Part No.
1/25" Round.....	No. 0022	9.5/64" Round .....	No. 0038	17.5/64" Round.....	No. 0062	28.5/64" Round .....	No. 0071
1/24" Round .....	No. 0021	10/64" Round.....	No. 0036	18/64" Round.....	No. 0065	29/64" Round .....	No. 0073
1/23" Round.....	No. 0024	10.5/64" Round.....	No. 0039	18.5/64" Round.....	No. 0066	30/64" Round .....	No. 0093
1/22" Round.....	No. 0019	11/64" Round .....	No. 0040	19/64" Round.....	No. 0067	32/64" Round .....	No. 0092
1/21" Round .....	No. 0023	11.5/64" Round .....	No. 0041	19.5/64" Round.....	No. 0068	33/64" Round .....	No. 0078
1/20" Round.....	No. 0020	12/64" Round.....	No. 0042	20/64" Round .....	No. 0070	34/64" Round .....	No. 0086
1/18" Round.....	No. 0018	12.5/64" Round.....	No. 0047	21/64" Round.....	No. 0072	35/64" Round .....	No. 0079
1/15" Round.....	No. 0015	13/64" Round.....	No. 0043	22/64" Round .....	No. 0075	36/64" Round .....	No. 0081
1/14" Round .....	No. 0010	13.5/64" Round.....	No. 0048	22.5/64" Round.....	No. 0076	38/64" Round .....	No. 0087
1/13" Round.....	No. 0005	14/64" Round.....	No. 0045	23/64" Round .....	No. 0077	40/64" Round .....	No. 0094
4/64" Round .....	No. 0025	14.5/64" Round.....	No. 0046	24/64" Round .....	No. 0080	42/64" Round .....	No. 0084
7/64" Round.....	No. 0035	15/64" Round.....	No. 0050	25/64" Round .....	No. 0085	48/64" Round .....	No. 0083
7.5/64" Round.....	No. 0037	15.5/64" Round.....	No. 0051	25.5/64" Round.....	No. 0069	56/64" Round .....	No. 0096
7.75/64" Round.....	No. 0033	16/64" Round.....	No. 0055	26/64" Round .....	No. 0090	1" Round .....	No. 0101
8.5/64" Round .....	No. 0031	16.5/65" Round.....	No. 0063	27/64" Round.....	No. 0091		
9/64" Round .....	No. 0032	17/64" Round.....	No. 0060	28/64" Round .....	No. 0095		

**Herringbone, Oblong and Slotted**

Perforation Size	Part No.	Perforation Size	Part No.	Perforation Size	Part No.	Perforation Size	Part No.
1/24" x 1/2" Oblong.....	No. 0124	.076" x 3/4" Oblong .....	No. 0145	10/64" x 3/4" Oblong.....	No. 0141	14/64" x 3/4" Oblong.....	No. 0315
1/22" x 1/2" Oblong.....	No. 0122	5.5/64" x 3/4" Oblong.....	No. 0104	10.5/64" x 3/4" Oblong .....	No. 0108	15/64" x 3/4" Oblong.....	No. 0117
1/20" x 1/2" Oblong.....	No. 0128	5.75/64" x 3/4" Oblong.....	No. 0243	11/64" x 3/4" Oblong.....	No. 0110	16/64" x 3/4" Oblong.....	No. 0118
3/64" x 5/16" Oblong.....	No. 0121	6/64" x 3/4" Oblong .....	No. 0088	11/64" x 3/4" HB.....	No. 0110HB	17/64" x 3/4" Oblong .....	No. 0129
3.5/64" x 1/2" Oblong.....	No. 0127	6.5/64" x 3/4" Oblong .....	No. 0099	11.5/64" x 3/4" Oblong.....	No. 0111	18/64" x 3/4" Oblong.....	No. 0112
1/18" x 3/4" Oblong.....	No. 0142	7/64" x 3/4" Oblong .....	No. 0097	12/64" x 3/4" Oblong.....	No. 0115	19/64" x 3/4" Oblong.....	No. 0119
1/16" x 3/4" Oblong.....	No. 0143	7.5/64" x 3/4" Oblong.....	No. 0098	12/64" x 3/4" HB.....	No. 0115HB	20/64" x 3/4" Oblong.....	No. 0125
1/14" x 1/2" Oblong.....	No. 0132	8/64" x 3/4" Oblong .....	No. 0100	12.5/64" x 3/4" Oblong .....	No. 0120	21/64" x 3/4" Oblong.....	No. 0146
4/64" x 1/2" Oblong .....	No. 0109	8.5/64" x 3/4" Oblong .....	No. 0114	13/64" x 3/4" Oblong.....	No. 0116	22/64" x 3/4" Oblong.....	No. 0138
4.5/64" x 3/4" Oblong.....	No. 0137	9/64" x 3/4" Oblong .....	No. 0105	13/64" x 3/4" HB.....	No. 0116HB	26/64" x 3/4" Oblong.....	No. 0147
4-7/8/64" x 3/4" Oblong....	No. 0113	9.5/64" x 3/4" Oblong .....	No. 0107	13.5/64" x 3/4" Oblong .....	No. 0126	32/64" x 3/4" Oblong.....	No. 0139

**Millimeter**

Perforation Size	Part No.
6mm Round.....	No. 0150
7mm Round.....	No. 0151
8mm Round.....	No. 0152
9mm Round.....	No. 0153
10mm Round .....	No. 0154

**Wire Mesh**

Perforation Size	Part No.
36 x 36 Wire Mesh .....	No. 0135
40 x 40 Wire Mesh .....	No. 0140
4 x 18 Wire Mesh.....	No. 0148
4 x 20 Wire Mesh.....	No. 0144

**Triangle**

Perforation Size	Part No.
10/64" Triangle (9/64" Inscribed Circle) .....	No. 0102
11/64" Double Triangle (6.5/64" Inscribed Circle) .....	No. 0134
12/64" Double Triangle (7/64" Inscribed Circle).....	No. 0103



**Carter Day Dockage Tester**

Designed by Carter-Day to meet specifications of the USDA, the Carter-Day Dockage Tester provides accurate and uniform tests of grain samples for dockage. It is the official testing machine used in Federal Grain Inspection Service offices of USDA-AMS/FGIS, the department's licensed inspectors, state grain inspection offices, Canadian Grain Commission and worldwide throughout the commercial grain grading and inspection system.

Official procedures have been established for testing Wheat, Corn, Barley, Rye, Flaxseed, Rice and grain Sorghums. Instructions on the proper riddles and sieves to use, along with their procedures for testing these grains are furnished with the tester and can also be found on the USDA Federal Grain Inspection Service website.

The Carter-Day Dockage Tester is manufactured in the USA and includes a sound reduction feature by using noise abatement materials in the side plates, cover plates and drive guard. Additionally a 'quiet motor' has been added. Also available is a swivel caster kit which allows the operator to move the Dockage Tester from one location to another, or just out of the way in an office environment. The casters retract into the base so the tester can be leveled with the four adjustment legs.

★ MADE IN  
★ USA

CDT/B

The Carter-Day Dockage Tester with noise reduction is furnished complete with a 1/2HP electric motor. Net wt: 425–475 lbs (weight varies depending on sieves and riddles). Actual dims: 27" (L) x 41" (W) x 55" (H), Ship wt: 425 lbs, Ship dims: 44" (L) x 32" (W) x 62" (H). Export wt: 585 lbs, Export dims: 36" (L) x 46" (W) x 65" (H).

Dockage Tester, 115/230V, 60Hz/1PH Less Riddles and Sieves..No. CDT/B  
 Dockage Tester, 115/230V, 50Hz/1PH Less Riddles and Sieves..No. CDT/C  
 Optional Retractable Caster Kit (Factory Installed)..... No. 440586

Double Corn Sieve Adapter Kit.....No. D-S KIT  
 Export Boxing for Either Model..... No. CDT/EX

Type of Grain	Air	Feed	Riddle	Top Sieve	Middle Sieve	Bottom Sieve
Barley	4	6	No. 6	No. 8	No. 6	None
Canola	5	3	No. 000	None	None	None
Corn	1	10	None	No. DS*	None	None
Flax	3.5	4	No. 000	No. 4	No. 2	No. 7
Lentils + 10/64	Max.	4	No. 25	No. 12	No. 3	No. 30 or No. 31
Lentils + 12/64	Max.	5	None	No. 12	None	No. 3
Mustard (Tame)	3.5	4	No. 000	No. 20, 34, or 21	No. 34 or No. 2	No. 18
Oats (Canadian Standards)	3	5	No. 6	No. 6	No. 5	No. 1
Rye	4	6	No. 25	None	No. 2	No. 2
Safflower	Max.	6	No. 3	No. 26	No. 8	None
Sesame			No. 000	No. 20, 34, or 21	No. 22	No. 1
Sorghums	1	6	None	No. 6	None	No. 1
Soybeans	5.5	12	No. 8	No. 12	No. 3	No. 10
Sunflower (Oil)	Max.	8	No. 35898	No. 3	None	No. 8
Wheat-Red Spring & Winter	4	6	No. 2	None	No. 2	No. 2
Wheat-White	4	6	No. 2	None	No. 2	No. 2
Wheat-Durum & White	4	6	No. 2	None	No. 2	No. 2

\*No. DS this is a double corn sieve with a 12/64" round on top and a 6/64" round on the bottom. The DS Corn Sieve requires the No. D-S KIT, sieve adapter kit to be installed at the factory.

Riddle No.	Description	Sieve No.	Hole Size	Sieve No.	Hole Size	Sieve No.	Hole Size
No. 000-R.....	Riddle (Flax)	No. 1-S.....	2.5/64" Round	No. 10-S.....	8/64" Round	No. 33-S.....	10/64" x 3/4" Slotted
No. 1-R.....	Riddle (Wheat)	No. 2-S.....	5/64" Round	No. 11-S.....	1/20" x 15/32" Slotted	No. 34-S.....	5.5/64" Round
No. 2-R.....	Riddle (Rye and Wheat)	No. 3-S.....	12/64" Round	No. 12-S.....	9/64" x 3/4" Slotted	No. 37-S.....	9/64" Round
No. 6-R.....	Riddle (Barley)	No. 4-S.....	0.064" x 3/8" Slotted	No. 18-S.....	1/18" x 15/32" Slotted	No. 42-S.....	5/64" x 3/4" Slotted
No. 8-R.....	Riddle (Soybean)	No. 5-S.....	4.5/64" x 15/32" Slotted	No. 20-S.....	6/64" Round	No. D-S.....	12/64" over 6/64" Round
No. 11-R.....	Riddle (Rice)	No. 6-S.....	0.078" Incribed Circle (Triangle)	No. 21-S.....	7/64" Round		
No. 25-R.....	Riddle (Lg Wheat)	No. 7-S.....	4.5/64" Round	No. 22-S.....	3.875" x 15/32" Slotted		
No. 35898..	Riddle Assy. (Sunflower Oil Seed)	No. 8-S.....	0.089" Incribed Circle (Triangle)	No. 27-S.....	6.5/64" Round		
No. Blank-S...	Blank Sieve (No Perforation)	No. 9-S.....	0.070" x 15/32" Slot Over 1/2" Rd. Swag	No. 32-S.....	10/64" Round		

**MCI Kicker Grain Tester**

The MCI Kicker is designed to provide a fast, accurate and consistent way of obtaining the following separations from most grains: shrunken and broken, overs/scalped material, clean grain, broken kernels, splits, aspirated material, dockage or FM and greatly reduces hand picking of Soybeans. Sizing operations for Malt, Sunflowers, food grains and Barley are also possible. The Kicker can generate these separations in approximately 30–45 seconds, depending on the sample size. These separations can then be weighed and calculated to provide the correct dockage or FM as well as the shrunken and broken kernels or splits using our **9000AG** grain dockage scale found on **page 12**.

The MCI Kicker is a 3 or 4 screen type tester and grain cleaner that is used for commercial grain grading. The Kicker can be configured to perform several functions including dockage testing and sizing for a variety of grains. The four-screen version can provide Barley sizing capability or other cereal grain testing requiring an additional level of separation. Just pour the grain sample into the MCI Kicker to quickly and accurately separate each fraction. Then retrieve them from four different pans. The Kicker uses bouncing rubber balls to keep screens clean and provides consistent analysis, sample after sample. It is compact and takes about the same space as a file cabinet. Quiet operation with minimal dust pollution. Grain throughput: 45 seconds (based on 500g of Wheat). Net wt: 620 lbs, Actual dims: 48" (L) x 42" (W) x 77" (H), Ship wt: 650 lbs, Ship dims: 48" (L) x 42" (W) x 77" (H).



- MCI Kicker 3-Screen Version, 110V, 60Hz.....No. MCI/B
- MCI Kicker 3-Screen Version, 220V, 50Hz.....No. MCI/C
- MCI Kicker 4-Screen Version, 110V, 60Hz.....No. MCI4/B
- MCI Kicker 4-Screen Version, 220V, 50Hz.....No. MCI4/C
- Set of Corn Sieves for 3-Screen Kicker .....No. MCI-CORNSET
- Set of Soybean Sieves for 3-Screen Kicker .....No. MCI-SOYSET
- Set of Wheat Sieves for 3-Screen Kicker .....No. MCI-WHEATSET

- Set of Corn Sieves for 4-Screen Kicker ..... No. MCI4-CORNSET
- Set of Soybean Sieves for 4-Screen Kicker ..... No. MCI4-SOYSET
- Set of Wheat Sieves for 4-Screen Kicker..... No. MCI4-WHEATSET
- Fine Screens (as Specified)..... No. MCIFS
- Scalp Screens (as Specified)..... No. MCISS
- Blank Screen.....No. MCIBS

MCI Kicker Three Screen Chart					
Screen Location	Scalp	Second	Third	Feed	Air
Barley	9 x 3/4	4.5 slot, 5 slot	6 rd	2	5
Corn	32 rd, 36 rd	12 rd, 14 rd	8 rd, 6 rd	3 1/2	1
Millet	12 rd, 6 x 3/4	9 rd, 4 slot	.067 rd	1	6
Oats	9 x 3/4	4 slot	10 tri	2 1/2	6
Sorghum	12 rd, 9 slot	4 slot, 5 tri	5 rd, 2 1/2 rd	2	5
Soybeans	24 rd, 26 rd	9 x 3/4, 10 x 3/4	8 rd	3	1
Wheat	JGS, 12 rd	4 slot, 10 tri	5 rd, 4 slot	2	5
Sunflower "O"	18 rd	12 rd	8 rd, 5 rd	2 1/2	6
Sunflower "C"	24 rd, 28 rd	22 rd, 20 rd	20 rd, Blank	3 1/2	6

MCI Kicker Four Screen Chart						
Screen Location	Scalp	Second	Third	Fourth	Feed	Air
Barley	9 x 3/4	6 rd NH, 9 tri NH	4.5 slot, 5 slot	10 tri, 6 rd	2	5
Corn	32 rd, 36 rd	Blank NH, 8 rd NH	12 rd, 14 rd	8 rd, Blank or 6 rd	3 1/2	1
Millet	12 rd, 6 x 3/4	Blank NH, 10 tri NH	9rd, 4 x 1/2	.067 rd	1	6
Oats	9 x 3/4, 10 x 3/4	5 rd NH, 10 tri NH	4 x 1/2	10 tri, 5 rd	2 1/2	6
Sorghum	9 x 3/4	Blank NH, 5 rd NH	4 x 1/2, 10 tri	5 rd, 2.5 rd	2	5
Soybeans	24 rd, 26 rd	8 rd RH, Blank NH	10 x 3/4, 9 x 3/4	12 rd, 8, 10 or 11 rd, Blank	3 1/2	1
Wheat	JGS, 12 rd	Blank NH, 5 rd NH	4 x 1/2, 10 tri	5rd, 4 x 1/2	2	5
Sunflower "O"	18 rd, 20 rd	10 tri NH, Blank NH	12 DR, 5 x 3/4	8 rd, 10 tri, 5 rd	2 1/2	6
Sunflower "C"	24 rd, 28 rd	12 rd NH, 14 rd NH	22 rd, 20 rd	20 rd, 18 rd	3 1/2	6

*\*NOTICE: Screen sizes, air and feed settings are based on manufacturer recommendations only. Individual user requirements may determine that different screen sizes and settings are needed to match reference tests. (Contact us for other screen sets or sizes.)*

**Pellet Durability Tester**

Seedbuero's Pellet Durability Tester utilizes a test method developed by Kansas State University to predict the amount of fines produced by handling pellets before feeding time. This is accomplished using a specially designed pellet tumbler which duplicates the amount of breakage that normally occurs from the time the pellets are expelled until they are consumed by the animal.



The results of the tests are interpreted as a standard measure of quality which is referred to as the Pellet Durability Index (P.D.I.). The test is simple to perform and requires a minimal amount of equipment. The procedure:

1. Secure a representative sample
2. Remove broken pellets from sample with appropriate hand sieve
3. Weigh out 500 grams of screened sample
4. Tumble 500 grams of screened pellet sample
5. Re-screen and weigh whole pellet sample
6. Compute Pellet Durability Index by dividing the weight of the whole pellets by 500 and multiplying by 100

Seedbuero offers a Four-Compartment Pellet Durability Tester and a Two-Compartment Pellet Durability Tester to cover all lab and office size requirements.

The unit features a 1/6HP, 115/230V, 50/60Hz, Single Phase, TEFC Motor. **PDT:** Net wt: 115 lbs, Actual dims: 14" (L) x 45" (W) x 19" (H), Ship wt: 155 lbs, Ship dims: 48" (L) x 17" (W) x 25" (H). **PDT2:** Net wt: 87 lbs, Actual dims: 22" (L) x 14" (W) x 19" (H), Ship wt: 127 lbs, Ship dims: 28" (L) x 24" (W) x 29" (H).

**Pellet Durability Tester Options**

- Four Compartment Pellet Durability Tester, 110V, 50/60Hz..... **No. PDT**
- Four Compartment Pellet Durability Tester, 220V, 50/60Hz.....**No. PDT/A**
- Two Compartment Pellet Durability Tester, 110V, 50/60Hz.....**No. PDT2**
- Two Compartment Pellet Durability Tester, 220V, 50/60Hz... **No. PDT2/A**

**Recommended Accessories**

- Riffle Type Divider .....**No. R66**  
*See page 39 for other sizes.*
- Scout Pro Scale, 620g x 0.1g with Square Platform.....**No. SPX621**
- Polyethylene Sample Bags, 8 1/2" (W) x 18" (L) x .003" Thick..... **No. 622**  
*See page 57 for other sizes.*
- See pages 51 for the Scout Pro Scale SPX621, See page 46 for U.S. Sieves*



U.S. Sieves

**Seedbuero U.S. Sieves**

The U.S. Sieves are made of wire mesh material designed to conform to specifications set by the A.S.T.M. (American Society of Testing and Materials). Sieves are available in 8" or 12" diameter. Each sieve made with your choice of the following: brass frame/brass wire cloth, brass frame/stainless wire cloth or stainless frame/stainless cloth. Frames are "Skirted" to nest together. See **page 46** for a complete list.

Screen Sizes for Durability Tests			
Pellet or Crumble Size		Required Screen Size	
Fraction	Decimal Equiv.	Part No.	Decimal Equiv.
3/32"	0.0938	No. 12BB8F	0.0661
1/8"	0.125	No. 10BB8F	0.0787
9/64"	0.1406	No. 7BS8F	0.111
5/32"	0.1563	No. 6BS8F	0.132
3/16"	0.1875	No. 5BS8F	0.157
13/64"	0.2031	No. 4BS8F	0.187
1/4"	0.25	No. 3.5BS8F	0.223

Screen Sizes for Durability Tests (Continued)			
Pellet or Crumble Size		Required Screen Size	
Fraction	Decimal Equiv.	Part No.	Decimal Equiv.
5/64"	0.3125	No. .265BS8F	0.265
3/8"	0.375	No. 5/16"BS8F	0.3125
1/2"	0.5	No. 7/16"BS8F	0.4375
5/8"	0.625	No. .530BS8F	0.53
3/4"	0.75	No. 5/8"BS8F	0.625
7/8"	0.875	No. 3/4"BS8F	0.75
1"	1	No. 7/8"BS8F	0.875



Left to right: PDT-BALLS, PDT-CLEANER, PDT-AGENT

**Sieving Aid, Cleaning Brushes and Balls**

When using the Seedbuero sieves with a Dura Tap testing sieve shaker found on **page 45**, remember to use the correct amount of cleaning agent, brushes and cleaning balls per sieve in your sieve arrangement. This aids in determining your particle size analysis.

- Sieving Agent (High Purity Silicon Dioxide Powder) .....**NO. PDT-AGENT**
- Cleaning Brushes (White Cleaner Bristles, pkg. 10).....**NO. PDT-CLEANER**
- Cleaning Balls (5/8", pkg. 40)..... **NO. PDT-BALLS**



**Dura Tap™ Testing Sieve Shaker**

The Dura Tap™ rotary sieves shaker is a real heavyweight mechanically, electrically and functionally. There are no plastic structural parts to wear or break. Designed to accurately reproduce the circular and tapping motion given to testing sieves in hand sieving. The Dura Tap™ is available to handle either 8" or 12" diameter sieves in full or half heights. The Dura Tap™ for 8" sieves can hold seven (7) full height sieves plus 1 bottom pan, or fourteen (14) half height sieves plus 1 bottom pan. The Dura Tap™ for 12" sieves will hold four (4) full height sieves plus a bottom pan and cover, or eight (8) half height sieves plus a bottom pan and cover. The unit is powered by a vertically mounted 1/4 HP electric motor with a built-in 99 minute digital timer and available in a variety of voltages. Net wt: 200 lbs, Actual dims: 21" (L) x 28" (W) x 25" (H), Ship wt: 222 lbs, Ship dims: 26" (L) x 31" (W) x 30" (H).



MADE IN USA

- Dura Tap™ Sieve Shaker for 8" Sieves, 110V/60Hz ..... **No. 168/B**
- Dura Tap™ Sieve Shaker for 8" Sieves, 220V/50Hz ..... **No. 258/C**
- Dura Tap™ Sieve Shaker for 8" Sieves, 220V/60Hz ..... **No. 268/E**
- Dura Tap™ Sieve Shaker for 12" Sieves, 110V/60Hz..... **No. 1612/B**
- Dura Tap™ Sieve Shaker for 12" Sieves, 220V/50Hz..... **No. 2512/C**
- Dura Tap™ Sieve Shaker for 12" Sieves, 220V/60Hz..... **No. 2612/E**

**Sound Enclosure Cabinet**

For use with the Ro-Tap or Dura Tap sieve shakers, cabinet reduces operating noise levels from approximately 85dB to 78dB. The cabinet is fabricated with 18 gauge steel and a 1" metal faced acoustic foam inner liner. (For sound reduction only, will not stop or start shaker if cabinet is opened or closed while operating). Net wt: 120 lbs, Ship wt: 250 lbs, Ship dims: 38" (L) x 28" (W) 34" (H). **No. R40041 Stand:** Net wt: 45 lbs, Ship wt: 50 lbs, Ship dims: 21" (L) x 32" (W) x 30" (H) (Shipped assembled).



- Ro-Tap™ Sound Enclosure Cabinet Fits The Ro-Tap or Dura Tap ..... **No. RX-SE**
- Ro-Tap™ Test Stand for Use With or Without Sound Enclosure..... **No. R40041**

See page 46 for U.S. Sieves.

**Ro-Tap™ Testing Sieve Shaker**

The Ro-Tap Sieve Shakers are designed to provide quality control personnel with accurate and consistent particle analysis testing and provides repeatable results. The shaker has a unique two dimensional operation: a horizontal, circular motion and a vertical, tapping motion with allows material particles to stratify and seek critical openings in the test media. Stationary unit comes with digital 99 minute timer/clock, accurate to 0.1 second. Each shaker is test run and serialized before shipment. For use with 8" or 12" diameter sieves (see the following page) in 110V/60Hz or 220V/50Hz (Other voltages available). Net wt: 180 lbs, Actual dims: 25" (H) x 28" (W) x 21" (D), Ship wt: 190 lbs.



- Ro-Tap™ Sieve Shaker for 8" Sieves, 110V/60Hz ..... **No. RX-29/B**
- Ro-Tap™ Sieve Shaker for 8" Sieves, 220V/50Hz ..... **No. RX-29/C**
- Ro-Tap™ Sieve Shaker for 8" Sieves, 220V/60Hz ..... **No. RX-29/E**
- Ro-Tap™ Sieve Shaker for 12" Sieves, 115V/60Hz..... **No. RX-30/B**
- Ro-Tap™ Sieve Shaker for 12" Sieves, 230V/50Hz..... **No. RX-30/C**
- Ro-Tap™ Sieve Shaker for 12" Sieves, 230V/60Hz..... **No. RX-30/E**

**Custom Brass and Stainless Steel Sieves**

These sieves are available with an 8" or 12" diameter brass or stainless steel frame and your choice of perforations from page 86. The frames are 'skirted' to nest together and available in full height, 2", or half height of 1".



- Custom 8" Brass Frame, Full Height, w/ Perforated Plate.... **No. CUSTOM SIEVE 8BF**
- Custom 8" Brass Frame, Half Height, w/ Perforated Plate.. **No. CUSTOM SIEVE 8BH**
- Custom 8" Stainless Frame, Full Height, w/ Perforated Plate.. **No. CUSTOM SIEVE 8SF**
- Custom 12" Brass Frame, Full Height, w/ Perforated Plate.. **No. CUSTOM SIEVE 12BF**
- Custom 12" Brass Frame, Half Height, w/ Perforated Plate.. **No. CUSTOM SIEVE 12BH**
- Custom 12" Stainless Frame, Full Height, w/ Perforated Plate.. **No. CUSTOM SIEVE 12SF**
- 8" Brass Cover ..... **No. CB8**
- 12" Brass Cover..... **No. CB12**
- 8" Brass Bottom Pan ..... **No. PB8F**
- 12" Brass Bottom Pan ..... **No. PB12F**

## U.S. Brass or Stainless Testing Sieves

The U.S. Sieves are a brass or stainless steel sieve with wire mesh screen material which is also made of either Brass or Stainless steel. They are designed to conform to specifications set by the A.S.T.M. (American Society for Testing and Materials). The 8" diameter has a full height of 2" or half-height of 1". The 12" diameter sieves are full height 4½" and half-height of 2". Each sieve is made with your choice of the following: brass frame/brass wire cloth, brass frame/stainless wire cloth or stainless frame/stainless cloth. Frames are "skirted" to nest together.

The part numbers can be interpreted as follows: mesh size is the first number listed. Next are two letters which represent the type of frame and then the type of cloth or mesh; B for brass or S for stainless steel. The next number is for the diameter of the sieve and the last letter is for the height; F for full height, H for half height. A **20BB8F** would be 20 mesh, brass frame and cloth, 8" diameter, full height sieve. Also available are 3" diameter sieves. Please contact us for prices. **MADE IN USA.**

U.S. Std. Sieve No.	Sieve Opening Dimensions	8" Brass Frame Brass Cloth	8" Brass Frame Stainless Cloth	8" Stainless Frame Stainless Cloth	12" Brass Frame Brass Cloth	12" Brass Frame Stainless Cloth	12" Stainless Frame Stainless Cloth
¾"	19.0mm	N/A	No. 3/4"BS8F	No. 3/4"SS8F	N/A	No. 3/4"BS12F	No. 3/4"SS12F
½"	12.5mm	N/A	No. 1/2"BS8F	No. 1/2"SS8F	N/A	No. 1/2"BS12F	No. 1/2"SS12F
⅜"	9.5mm	N/A	No. 3/8"BS8F	No. 3/8"SS8F	N/A	No. 3/8"BS12F	No. 3/8"SS12F
¼"	6.3mm	N/A	No. 1/4"BS8F	No. 1/4"SS8F	N/A	No. 1/4"BS12F	No. 1/4"SS12F
3.5	5.6mm	N/A	No. 3.5BS8F	No. 3.5SS8F	N/A	No. 3.5BS12F	No. 3.5SS12F
4	4.75mm	N/A	No. 4BS8F	No. 4SS8F	N/A	No. 4BS12F	No. 4SS12F
5	4.00mm	N/A	No. 5BS8F	No. 5SS8F	N/A	No. 5BS12F	No. 5SS12F
6	3.35mm	N/A	No. 6BS8F	No. 6SS8F	N/A	No. 6BS12F	No. 6SS12F
7	2.80mm	N/A	No. 7BS8F	No. 7SS8F	No. 7BB12F	No. 7BS12F	No. 7SS12F
8	2.36mm	No. 8BB8F	No. 8BS8F	No. 8SS8F	No. 8BB12F	No. 8BS12F	No. 8SS12F
10	2.00mm	No. 10BB8F	No. 10BS8F	No. 10SS8F	No. 10BB12F	No. 10BS12F	No. 10SS12F
12	1.7mm	No. 12BB8F	No. 12BS8F	No. 12SS8F	No. 12BB12F	No. 12BS12F	No. 12SS12F
14	1.4mm	No. 14BB8F	No. 14BS8F	No. 14SS8F	No. 14BB12F	No. 14BS12F	No. 14SS12F
16	1.18mm	No. 16BB8F	No. 16BS8F	No. 16SS8F	No. 16BB12F	No. 16BS12F	No. 16SS12F
18	1.00mm	No. 18BB8F	No. 18BS8F	No. 18SS8F	No. 18BB12F	No. 18BS12F	No. 18SS12F
20	850 µm	No. 20BB8F	No. 20BS8F	No. 20SS8F	No. 20BB12F	No. 20BS12F	No. 20SS12F
25	710 µm	No. 25BB8F	No. 25BS8F	No. 25SS8F	No. 25BB12F	No. 25BS12F	No. 25SS12F
30	600 µm	No. 30BB8F	No. 30BS8F	No. 30SS8F	No. 30BB12F	No. 30BS12F	No. 30SS12F
35	500 µm	No. 35BB8F	No. 35BS8F	No. 35SS8F	No. 35BB12F	No. 35BS12F	No. 35SS12F
40	425 µm	No. 40BB8F	No. 40BS8F	No. 40SS8F	No. 40BB12F	No. 40BS12F	No. 40SS12F
45	355 µm	No. 45BB8F	No. 45BS8F	No. 45SS8F	No. 45BB12F	No. 45BS12F	No. 45SS12F
50	300 µm	No. 50BB8F	No. 50BS8F	No. 50SS8F	No. 50BB12F	No. 50BS12F	No. 50SS12F
60	250 µm	No. 60BB8F	No. 60BS8F	No. 60SS8F	No. 60BB12F	No. 60BS12F	No. 60SS12F
70	212 µm	No. 70BB8F	No. 70BS8F	No. 70SS8F	No. 70BB12F	No. 70BS12F	No. 70SS12F
80	180 µm	No. 80BB8F	No. 80BS8F	No. 80SS8F	No. 80BB12F	No. 80BS12F	No. 80SS12F
100	150 µm	No. 100BB8F	No. 100BS8F	No. 100SS8F	No. 100BB12F	No. 100BS12F	No. 100SS12F
120	125 µm	No. 120BB8F	No. 120BS8F	No. 120SS8F	No. 120BB12F	No. 120BS12F	No. 120SS12F
140	106 µm	No. 140BB8F	No. 140BS8F	No. 140SS8F	No. 140BB12F	No. 140BS12F	No. 140SS12F
170	90 µm	No. 170BB8F	No. 170BS8F	No. 170SS8F	No. 170BB12F	No. 170BS12F	No. 170SS12F
200	75 µm	No. 200BB8F	No. 200BS8F	No. 200SS8F	No. 200BB12F	No. 200BS12F	No. 200SS12F
230	63 µm	No. 230BB8F	No. 230BS8F	No. 230SS8F	No. 230BB12F	No. 230BS12F	No. 230SS12F
270	53 µm	No. 270BB8F	No. 270BS8F	No. 270SS8F	No. 270BB12F	No. 270BS12F	No. 270SS12F
325	45 µm	No. 325BB8F	No. 325BS8F	No. 325SS8F	No. 325BB12F	No. 325BS12F	No. 325SS12F
400	38 µm	No. 400BB8F	No. 400BS8F	No. 400SS8F	No. 400BB12F	No. 400BS12F	No. 400SS12F
450	32 µm	N/A	No. 450BS8F	No. 450SS8F	N/A	No. 450BS12F	No. 450SS12F
500	25 µm	N/A	No. 500BS8F	No. 500SS8F	N/A	No. 500BS12F	No. 500SS12F
635	20 µm	N/A	No. 635BS8F	No. 635SS8F	N/A	No. 635BS12F	No. 635SS12F
8" Brass Bottom Pan		No. PB8F		12" Brass Bottom Pan		No. PB12F	
8" Stainless Bottom Pan		No. PS8F		12" Stainless Bottom Pan		No. PS12F	
8" Brass Cover		No. CB8		12" Brass Cover		No. CB12	
8" Stainless Cover		No. CS8		12" Stainless Cover		No. CS12	
8" Blank Frame (Without Cloth)		No. 0BB8F		12" Blank Frame (Without Cloth)		No. 0BB12F	
Brass Brush for Cleaning		No. 8576		Nylon Brush for Cleaning		No. 8577	

**Seedburo No. 2 Miller**

The Seedburo No. 2 Miller tests Rice samples for milling quality, grading, color and style. This miller can provide reliable results similar to the **No. 3** Seedburo Miller. Designed primarily for the Rice buyer as a guide. It is not intended to replace the **No. 3** Miller as a grading machine. Sample size approximately 160g. The miller is available with an integrated digital timer or without timer. Equipped with 1/3HP, 1 PH motor. Net wt: 45 lbs, Ship wt: 68 lbs, Ship dims: 19" (L) x 12" (W) x 20" (H).

- Miller, 115V, 60Hz, without Timer ..... **No. 60-115-60-2**
- Miller, 230V, 60Hz, without Timer ..... **No. 60-230-60-2**
- Miller, 110V, 50Hz, without Timer ..... **No. 60-110-50-2**
- Miller, 220V, 50Hz, without Timer ..... **No. 60-220-50-2**
- Miller, 115V, 60Hz, with Digital Timer ..... **No. 60-115-60-DT**
- Miller, 230V, 60Hz, with Digital Timer ..... **No. 60-230-60-DT**
- Miller, 220V, 50hz, with Digital Timer ..... **No. 60-220-50-DT**
- Complete Basket Assembly ..... **No. 60CRMB**  
*Includes: 60BCOKIT, 60KNKIT, and 60PCAKIT*
- Basket Components Only, Assembled ..... **No. 60BCOKIT**  
*Includes: end plug, 6 bolts, front/rear end plates, 10 guide pins, 2 space bar, screen, lever holder space bar*
- Stainless Steel Pressure Cover ..... **No. 60-01-OS**
- End Plug ..... **No. 60-02-00**
- Front End Plug ..... **No. 60-04-00**



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★ USA

*No. 2 miller with digital timer, optional external digital timer available*

- Clean Out Brush ..... **No. 60-45-00**
- Replacement Cylinder ..... **No. 60-07-00**
- Replacement Standard Screen, 3/64" ..... **No. 60-09-00**
- Rear End Plate ..... **No. 60-11-00**
- Adapter Shaft ..... **No. 60-14-56**
- External Digital Timer, 115V, 60Hz ..... **No. 60EDT16**
- Required Crating, Wooden Box ..... **No. 60/DOM**

**Seedburo No. 3 Miller**

This miller accurately tests Rice samples for milling yield by automatically controlling both the milling pressure and the time cycle. Milling pressure is controlled with iron weights in increments of 1/2 lb up to 10 lbs for a wide range of milling results. An automatic digital timer stops the machine at the desired interval. A manual red push button "stop" control is also installed at the control panel box.

All the interior surfaces in contact with the Rice are hard chrome-plated, rust-free and long wearing. This sturdy machine is built to comply with the service requirements of the USDA Federal/State Rice Inspection Service. Sample size approximately 1000g.

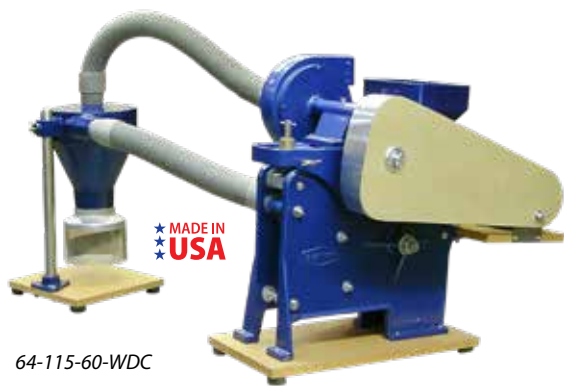
Equipped with 3HP motor, standard wiring, 220V, 60Hz. 3 phase, complete with automatic digital timer and starter. All wires connected and tested, ready for installation and connection to power source. Net wt: 250 lbs, Ship wt: 275 lbs, Ship dims: 35" (L) x 21" (W) x 30" (H).



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*No. 3 Rice Miller*

- Miller, 220V, 60Hz, 3Ph ..... **No. 65-220-60-3**
- Miller, 220V, 50Hz, 3Ph ..... **No. 65-220-50-3**
- Replacement Cylinder ..... **No. 650100**
- Replacement Standard Screen ..... **No. 651700**
- Stainless Steel Pressure Cover ..... **No. 652400**
- Required Crating, Wooden Box ..... **No. 65/DOM**
- Clean Out Brush ..... **No. 60-45-00**



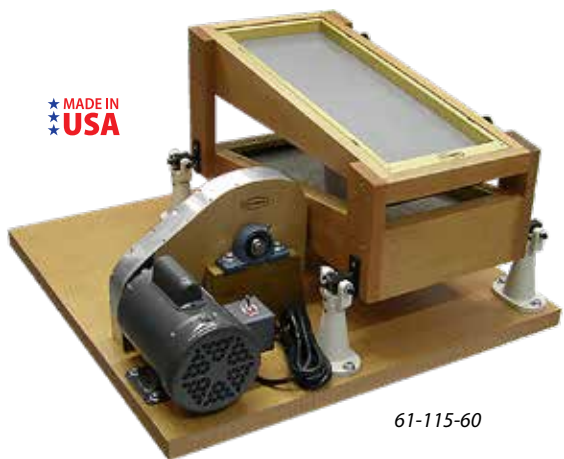
64-115-60-WDC

### Seedburo Sample Sheller for Rough Rice

The Seedburo Sheller provides a rapid, easy and efficient method of shelling. Utilizing only one piece of equipment, it will accommodate both wet and dry Rice samples for all varieties of rough Rice. The Seedburo Sheller is designed to comply with service requirements of the Federal/State Rice Inspection Service. Quality construction assures years of service. Safety features prevent damage by small rocks or metal objects, which accidentally enter the hopper. The large hopper holds over 2 lbs of rough Rice. This unit will shell 1 lb per minute in continuous operation. The dust collector is used to save hulls from each sample for further analysis or as a dust prevention method.

**Sheller with Dust Collector:** Net wt: 166 lbs, Ship wt: 200 lbs, Ship dims: 34" (L) x 21" (W) x 32" (H).

Sample Sheller with Dust Collector, 1/3HP, 115V, 60Hz.....	No. 64-115-60-WDC
Sample Sheller with Dust Collector, 1/3HP, 220V, 50Hz.....	No. 64-220-50-WDC
Sample Sheller without Dust Collector, 1/3HP, 115V, 60Hz.....	No. 64-115-60-WODC
Sample Sheller without Dust Collector, 1/3HP, 220V, 50Hz.....	No. 64-220-50-WODC
Required Crating, Wooden Box .....	No. 64/DOM
Replacement Rubber Shelling Roll .....	No. 6404300
Replacement Steel Shelling Roll Assembly.....	No. 6409200



61-115-60

### Rice Sizing Device

The Rice Sizing Device provides a repeatable and consistent separation which cannot be accomplished with hand held indented tray plates. Local government or industry regulations may determine the tray plate sizes for each separation. Follow these instructions for your individual test sequence; however, the following is the standard method: First, insert two plates of the same size into the machine, then feed a standard sample of 1000 grams of cleaned shelled, milled Rice onto the top screen. When the entire sample has passed over the plates, remove and empty the rice that remains on the plates into a separate container. Change to the next set of plates and repeat the above steps, until all necessary separations have been made based on local regulations.

Because the total pre-weighed sample was 1000 grams, the percentage of each portion is obtained by weighing it and simply moving the decimal point one place. The percentage of whole Rice is taken from the weight of the Rice which remains after the last set of plates have been used.

**Rice Sizing Device:** Net wt: 84 lbs, Ship wt: 160 lbs, Ship wt (With Set of 10 plates): 200 lbs, Ship dims: 35" (L) x 35" (W) x 25" (H).  
**Single Plate:** Net wt: 3 lbs, Ship wt: 5 lbs, Ship dims: 25" (L) x 11" (W) x 5" (H).

Rice Device, Less Plates, 115V, 60Hz.....	No. 61-115-60
Rice Device, Less Plates, 230V, 60Hz.....	No. 61-230-60
Rice Device, Less Plates, 110V, 50Hz.....	No. 61-110-50
Rice Device, Less Plates, 220V, 50Hz.....	No. 61-220-50
Required Crating, Wooden Box .....	No. 61/DOM

Plates can be ordered as a set of ten or individually based on local requirements. Each plate is perforated with round holes, centers staggered. Typical set may include two of each size: 5/64" (centers 5/32"), 9/64" (centers 5/32"), .135" (centers 3/16"), 10/64" (centers 1/4"), 12/64" (centers 1/4"). Other combinations can be selected from the list below:

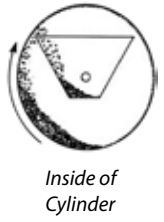
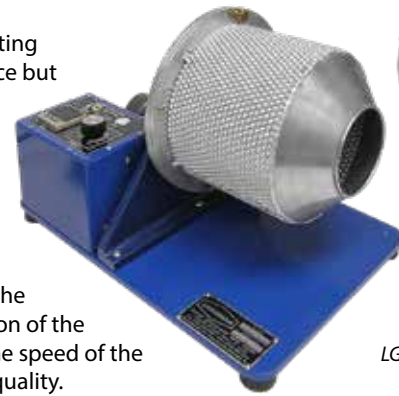
Standard Set of 10 Plates.....	No. 61SET	10/64" Plate.....	No. 61-10
13/64" Plate.....	No. 61-13	9/64" Plate.....	No. 61-6
12/64" Plate.....	No. 61-12	5/64" Plate.....	No. 61-5
11/64" Plate.....	No. 61-11	.135" Plate.....	No. 61-135



**Laboratory Rice Length Grader**

The Model 68 Length Grader is designed for maximum efficiency when working in the testing laboratory. This basic cylinder style can provide similar separations to the Rice Sizing Device but in much shorter time. Intended primarily for the Rice buyer as a complement to maximize the efficiency of the production size equipment by first measuring the length-sizing separations on the laboratory equipment and is not meant to replace the **Rice Sizing Device** (official approved testing machine USDA-AMS/FGIS) as a grading machine.

The rotating indented cylinder separates by length broken or shorter grains from whole kernels with elongated shape such as, Rice, Wheat, Oats, Flax, Barley, Rye, Vetch, Carrot or Lettuce seed, etc. The broken or short kernels are lifted by the indent pockets that line the inside surface of the cylinder. The operator controls the separation by adjusting the position of the separating edge of the internal collection pan (into which the broken product falls) and the speed of the cylinder rotation. Aluminum, stainless steel and brass materials are used for long life and quality.



MADE IN USA  
LG6816DT/B

**Standard Features:** Variable speed control, collection pan tilt adjustment control with angle indication, digital timer control, sealed gear drive, vibration free operation, cylinder shell, separate control box with On/Off switch and Run button. Net wt: 33 lbs, Ship wt: 54 lbs, Ship dims: 21" (L) x 16" (W) x 18" (H) (with one cylinder). **Individual Cylinder:** Ship wt: 3 lbs, Ship dims: 10" (L) x 10" (W) x 10" (H).

Lab Rotary Length Grader with Digital Timer, 115V, 50/60Hz, without Cylinder .....	No. LG6816DT/B
Lab Rotary Length Grader with Digital Timer, 220V, 50/60Hz, without Cylinder .....	No. LG6825DT/C
Indent Cylinder No. 12.....	No. 680112
Indent Cylinder No. 14.....	No. 680114
Required Domestic/Export Packing .....	No. 68BOX-W

**Laboratory Aspirator**

The aspirator separates foreign material from granular product by means of spreading flow over an intake cone. The thin stream of material is introduced to a controlled current of air that passes through the material as it falls. Airflow is controlled with a sensitive valve, which restricts or increases air passage to the centrifugal collector. This fast and accurate design is ideal for analysts, inspectors and laboratory workers who require separation of light chaffy material from granular product.

Operation: A sample is placed in the receiving hopper. The sample flow rate dial is then set for the desired rate of flow. Once the air slide is adjusted and locked, the fan is turned on. The sample flow rate can be started or stopped instantly. The cleaned sample falls in the triangular pan while the foreign material is dropped in the removable transparent plastic cup. When the cycle is completed, the grain or seed along with the foreign material can be immediately inspected and weighted.

The three quart hopper holds approximately 5 lbs (2.2kg) of Rice allowing larger samples to be fed continuously. Each unit comes complete with 300 Watt DC motor, one triangular pan and a two quart plastic cup. Net wt: 43 lbs, Ship wt: 50 lbs, Ship dims: 16" (L) x 24" (W) x 29" (H), Export wt: 77 lbs, Export dims: 18" (L) x 26" (W) x 34" (H).



63-115-60-VS

Aspirator with Variable Fan Speed Control, 115V, 60Hz.....	No. 63-115-60-VS
Aspirator with Variable Fan Speed Control, 220V, 50Hz.....	No. 63-220-50-VS
Replacement Transparent Plastic Cup .....	No. 634200
Replacement Motor, 90V, DC .....	No. 633292
Replacement Feed Dial .....	No. 630800
Replacement Brass Knurled Screw.....	No. 634100
Replacement Brass Knurled Nut .....	No. 630900
Replacement Blue Triangular Tin Pan.....	No. 64
Replacement Blue Triangular Plastic Pan.....	No. 64BP
Required Domestic Packing, Carton Box.....	No. 63-BOX-OD
Required Export Crating, Wooden Box.....	No. 63-BOX-OE

**Ohaus Adventurer™ Pro Precision Electronic Balances**



The Ohaus Adventurer™ Pro continues to combine unsurpassed value with solid reliability. Precision performance, versatility, and cutting edge design come together to deliver accurate results. Adventurer™ Pro's unique design integrates a custom two-line backlit LCD for easy viewing and simple menu navigation. An ergonomic leveling system with an upfront bubble indicator quickly ensures that the balance is level. Standard Features/Equipment: Large stainless steel weighing platform, two-line backlit LCD, bi-directional RS232 interface, leveling system, in-use cover, integral security bracket, weigh below hook, GLP data output options, adjustable environmental settings, stability indicator, overload and underload indicators, low battery indicator, auto shut-off, AC adapter, draft shield on Model AX224N. All models shown are NTEP certified.

Model	No. AX224N*	No. AX223N/E	No. AX423N/E	No. AX622N/E	No. AX1502N/E	No. AX2202N/E	No. AX4202N/E	No. AX8201N/E
Capacity (g)	220		420	620	1520	2200	4200	8200
Readability (g)	.01mg	0.001g		0.01g			0.1g	
Weighing Units	Milligram, Gram, Kilogram, Ounce, Pound, Carat, Pennyweight, Ounce Troy, Grain, Newton, Hong Kong Tael, Singapore Tael, Taiwan Tael, Momme, Tical, Baht, Mesghal, Tola, Custom							
Tare Range	To Capacity By Subtraction							
Stabilization Time (sec)	3	2	1.5					
Operating Temp Range	50°–86°F (10°–30°C)							
Power Requirements	AC Adapter (Included)							
Calibration	All Models Feature External Weight Calibration							
Display Type	Full Color Touchscreen							
Pan Size (in/mm)	3.5" (90mm)		5.1" (130mm)	6.9" x 7.7" (175mm x 195mm)				
Ship Dimensions (in/mm)	22" x 16" x 13" (558mm x 406mm x 330mm)							
Ship Weight (lb/kg)	17 lb (7.7kg)			14 lb (6.4kg)				

\*Auto calibration

**Ohaus Pioneer™ Precision Electronic Balances**



The Ohaus Pioneer™ Series of analytical and precision balances are designed for basic routine weighing. With the right combination of performance and features, the OHAUS Pioneer offers uncomplicated performance for all your basic weighing needs. Features include: easy-to-clean removable draftshield panels (analytical models only), up-front level indicator to ensure balance levelness, three filter modes and adjustable zero tracking adjust balance sensitivity to environmental disturbances, or application requirements. RS232 interface allows connection to a printer or computer.

Model	No. PX84/E	No. PX124/E	No. PX224/E	No. PX163/E	No. PX323/E	No. PX523/E	No. PX1602/E	No. PX3202/E	No. PX4201/E
Capacity (g)	85	120	220	160	320	520	1600	3200	4200
Readability (g)	0.1mg			1mg			10mg		100mg
Repeatability (Std Dev)	0.1mg			1mg			10mg		100mg
Linearity	0.2mg		0.3mg	2mg			20mg		100mg
Application Modes	Weighing, Parts Counting, Percent, Animal Dynamic Weighing, Density Determination								
Weighing Units	mg, g, ct, oz, dwt, tical, tola, mommes, baht, grain, mesghal, Newton, ozt, teals				g, lb, ct, oz, dwt, tical, tola, mommes, baht, grain, kg mesghal, Newton, ozt, teals		g, kg, lb, ct, oz, dwt, tical, tola, mommes, baht, grain, mesghal, Newton, ozt, teals		
Platform Size	3.54" (9cm) diameter			4.72" (12cm) diameter		7.1" (18cm) diameter			
Taring Time	1 Second								
Stabilization Time	3 Seconds								
Draftshield	7.3" (18.5cm) Inside Height					None			
Operating Conditions	50° F–104° F (10° C–40° C) at 10%–80% relative humidity, non-condensing, up to 4000m above sea level								
Ship Weight (lb/kg)	16 lb (7.2kg)								
Ship Dimensions (in/cm)	20" x 16" x 21" (50.8cm x 40.6cm x 53.3cm)								

## Ohaus Scout Pro™ Portable Electronic Balances

Designed for use in laboratory, industrial or education applications, the Ohaus Scout Pro™ features easy-to-use four-button operation, large backlit LCD display, multiple weighing units, four application modes, and the option of either RS232 or USB connectivity, the Scout Portable™ is the portable balance for all your needs with superior overload protection.


*Scout Pro*

It features multiple weighing units including grams, kilograms, pounds, ounces, a combined pound: ounce display, troy ounces and penny-weights. The Scout Pro also has multiple application modes: parts counting, percentage weighing, totalization, check weighing and display hold. The high-contrast LCD display combined with four key operation makes the Scout Portable a snap to operate. It also has USB or RS232 connectivity (the quickly-installed option with integral cable allows data connection to PC or printer). The unit is easy to clean with a removable stainless steel weighing platform and sealed front panel help keep the unit safe from spills. It is battery or AC powered, using 4-AA batteries (not included) or the Scout Pro can be run on the included AC adapter. The integral weigh-below hook is critical for density or specific gravity determination.

Model	No. SPX223	No. SPX422	No. SPX622	No. SPX421	No. SPX621	No. SPX2201	No. SPX6201	No. SPX8200
Capacity (g)	220	420	620	420	620	2200	6200	8200
Readability (g)	0.001	0.01	0.01	0.1	0.1	0.1	0.1	1
Capacity x Readability (kg)	N/A	N/A	N/A	N/A	N/A	2.2 x 0.0001	6.2 x 0.0001	8.2 x 0.001
Capacity x Readability (lb)	N/A	N/A	1.36690 x 0.00005	N/A	1.3670 x 0.0005	4.8500 x 0.0005	13.6685 x 0.0005	18.080 x 0.005
Application Modes	Weighing, Parts Counting, Percent Weighing, Check Weighing, Totalization, Display Hold							
Tare Range	Full Capacity By Subtraction							
Over Range Capacity	10 Times Rated Capacity							
Stabilization Time	1.5	1	1	1	1	1	1	1
Power Requirements	AC Adapter (Included) or 4-AA Batteries (Not Included)							
Calibration Type	User-Selectable External Span or Linearity Calibration/Digital with External Weight							
Pan Size (in/mm)	Ø 3.7" (93mm)	Ø 4.7" (120mm)	Ø 4.7" (120mm)	Ø 4.7" (120mm)	6.7" x 5.5" (170mm x 140mm)			
Balance Dimensions W22 (W x D x H) (in/cm)	8" x 8.7" x 4.1" (202 x 222 x 103mm)	8" x 8.8" x 2.1" (202mm x 224mm x 54mm)						
Net Weight (lb/kg)	2.2 lb (1kg)							
Shipping Dimensions (W x H x D)	15" x 15" x 5" (381 x 381 x 127mm)	15" x 15" x 4" (381mm x 381mm x 101.6mm)						
Shipping Weight (lb/kg)	4 lb (1.8kg)							

## Ohaus CS Series™ Compact Scales

Ohaus Compact Scales are ideal when cost matters and dependable results are a must. These uniquely designed scales have a wide variety of applications, more than any other scale in their class. The three portable models range in capacities from 200g–5000g, and are perfect for use in light production, in the field, the kitchen, the office and more. Easy operation, long battery life, and great performance make Ohaus Compact Scales a truly remarkable value. Standard features are a low battery indicator, overload and under load indicators, auto shut-off, rugged plastic construction and tactile feedback keypad. Weighing modes include grams, pounds, and ounces. The CS series scales are powered by 3-AA batteries or an AC adapter (110V/230V, 50/60Hz) that are included. Ship wt: 3 lbs, Ship dims: 12" (L) x 10" (W) x 6" (H).


*CS200*

Model	No. CX221	No. CX2200	No. CX5200
Capacity	200g	2000g	5000g
Readability	0.1g	1.0g	1.0g
Platform	7.1" Diameter	7.1" Diameter	7.1" Diameter

No. CX-ADAPTER	No. CX-ADAPTER-220KIT
Replacement Adapter, 110V, 60Hz	Replacement Adapter, 220V, 50Hz



**BenchPro Series Scales**

The BenchPro Series family of digital bench scales is ideal for many diverse industries and markets. As a general purpose scale, the BenchPro offers multiple benefits, including the ability to tare containers and change units of measure. These digital scales operate on AC, USB HID Point of Sale Interface or four AA batteries (not included), offering the convenience of portability and 80 hours of continuous use on certain models. Because of these extra features, the BenchPro may be used for a wide range of applications including retail, point of sale, manufacturing, food service and more in addition to shipping and postal settings.

**Standard Features:**

- Platform Size 12" x 14" (304.8mm x 355.6mm)
- Can be easily configured to work with UPS Worldship and FEDEX ShipManager Software
- Units switching function, kg, lb, oz lb:oz, g
- Large six-digit backlight LCD display with 1" (29mm) characters
- Four button touch key panel with Units, Tare, On/Off, F1 Selection using heavy duty tempered glass keypad, scratch and drop resistant, repels water, dust and oil
- Front mount is standard, column mount primary display and secondary remote display options
- Simple operation; easy setup of BenchPro Series user features and functions using keypad
- Powered USB HID Scale Interface
- RS-232 Interface
- Legal for trade

**Specifications:**

- User program flash memory capacity: 128Kb
- In-line power supply input: 100–240 VAC, 50/60hz
- Approvals: UL, CE, EN CUL
- RS232
- USB cable
- Stainless steel weigh platter
- Die cast aluminum base with black power coat
- Adjustable leveling feet with lock nut, adjust height of scale from 2.77" (H) (70.50mm) to 3.18" (H) (80.76mm)
- Approvals: NTEP COC #17-002, Canada Weights and Measures: AM-6050

BenchPro Series, 150 lb/75kg, SS Weight Platter .....No. 174879  
 BenchPro Series, 30 lb/15kg, SS Weight Platter.....No. 179732  
 BenchPro Series, 15 lb/ 6kg, SS Weight Platter .....No. 179733  
 Column Bracket and Post, Optional.....No. 174783

Model	No. 179733	No. 179732	No. 174879
Range	Single	Single	Single
lb	15 x 0.005	30 x 0.01	150 x 0.05
lb/oz	15 lb x 0.1 oz	30 lb x 0.02 oz	-
oz	240 x 0.1	480 x 0.2	-
Kilograms	6 x 0.002	15 x 0.005	75 x 0.02
Grams	6000 x 2	-	-



**Ohaus VX Series Standard Floor Scales**

The Ohaus VX Scale offered by Seedbuero is a portable low-profile floor platform and indicator scale package. It is the ideal solution for processing plants as well as shipping and receiving. Quick connects and factory calibration allows the package to operate right out of the box with minimal set-up time. This scale combines a 5000d NTEP approved scale (VX2500L and VS5000L) and a stainless NEMA 4X/IP65 protection. Indicator Model T32XW is stainless and pre-calibrated featuring an RS232 interface, high-visibility backlit LCD display, counting function and positive feedback keys and includes wall mount bracket. Display is 1" high, 6-digit, 7-segment bright white backlit LCD. The stabilization time is within 2 seconds. Power 100/240V, 50/60Hz. Rechargeable sealed lead acid battery, (58-hour operation on full charge). Indicator dimensions are 8.3" x 2.8" x 5.8". CE compliant. Optional Ramp available.

a 5000d NTEP approved scale (VX2500L and VS5000L) and a stainless NEMA 4X/IP65 protection. Indicator Model T32XW is stainless and pre-calibrated featuring an RS232 interface, high-visibility backlit LCD display, counting function and positive feedback keys and includes wall mount bracket. Display is 1" high, 6-digit, 7-segment bright white backlit LCD. The stabilization time is within 2 seconds. Power 100/240V, 50/60Hz. Rechargeable sealed lead acid battery, (58-hour operation on full charge). Indicator dimensions are 8.3" x 2.8" x 5.8". CE compliant. Optional Ramp available.

Model	No. VX32XW2500L	No. VX32XW5000L	No. VX32XW10000L	No. VX32XW5000X	No. VX32XW10000X
Capacity/ Readability	2,500 x 0.5 lb 1,000 x 0.5kg	5,000 x 1 lb 2,200 x 0.2kg	10,000 x 2 lbs 4,500 x 1kg	5,000 x 1 lb 2,200 x 0.5kg	10,000 x 2 lbs 4,500 x 1kg
Dimensions	4' x 4' x 4.5'			5' x 5' x 4.5'	
Deck Material	Painted Carbon Steel, Treaded Surface, Fixed Top Plate				
Max Central Load	100%				
NTEP Resolution	NTEP 5000d	NTEP 5000d	N/A	N/A	N/A
Operating Temp.	50°F–104°F (10°C–40°F)				
Five Weighing Units	lb, kg, g, oz, lb:oz				
Scale Net Weight	330 lb (150kg)	430 lb (195kg)	450 lb (204kg)	450 lb (204kg)	615 lb (279kg)
Shipping Weight	330 lb (150kg)	430 lb (195kg)	450 lb (204kg)	450 lb (204kg)	615 lb (279kg)
Shipping Dimension	60" x 40" x 14" (1,524mm x 1,220 x 356mm)			72" x 50" x 14" (1,829mm x 1,524mm x 356mm)	

**Floor Scales**

Floor Scale, 2,500 lb Capacity NTEP .....No. VX32XW2500L  
 Floor Scale, 5,000 lb Capacity NTEP .....No. VX32XW5000L  
 Floor Scale, 10,000 lb Capacity ..... No. VX32XW10000L  
 Floor Scale, 5,000 lb Capacity.....No. VX32XW5000X  
 Floor Scale, 10,000 lb Capacity .....No. VX32XW10000X

**Options**

Foot Kit .....No. 80252545  
 Floor Stand Indicator Kit, Stainless.....No. 30047154  
 Ramp, 48" (W) x 48" (L), 2.5K/5K.....No. 80252766  
 Ramp, 60" (W) x 48" (L), 5K.....No. 80252767  
 Ramp, 48" (W) x 48" (L), 10K .....No. 80252795  
 Ramp, 60" W x 48" L, 10K.....No. 80252796



### Equipoise Compact Balance

Ideal for classrooms, laboratories and industrial applications. These seven-button balances allow quick access to 13 different units of measure, percentage, counting and accumulating. All units include automatic zero tracking, automatic tare and an accumulation facility which allows the count to be stored and recalled as an accumulated total.

A detachable enclosed weighing chamber is included in the capacities below 1000 grams. Equipoise can be used with the included AC adapter or an on-board rechargeable battery that offers up to 40 hours of continuous operation. RS-232 output is standard on each model. RS-232 cable is optional.



165341

#### Standard Features:

- Capacities between 300–3000g
- LCD display
- Quick response
- 13 different units of measure
- Modes include accumulation, counting and percentage
- Detachable enclosed weighing chamber (in capacities <1kg)
- Battery operation for up to 40 hours of continuous use (without backlight)
- Standard RS-232 interface for connecting to a printer or PC

Model	No. 165338	No. 165339	No. 165340	No. 165341
Capacity (g)	300g	600g	1500g	3000g
Resolution (g)	0.01g	0.02g	0.05g	0.1g
Repeatability (g) (±)	0.01g	0.02g	0.05g	0.1g
Linearity (g) (±)	0.02g	0.04g	0.1g	0.2g
Stabilization Time (seconds)	2			
Weighing Units	Gram, Carat, Ounce Troy, Pound, Pennyweight, Grain, Momme, Hong Kong Tael, Singapore Tael, Taiwan, Tael, Tola			
Operating Modes	Weighing, Percent Weighing, Parts Counting, Accumulation			
Pan Size	4.7" (120mm)		4.8" x 5.6" (122mm x 142mm)	
Ship Weight and Dimensions	7 lb (3kg), 7.1" x 8.7" x 3.3" (180mm x 220mm x 85mm)			
Power	AC adapter (12v/500mA), internal rechargeable battery (6V/1.2Ah)			
Warranty	One-year limited warranty			

### Ohaus Scout STX™ Touchscreen Scales

Ideal for laboratory and industrial applications, the Ohaus Scout features an easy-to-navigate color touchscreen display and a slim design which allows stackable storage. Standard feature includes: quick and efficient navigation with informative color touchscreen display. Fast weighing speed and high resolution with stabilization time as fast as 1 second. Integrated superior overload protection system rated at 10 times the capacity. Multiple connectivity options including RS232, USB Host, USB Device, Ethernet and Bluetooth (available as an accessory). AC adapter included or powered by 4-AA batteries (not included). Ship wt: 4 lbs, Ship dims: 12" (L) x 10" (W) x 6" (H).



Scout STX

Model	No. STX223*	No. STX422	No. STX621	No. STX8200
Capacity	220g	420g	620g	8200g
Readability	0.001	0.01	0.1	1
Pan Size	0.37" (93mm)	0.47" (120mm)	6.7" x 5.5" (170 x 140mm)	6.7" x 5.5" (170 x 140mm)

\*Requires draftshield



**Triple Beam Balance**

Seedburo offers the very best in mechanical balances. Manufactured by Ohaus, these balances carry a 5 year warranty. All of these scales are ideal for many non-legal for trade applications. The triple beam balances feature a magnetic damper for fast, accurate weighing and easy manipulation of the poises.

The capacity of the gram scale is 610g. With the addition of the **No. 707** weight set, it increases the capacity to 2610g. The front beam reads 10g x 0.1g, rear beam 100g x 10g and the center beam is 500g x 100g. The mechanical series is available with a poly (**No. 99**) or stainless steel scoop (**No. 99S**) which measures 12" x 6" x 2¾", or with round 6" diameter stainless steel plate (**No. 760**). Ship wt: 6 lbs, Ship dims: 21" (L) x 9" (W) x 10" (H).

Gram Scale with Poly Scoop, Spider Platform Style .....	<b>No. 99</b>
Gram Scale with Stainless Steel Scoop, Spider Platform Style .....	<b>No. 99S</b>
Gram Scale with Stainless Steel Plate and Tare Beam .....	<b>No. 760</b>

**Dial-O-Gram Balances**



The Dial-O-Gram Balances eliminate the front beam of a Triple Beam Balance and replace it with a convenient direct reading dial that reads 10g x 0.1g. These scales are equipped with magnetic damping and are suited for non-legal for trade applications.

Capacity is 610g and 2610g with a **No. 707** weight set. The stainless plate is 6" in diameter to accommodate the footed stainless scoop and counter weight (**No. 703S**) Dial 10g x 0.1g, rear beam 100g x 10g, center beam 500g x 100g. Ship wt: 9 lbs, Ship dims: 22" (L) x 9" (W) x 9" (H).

Dial-O-Gram with Stainless Steel Plate and Tare Beam .....	<b>No. 1650-00</b>
Dial-O-Gram with Stainless Steel Plate, Tare Beam and No. 707 Weight Set .....	<b>No. 1650-W0</b>

**Triple Beam and Dial-O-Gram Accessories**



Weight Set, Two 1000G and One 500G Weights.....	<b>No. 707</b>
Stainless Flat Bottom Scoop and Counter Weight.....	<b>No. 703S</b>
Poly Scoop and Counter Weight .....	<b>No. 703</b>
Footed Poly Scoop Used with No. 99 Gram Scale (White) .....	<b>No. 1101</b>
Footed Poly Scoop Used with No. 99 Gram Scale (Gray) .....	<b>No. 1101G</b>
Stainless Steel Scoop Used with No. 99S Gram Scale.....	<b>No. 80250400</b>
Maxi-Scoop, 10" x 2½" Polypropylene, for Tare Models Only .....	<b>No. 3369</b>



**Ohaus Defender™ D500M Portable Platform Scale**

THE OHAUS Defender™ D500M is a portable, mechanical industrial scale designed to meet a variety of applications where simplicity and economy are a must. The D500M features an easy-to-read, dual-side flat beam with a shadow-proof poise, providing quick reading under most lighting conditions. The scale is constructed with die-cast beam, fabricated carbon steel base with 4" x 5" diameter phenolic wheels. The platform is 28.13" x 19.25" and the scale capacity is 1000 lbs x 0.5 lb. The D500M is NTEP Certified. Net wt: 114 lbs, Ship wt: 124 lbs, Ship dims: 50" (L) x 32" (W) x 8" (H).

D500M Portable Platform Scale.....	<b>No. D500M</b>
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### OS On Site Hanging Scale

The handiest scale to have at any site. The scale can be held in one hand or suspended from the weighing handle (included) when weighing heavier loads. Results can be displayed in kg, lbs, or lbs/oz, with an easy to read LCD display, "Hold" feature, tare capability and powered by 2 AA batteries (included). Carrying case and top S-hook also included. Ship wt: 3 lbs Ship dims: 14" (L) x 4" (W) x 3" (H).



- Digital Hanging Scale, 22 lb x 0.02 lb, 10kg x 0.01kg .....No. 130292
- Digital Hanging Scale, 55 lb x 0.05 lb, 25kg x 0.02kg .....No. 130293
- Digital Hanging Scale, 99 lb x 0.1 lb, 45kg x 0.05kg .....No. 130294

130292

### Seedburo Cylindrical Individual Weights and Weight Sets

Designed specifically for adjustment of electronic balances and scales, our high-precision stainless steel weights provide easy handling and stacking. All weights feature a satin finish, are traceable to the National Institute of Standards and Technology (NIST), and are manufactured to the specifications of NIST Handbook 105-1. A traceable certificate is available for all weight sets and individual weights. Weight Sets are provided in protective case. All weights are Class 5, stainless steel.

#### Weight Sets

Add "TC" to part number to receive set with a traceable certificate.

Part No.	No. 12506	No. 12512	No. 12591	No. 12593	No. 12646
Range	100g-1g	500g-1g	1 lb-1/32 oz	1 lb-0.001 lb	10 lb-0.05 oz
	1-100g	1-500g	1-1 lb	1-1 lb	2-10 lb
	1-50g	2-200g	1-8 oz	1-0.5 lb	1-5 lb
	2-20g	2-100g	1-4 oz	2-0.2 lb	2-2 lb
	1-10g	1-50g	1-2 oz	1-0.1 lb	1-1 lb
	1-5g	2-20g	1-1 oz	1-0.05 lb	1-8 oz
	2-2g	1-10g	1-1/2 oz	2-0.02 lb	1-4 oz
	1-1g	1-5g	1-1/4 oz	1-0.01 lb	1-2 oz
		2-2g	1-1/8 oz	1-0.005 lb	1-1 oz
		1-1g	1-1/16 oz	2-0.002 lb	1-0.5 oz
			1-1/32 oz	1-0.001 lb	2-0.2 oz
					1-0.1 oz
					10.05 oz
Piece Count	9	12	11	13	15
Total Weight	221.00g	1.110kg	2 lb	2.111 lb	31 lb 0.05 oz
	Metric	Metric	Avoirdupois	Avoirdupois	Avoirdupois



No. 12506

#### Individual Weight

\* = Weights are grip-handled for easier lifting. † = Weights are cast iron.

Metric		Metric with Traceable Certificate		Avoirdupois		Avoirdupois with Traceable Certificate	
1g	No. WT-1F	1g	No. WT-1FTC	1/16 oz	No. 12575	1/16 oz	No. 12575FTC
2g	No. WT-2F	2g	No. WT-2FTC	1/8 oz	No. 12578	1/8 oz	No. 12578FTC
3g	No. WT-3F	3g	No. WT-3FTC	1/4 oz	No. 12581	1/4 oz	No. 12581FTC
5g	No. WT-5F	5g	No. WT-5FTC	1/2 oz	No. 12584	1/2 oz	No. 12584FTC
10g	No. WT-10F	10g	No. WT-10FTC	1 oz	No. 12587	1 oz	No. 12587FTC
20g	No. WT-20F	20g	No. WT-20FTC	2 oz	No. 12590	2 oz	No. 12590FTC
30g	No. WT-30F	30g	No. WT-30FTC	4 oz	No. 12592	4 oz	No. 12592FTC
50g	No. WT-50F	50g	No. WT-50FTC	8 oz	No. 12594	8 oz	No. 12594FTC
100g	No. WT-100F	100g	No. WT-100FTC	12 oz	No. 12626	12 oz	No. 12626FTC
150g	No. WT-150F	150g	No. WT-150FTC	1 lb	No. 12596	1 lb	No. 12596FTC
200g	No. WT-200F	200g	No. WT-200FTC	2 lb	No. 12598	2 lb	No. 12598FTC
300g	No. WT-300F	300g	No. WT-300FTC	3 lb	No. 12600	3 lb	No. 12600FTC
400g	No. WT-400F	400g	No. WT-400FTC	4 lb	No. 12602	4 lb	No. 12602FTC
500g	No. WT-500F	500g	No. WT-500FTC	5 lb	No. 12604	5 lb	No. 12604FTC
1kg	No. WT-1000F	1kg	No. WT-1000FTC	10 lb	No. 12606	10 lb	No. 12606FTC
2kg	No. WT-2000F	2kg	No. WT-2000FTC	10 lb	No. 12673*	10 lb	No. 12673FTC*
3kg	No. WT-3000F	3kg	No. WT-3000FTC	20 lb	No. 12674*	20 lb	No. 12674FTC*
4kg	No. WT-4000F	4kg	No. WT-4000FTC	25 lb	No. 12675*	25 lb	No. 12675FTC*
5kg	No. WT-5000F	5kg	No. WT-5000FTC	30 lb	No. 12676*	30 lb	No. 12676FTC*
				50 lb	No. 12677*	50 lb	No. 12677FTC*
				50 lb	No. 12839†	50 lb	No. 12839TC†



Cylindrical

Grip-Handle

**SEEDBURO SAMPLE PANS AND CONTAINERS**



★ MADE IN  
★ USA Left to right: 64P, 64BP

**Triangular Sample Pans**

The **No. 64** Sample Pan is made of mild steel and has an enameled, dark blue color. This pan has become a standard and features a tapered pour spout. The **No. 64P** and **No. 64BP** are the same sized pan as the **No. 64** but are made of durable, static resistant plastic.

- Blue Powdercoat Steel Triangular Sample Pan, 10" (L) x 10" (W) x 2 1/2" (H).....**No. 64**
- White Plastic Triangular Sample Pan, 10" (L) x 10" (W) x 2 1/2" (H).....**No. 64P**
- Blue Plastic Triangular Sample Pan, 10" (L) x 10" (W) x 2 1/2" (H).....**No. 64BP**



★ MADE IN  
★ USA Left to right: 7, 31, 3

**Spouted Sample Pans**

These pans are made of aluminum and are ideal for controlled pouring of samples. The **No. 33** and **No. 31** feature a funnel-type pour spout.

- Spouted Sample Pan, 1 1/2 qt., 11 3/8" (L) x 7 1/4" (W) x 1 3/8" (H).....**No. 33**
- Spouted Sample Pan, 3 qt., 15 1/4" (L) x 9 7/8" (W) x 2 1/8" (H).....**No. 31**
- Mini-Tin Pan, 7" (L) x 5" (W) x 7/8" (H).....**No. 7**



44

**Round Sample Pans**

The **No. 44** sample pan series are available in the following sizes:

- Round Aluminum Sample Pan, 5" (D) x 1" (H).....**No. 44**
- Round S.S. Sample Pan, 4 qt. Liquid (3.4 qt Dry), 9 1/4" (D) x 2 7/8" (H).....**No. 44-4**
- Round S.S. Sample Pan, 2 qt. Liquid (1.7 qt Dry), 8" (D) x 2 3/4" (H).....**No. 44-2**
- Round S.S. Sample Pan, 6 qt. Liquid (5.1 qt Dry), 11" (D) x 3 1/2" (H).....**No. 44-6**



Left to right: 1420L, 1420S, 1420M

**Seedbuero Anti-Static Weigh Boats**

These durable, lightweight weigh boats are ideal for use with digital balances or small weighing applications. Resist temperatures to 200°F and flex for easy pouring. Rubberized polystyrene with anti-static properties. Designed with shallow shape and flat bottom to resist tipping. Sold in packages of 50 each. Available in white and blue.

- Small Weigh Boat, 1 3/4" (L) x 1 3/4" (W) x 3/8" (D), White.....**No. 1420S**
- Small Weigh Boat, 1 3/4" (L) x 1 3/4" (W) x 3/8" (D), Blue.....**No. 1422S**
- Medium Weigh Boat, 3 1/4" (L) x 3 1/4" (W) x 1" (D), White.....**No. 1420M**
- Medium Weigh Boat, 3 1/4" (L) x 3 1/4" (W) x 1" (D), Blue.....**No. 1422M**
- Large Weigh Boat, 5 1/2" (L) x 5 1/2" (W) x 7/8" (D), White.....**No. 1420L**
- Large Weigh Boat, 5 1/2" (L) x 5 1/2" (W) x 7/8" (D), Blue.....**No. 1422L**



Left to right:  
630, 635

**Quart And Pint Sample Bottles**

Seedbuero's Quart and Pint Sample Bottles are made of a durable polyethylene. Includes an enameled plastic screw-top cap that has a gasket insert to provide an air-tight seal. The **No. 630** Quart Bottle meets the specifications of the USDA-AMS/FGIS for official inspection to minimize moisture loss and preserve quality while in short term storage. Both units feature a 1 3/4" neck opening.

- Quart Sample Bottle, 3 3/4" (L) x 3 3/4" (W) x 7" (H).....**No. 630**
- Replacement Cap Only for Quart Sample Bottle .....**No. 630C**
- Pint Sample Bottle, 2 3/4" (D) x 6" (H) .....**No. 635**
- Replacement Cap Only for Pint Sample Bottle .....**No. 635C**



Left to right:  
625, 640, 645

**Half Gallon and Gallon Containers**

Our Half Gallon and Gallon Containers are made of a durable, high density polyethylene. The **5095** Half Gallon Container features an air-tight, snap-on lid. They are commonly used in inspection offices and laboratories and are great for "stackable" storage. Both the **No. 625** and **No. 640** containers have a screw-top plastic cap.

- Half Gallon Square Container, Snap-On Lid, 5" (L) x 5" (W) x 6 3/4" (H).....**No. 5095**
- Half Gallon Round Container with Snap-on Lid, 6" (D) x 5 3/4" (H).....**No. 645**
- Half Gallon Container, Screw-Top Cap, 5" (L) x 5" (W) x 6 1/2" (H).....**No. 625**
- Gallon Container, 6" (D) x 10" (H) with 3 3/4" Neck Opening, Screw-Top Cap...**No. 640**



### Polyethylene Grain Sample Bags

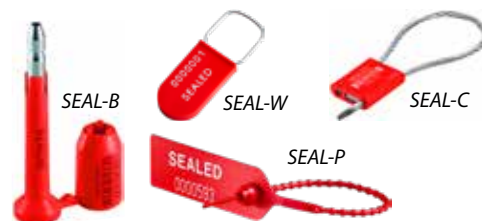
Seedburo's "poly" bags are ideal for retaining samples or for sending samples for inspection or evaluation purposes. Can be used separately or as a liner for our canvas grain sample bags (see below). Made of tough, transparent polyethylene, these bags will not become brittle. Bags are odorless, non-toxic and sealable with cable ties or twistie ties. Poly bags sold in lots of 100 or 1000's. Available in sizes specified or in rolls (specify width and thickness).



Poly Bag with Pockets, 8" (W) x 26" (H) x .003 ml Thickness.....	<b>No. 620</b>	Roll of Polyethylene Tubing (Specify Width and Thickness).....	<b>No. 623</b>
Poly Bag, 6" (W) x 13" (H) x .006 ml Thickness.....	<b>No. 621</b>	Plastic "Twistie" Ties (pkg./1000).....	<b>No. 624</b>
Poly Bag, 8½" (W) x 18" (H) x .003 ml Thickness.....	<b>No. 622</b>	Plastic Cable 8" 40 lb Ties (pkg./1000).....	<b>No. 626-ZIPTIE</b>
Poly Bag 6" (W) x 12" (H) x .006 ml Thickness.....	<b>No. 628</b>		

### Seedburo Container, Barge and Bag Seals

Seedburo container, barge and bag seals are required by the USDA for all direct export trade of grain out of the country. The seals are attached to the container, barge door or bag opening to provide a tamper-evident seal. All of the seals meet the ISO-9001:2008 requirements. Seals sold in lots of 1000. Customized seals are available in lots of 1000 - call for quotation.



Bolt Lock Seal 3.67" (L) x 0.41" (W) with Code and Barcode .....	<b>No. SEAL-B</b>	Plastic Seal 16" (L) x .14" Diameter Plastic Band with Code .....	<b>No. SEAL-P</b>
Cable Lock Seal 10" (L) x 4mm Diameter Cable with Code and Barcode ...	<b>No. SEAL-C</b>	Wire Seal 3" (L) x 3/64" Diameter Wire with Code .....	<b>No. SEAL-W</b>

### 'Placed In Service' Seals

The Seedburo tool-less red roto seal provides a secure means of applying the tamper proof wire seal to a scale, moisture meter or other laboratory device. The seal provides a sequential number for record keeping and identification. The soft braided 7 x .009" stainless steel wire will pass through most seal screws or slide brackets used. The SEAL-KIT includes a bag of 100 seals which are sequentially numbered and a 50 ft length of the stainless steel cable.



Seedburo Seal Kit 100/Bag with 50' Wire.....	<b>No. SEAL-KIT</b>
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### Seedburo Bag Sealers

Seedburo's bag sealers, are lightweight, portable table models. Ideal for use with polyethylene sample bags (see above). Unit features a teflon jaw for a clean and watertight seal. The hand-operated unit is available with a 8" or 12" teflon jaw and is thermostatically controlled. **Model S210-8:** Ship wt: 7 lbs, Ship dims: 14" (L) x 4" (W) x 8" (H). **Model S210-12:** Ship wt: 12 lbs, Ship dims: 21" (L) x 6" (W) x 10" (H).



Hand-Operated Impulse Bag Sealer with 8" Teflon Jaw, 110V, 50/60Hz .....	<b>No. S210-8</b>
Hand-Operated Impulse Bag Sealer with 12" Teflon Jaw, 110V, 50/60Hz.....	<b>No. S210-12</b>
Transformer for 220V.....	<b>No. K22</b>

### Seedburo Canvas Grain Sample Bags

These government standard sample bags are made to comply with USDA specifications. The heavy canvas material has a mildew proofing agent to retard deterioration and is treated with a water resistant agent. All bags have a double-stitched drawstring. Private labeling is available - Call for quotation.



Left to right: 155, 156, 157

Canvas Drawstring Bag, 8" (W) x 16" (H).....	<b>No. 155</b>
Canvas Drawstring Bag, 8½" (W) x 19" (H).....	<b>No. 156</b>
Canvas Drawstring Bag, 10½" (W) x 16½" (H).....	<b>No. 157</b>
Custom Canvas Bag.....	<b>No. CUSTOM-CANVAS</b>
*Canvas Drawstring Bag, 10" (W) x 18" (H).....	<b>No. 152</b>

\*Non-government approved canvas bag with single stitched drawstring. Does not have mildew or water resistant agents (not shown).



CODA-24-16

### CODA Digital Magnification and Inspection System

The CODA digital magnification inspection system is a highly functional ergonomic tool for performing daily work requiring magnification. This is a 1080 pixel resolution camera on a Dazor articulating arm. This system is designed to provide the ultimate in magnification simplicity for production and quality control inspection. The Dazor floating arm allows the user complete control over orienting the HD camera into a desired position while minimizing the system's total footprint. This system is all metal construction for long lasting rugged use. The CODA system has up to a 750mm (23.5") working distance and up to a 255mm (10.2") field of view with an option of a 16mm or 35mm lens.

This product includes an HDMI cable to connect to a monitor and has a 2 year warranty. You can connect the CODA magnifier to your own monitor or purchase a 21.5" true HD LED monitor. We also offer a HD video and image frame grabber that can save videos and images while using this magnifier. Both Models Net wt: 7 lbs, Actual dims: 4" (L) x 3" (W) x 2" (H), Ship wt: 12 lbs, Ship dims: 35" (L) x 8" (W) x 7" (H).

- CODA 24" Arm, 16mm Lens, 110/220V, 60Hz..... **No. CODA-24-16**
- CODA 24" Arm, 35mm Lens, 110/220V, 60Hz..... **No. CODA-24-35**
- CODA 34" Arm, 16mm Lens, 110/220V, 60Hz..... **No. CODA-34-16**
- CODA 34" Arm, 35mm Lens, 110/220V, 60Hz..... **No. CODA-34-35**
- True HD 21.5" LED Monitor, 110V, 60Hz ..... **No. CODA-MONITOR**
- HD Video and Image Frame Grabber, 110V, 60Hz ..... **No. CODA-FRAME GRABBER**

24" Arm	16mm Lens		35mm Lens	
	Magnification	2.3X	15.0X	5.0X
Working Distance	600mm (23.6")	80mm (3.14")	600mm (23.6")	225mm (8.85")
Field of View	207mm (8.14")	32mm (1.2")	92mm (3.6")	35mm (1.37")

34" Arm	16mm Lens		35mm Lens	
	Magnification	1.8X	15.0X	4.1X
Working Distance	750mm (29.5")	80mm (3.14")	750mm (29.4")	225mm (8.85")
Field of View	255mm (10.03")	32mm (1.2")	115mm (4.52")	35mm (1.37")



### LED Task Lamp

The Dazor LED Task Lamp is the newest mobile lighting system on the market. This is the latest innovation in energy efficient task lighting. This lamp is precision machined and houses the latest in high brightness LED technology and ultra-smooth dimming control. This task grading lamp is exceptionally designed for years of continuous and reliable use. This task lamp has been engineered to produce pure white light with the highest lumen efficiency available. The task lamp consists of 288 fully diffused intensity adjustable LEDs that are dimmable to 20% intensity. The lamp features the patented floating adjustable arm for smooth and easy positioning of the lamp to any position for a total reach of 31 inches. All metal construction for rugged heavy use environments with a sturdy weighted desk base all powder coated finish. Innovative thermal engineering allows LEDs to achieve their rated life of 50,000 hours. The Task Lamp has a 5-year mechanical and 2-year electrical warranty. Made in the USA. Net wt: 27.5 lbs, Shade dims: 14" (L) x 6" (W) x 2" (H), Base dims: 10" (L) x 8" (W) x 2.25" (H), Ship wt: 29 lbs, Ship dims: 13" (L) x 13" (W) x 26" (H)

- LED Task Lamp..... **No. TASK-LAMP**

### Canadian LED Grain Grading Light Tubes

The new LED Canadian light tubes are a great energy saver for onsite labs or grading rooms. With up to 80% less energy cost than traditional florescent tubes, the ballast compatible 20W and 9W LED tubes can be placed in existing fixtures without removing the ballasts for immediate use. The color temperature of the 20W and 9W Canadian LED tubes meet the CGC requirements of 5000K. This LED Tube has the approval of the Canadian Grain Commission. **Model T809:** Net wt: 1 lbs, Ship wt: 3 lbs, Ship dims: 26" (L) x 6" (W) x 6" (H). **Model T820:** Net wt: 3 lbs, Ship wt: 5 lbs, Ship dims: 49" (L) x 6" (W) x 6" (H).

T820-4B-92-5000



- Ballast Compatible (20W) LED 48" Tube..... **No. T820-4B-92-5000**
- Ballast Compatible (9W) LED 24" Tube..... **No. T809-2B-92-5000**

### Circline LED Magnifier Lamp

Seedburo's Circline LED Magnifier Lamp provides shadow-free light to illuminate and enlarge objects placed under the lens. This lamp is twice as bright as a 22W fluorescent bulb but also dimmable to 20% intensity. Ideal for laboratories, quality control and grain inspection. Built-in handle lets you maneuver the lamp easily. The 5-inch, 3-diopter lens increases magnification 75% at a focal length of 13". The arm reaches a full 28". **Clamp-On Model:** Ship wt: 12 lbs, Ship dims: 25" (L) x 25" (W) x 5" (H). **Desk Base Model:** Ship wt: 28 lbs, Ship dims: 13" (L) x 13" (W) x 25" (H).



- Clamp-On Model, 110/220V, 50/60Hz ..... No. MC150-LED
- Desk Base Model, 110/220V, 50/60Hz..... No. MC100-LED
- LED Replacement Kit for 110V and 220V .....No. MCKIT-LED
- Add-A-Lens Attachment to Increase Magnification to +275% at a Focal Length of 3<sup>3</sup>/<sub>4</sub>" ..... No. M1400

### Highlighting LED Magnifier Lamp

The Highlighting Magnifier is perfect for highlighting flaws, imperfections and other irregularities on the object being inspected. Magnifier features a 5-inch, 3-diopter lens to increase magnification to 75% at a focal length of 13". Arm reach is 28" and the lamp uses 72 fully diffused LED's. **Clamp-On Model:** Ship wt: 12 lbs, Ship dims: 25" (L) x 24" (W) x 5" (H). **Desk Base Model:** Ship wt: 28 lbs, Ship dims: 13" (L) x 13" (W) x 25" (H).



- Clamp-On Model, 110/220V, 50/60Hz .....No. MG450-LED
- Desk Base Model, 110/220V, 50/60Hz.....No. MG400-LED
- LED Replacement Kit..... No. MGKIT-LED

### Swift Stereo Microscopes

These modular stereo microscopes offered by Seedburo incorporate the latest optical technology. The SM100 Series is the best choice for most microscopic applications. Features include: 360° rotating body, two selectable powers, super-wide 10X eyepieces, wide interpupillary range, diopter equipped eyetube and Ultra-Lite illuminating system. 110V, 50/60Hz. Ship wt: 15 lbs, Ship dims: 21" (L) x 21" (W) x 16" (H). (If you would like the cordless version just add -C to the end of the part # SM101,102 or 105).



Model No.	Cordless No.	Objective	Eyepiece	Total Magnification
No. SM101	No. SM101-C	1X, 3X	10X	Fixed 10X & 30X
No. SM102	No. SM102-C	2X, 4X	10X	Fixed 20X & 40X
No. SM105	No. SM105-C	1X, 3X	10X	Zoom 10X & 30X

### Seedburo Hand-Held Microscope

The IPM Scope combines a digital movie camera, precision optics and LED lighting in a microscope that fits in the palm of your hand. 40 to 140X magnification lets you zoom in on the fine details of insects, textiles, electronics or anything else too small to see.

Place the IPM Scope over the object and comfortably view the live and still image on your computer screen, instead of straining to look into a tiny eyepiece. Capture images of movies, easily add labels, make measurements and even draw right on the live video image. This makes it very easy to send images via e-mail. The IPM Scope connects to your computer's USB port where it's always ready to use. Ship wt: 2 lbs, Ship dims: 10" (L) x 8" (W) x 3" (H).



- Hand Held Microscope and Digital Camera with Imaging Software..... No. IPM-SCOPE
- Scope Stand .....No. IPM-STAND



MC45

**Portable Macroscopes**

The portable macroscopes are designed to fill the need for superior image quality in simple, cost effective configurations for application in research, production, and quality control. The macroscope 25X and 45X units produce images superior to most laboratory instruments in resolution, contrast, brightness, and field of view. This is a great tool to have at all times to check plant health or insect species. Net wt: 2 lbs, Ship wt: 3 lbs, Ship dims: 12" (L) x 8" (W) x 4" (H).

- Macroscope 25X with Hard Case ..... **No. MC25**
- Macroscope 45X with Hard Case ..... **No. MC45**



**Flip-Up Magni-Focuser**

The Seedbuero Magni-Focuser comes with a flip-up front, a snap-on interchangeable lens plate including 1.5x, 2x, 2.5x and 3x magnification. This head-worn magnifier includes a lightweight adjustable headband and can be worn with or without regular glasses. This magnifier also comes with a removable LED lamp that can be used as a free standing light source. Net wt: 5.8 oz, Ship wt: 2 lbs, Ship dims: 12" (L) x 11" (W) x 5" (H).

- Flip-Up Magni-Focuser ..... **No. CP60**



**Seed And Germination Magnifier**

This magnifier is a 2X LED magnifier desk lamp with a 5X power spot lens. The 2508 feature two super bright LED lights; while it's large 4" crystal clear acrylic lens provides a large viewing area for seed or grain examination. It has a flexible neck that allows you to position the magnifier where you need it. The 2508 plugs into any 110V standard outlet or can be powered by using 3 AA batteries (not included). Ship wt: 3 lbs, Ship dims: 8" (L) x 6" (W) x 10" (H).

- Seed and Germination Magnifier, 2X Lighted Magnifier..... **No. 2508**



107-L

**Seed Analysts Special**

The 107 high quality magnifier is made of aluminum alloy with black finish. The 107 folds compactly to fit in a pocket and has a 1" x 1" (25.4mm x 25.4mm) graduated base for evaluating size of object. Features 6X power lens, 3/4" in diameter. Includes carry pouch. The 107-L is a 10X 15mm lens lighted version of the Seed Analysts Special with a super bright LED light. It contains markings in both inches and centimeters for easy measuring of small seeds or objects. Folds flat for storage. Runs on 3 No. 392 button cell batteries (included) and includes hard plastic case. Ship wt: 1 lbs, Ship dims: 7" (L) x 5" (W) x 3" (H).

- Seed Analysts Special, 6X Power..... **No. 107**
- Seed Analysts Special, 10X Power, Lighted ..... **No. 107-L**



M10X

**Hastings Triplet Magnifier**

This highly "corrected" triple lens system provides excellent image quality and is designed to eliminate optical errors that can degrade image quality. Swing-away case protects the lens and can also be used as a handle. Ship wt: 1 lbs, Ship dims: 7" (L) x 5" (W) x 3" (H).

Focal Length	Power	Lens Diameter	Model No.
1.5"	7X	18mm	No. M7X
1"	10X	14mm	No. M10X
0.75"	14X	11mm	No. M14X
0.5"	20X	8mm	No. M20X



**Seedburo Hygrothermograph**

The Seedburo Battery-Operated Hygrothermograph can be used for indoor or (sheltered) outdoor use. The unit provides a permanent record of temperature and relative humidity changes over a 1-day, 7-day or 32 days period and measures in °F or °C by changing chart paper. The quartz-controlled drive mechanism consistently rotates the chart drum even when batteries are weak. The unit includes two felt-tipped pens (blue and red) and two "C" alkaline batteries. A removable clear plastic cover with handle allows for chart and component access. Net wt: 9 lbs, Actual dims: 16" (L) x 9" (W) x 14" (H), Ship wt: 11 lbs, Ship dims: 21" (L) x 11" (W) x 15" (H).



3725Q

- Battery Operated Hygrothermograph.....No. 3725Q
- Replacement Pens, Blue (Pkg. of 6)..... No. 3725PB
- Replacement Pens, Red (Pkg. of 6)..... No. 3725PR

**Hygrothermograph Charts**

- 1-Day, 14 to 122°F (Pkg. of 100).....No. 37251F
- 1-Day, -10 to 50°C (Pkg. of 100)..... No. 37251C
- 7 -Day, 14 to 122°F (Pkg. of 100).....No. 37257F
- 7-Day, -10 to 50°C (Pkg. of 100)..... No. 37257C
- 32-Day, 14 to 122°F (Pkg. of 25).....No. 372532F
- 32-Day, -10 to 50°C (Pkg. of 25).....No. 372532C

**Paperless Humidity and Temperature Chart Recorder**

Ideal for monitoring controlled environments such as grain labs, storage, freezers, and other critical areas. Instrument can be either wall or desk-mounted for versatile, easy monitoring. Detachable humidity/temperature probe does not require recalibration and extends up to 1 meter for measurements in closed environments. The large dual graphic LCD displays temperature (°F/ °C) and relative humidity readings, time/date, min/max, battery status, and percentage of remaining memory. Internal memory records up to 49,000 data points which can be transferred to a PC via RS-232 serial port for further data analysis. Audible and visual alarms with Hi/Low set-points generate warnings when conditions are outside the required limits. Each unit is supplied with detachable probe with 3-ft (1m) cable, RS-232 cable, 110 VAC adapter, (3) AAA alkaline batteries, built-in stand, and LabView-based PC software compatible with Windows® 95/98/2000/NT/ME/XP. Net wt: 1 lb, Actual dims: 7.7" (L) x 0.9" (W) x 5" (H), Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H).



RH520A

**Specifications**

- Relative Humidity Range: 10.0 to 95.0%
- Accuracy: ±3%
- Temperature Range: -20.0°F to 140.0°F (-28.0 to 60.0°C)
- Relative Humidity: ±1.8°F ±1°C

- Paperless Humidity/Temperature Chart Recorder ..... No. RH520A
- Adapter for 220V Operation .....No. RH520ADPT
- Replacement Humidity/Temperature Probe.....No. RH520P

**Seedburo Wireless Rain Gauge**

This Wireless Rain Gauge with thermometer and clock is ideal for monitoring rainfall, indoor-outdoor temperatures and more. Wireless transmission of the temperature from the remote temperature sensor to the main unit can be made up to 100 feet (30 meters) away. Rainfall may be displayed in inches or mm. Some of the features include: programmable rain alarm, 7 days of rain collection history, indoor and remote temperature display, MIN/MAX memory for indoor/outdoor temperature, hourly, daily and weekly rainfall history, monitors temperature in up to 3 remote locations (only one remote sensor included), dual crescendo alarm with snooze, programmable ice warning alarm, wall mount or desktop option, low battery indicator, LED backlight display. Each component (main unit, remote sensor, remote rain gauge) is powered by two 'AA' alkaline batteries (not included). Actual dims: **Main Unit:** 3" (L) x 1" (W) x 6" (H). **Remote Sensor:** 3" (L) x 1" (W) x 4" (H). **Remote Rain Gauge:** 7" (L) x 5" (W) x 7" (H), Ship wt: 4 lbs, Ship dims: 13" (L) x 10" (W) x 13" (H).



RGR126N

- Wireless Rain Gauge .....No. RGR126N

**Seedburo Rain Gauges**

The Seedburo "Clear View" Rain Gauges will measure accumulated precipitation in either English or Metric units. The clear buterate cylindrical rain gauge has an area ratio of 10 to 1 between knife-edge funnel and inner receiver. Inner receiver has molded-on graduations. Unit includes mounting bracket, screws and data recording sheet for logging rainfall data up to one year. Net wt: 3 lbs, Ship wt: 4 lbs, Ship dims: 9" (L) x 9" (W) x 21" (H).



RGE

- Seedburo Rain Gauge, English .....No. RGE
- Seedburo Rain Gauge, Metric ..... No. RGM



**Seedburo Digital Psychrometer with Dew Point and Wet Bulb**

This certifiable digital psychrometer offers a solution to a wide range of applications in monitoring environmental conditions. Displays wet bulb, dew point, humidity and temperature on a large digital display. No twirling or charts necessary. Includes Min/Max memory with reset key. Range: -4° to 122° F (-30° to 50°C). Temperature accuracy: ±1.8°F. Humidity accuracy: ± 5% reading. Unit runs on two AAA alkaline batteries (included). Net wt: 1 lb, 6.7" (L) x 1.85" (W) x 0.5" (H), Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H).

Digital Psychrometer with Dew Point and Wet Bulb .....No. SAM990DW



EP8710

**Seedburo Calibratable 7 Function Digital Psychrometer**

This combination meter measures and displays ambient temperature, relative humidity (RH), both dew point and wet bulb temperatures on a bright dual-readout LCD display. Includes an external stem probe for measuring surface or internal temperature of a solid object or the temperature of a liquid or gas. NIST calibration available. F°/C° switch and an adjustable auto power off trigger. Unit includes one 9V alkaline battery. Net wt: 3.7 oz, Ship wt: 2 lbs, Actual dims: 7.56" (L) x 2.4" (W) x 1.57" (H), Ship dims: 12" (L) x 10" (W) x 3" (H).

Calibratable 7 Function Psychrometer .....No. EP8710

Calibration Reference 33% and 75% Salts for Field Calibration .....No. HR33 or HR75



318

**Seedburo Sling Psychrometer**

The Seedburo Sling Psychrometer determines relative humidity by measuring evaporation of water into the surrounding air. The unit compares wet and dry bulb temperatures. The %RH is read from the slide rule calculator integrated into the psychrometer. Standard humidity tables can also be used. Unit contains two spirit filled thermometers and wick. Net wt: 4 oz, Actual dims: 8½" (L) x 1½" (W) x ¾" (H), Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 10" (H).

Sling Psychrometer, 20 to 120°F.....No. 318

Sling Psychrometer, -5 to 50°C.....No. 318C

Replacement Thermometer °F.....No. 318T

Replacement Thermometer °C .....No. 318TC

Replacement Wicks.....No. 318W



**Delmhorst Thermo-Hygrometer**

The Delmhorst Thermo-Hygrometer, offered by Seedburo Equipment Company, is an effective way to control the effects of humidity and temperature in a variety of locations such as seed storage rooms, walk in germinators or coolers, or grain drying rooms. The HT-3000 displays relative humidity from 0–100% with a ± 3% accuracy and temperature from -4° F to 158° F (-20° C to 70° C) with up to ±1.8° accuracy. Dew point range is -40° F to 158° F (-40° C to 70° C). The HT-3000 has a quick response time, selectable display screens, data hold feature, graphic display with backlight, auto power down when the unit has been idle and hard rugged case. Actual wt: 1 lb., Actual dims: 3" (L) x 1½" (W) x 8" (H), Ship wt: 3 lbs, Ship dims: 13" (L) x 10" (W) x 7" (H).

Thermo-Hygrometer .....No. HT-3000



**Seedburo Mason Hygrometer**

The Mason Hygrometer has easy reading thermometers for wet and dry bulb temperatures. These spirit-filled thermometers have a dual temperature range of 20 to 120°F and -5 to 50°C and are mounted on a durable plastic housing for convenient wall mounting. Unit includes humidity tables for easy reference to atmospheric humidity. Net wt: 8 oz, Actual dims: 3" (W) x 12" (H), Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 10" (H).

Mason Hygrometer .....No. 312D

**Watertight Folding Pocket Thermometer**

The folding thermometer from Seedburo features an adjustable angle head of 45/90/135/180°, stainless steel sensor probe, memory recall, either F° or C° selectable readout, data hold/test function, low battery indicator. The folding thermometer has an easy-to-read 3/4" digital display and a range of -58° to 572°F or -50° to 300°C. Resolution is 0.1° below 200°C and 1°C outside of this range. Accuracy is ±1° between -20° and +100°C. Response Time 4 seconds in water. Unit operates on one (1) CR2032 button battery (included) and is turned on or off by extending the probe.



The folding thermometer is shipped with a Traceable™ Certificate of Calibration. Watertight IP65 and HACCP conform tested. The unit measures 11" with the probe fully extended and is 6" (L) x 1 7/8" (W) x 7/8" (H) when closed. Net wt: 8 oz, Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 10" (H).

Folding Digital Traceable Thermometer .....No. ACCD0552DIG

**Seedburo Single and Dual Range Dial Thermometers**

Accurate readings are always obtained with these 3" and 5" bimetallic dial thermometers. Ruggedly built, these thermometers are constructed of stainless steel (type 304) casings and stems with heavy glass lenses and large black figures. All thermometers have 1/4" dia. stems with 1/2" NPT connections, nut-type recalibrator and accuracy to 1% of span. Additional shorter stem lengths available on request.



**Single and Dual Temperature Ranges Available:** (Specify temperature range: dual or single, °F or °C when ordering)

-40/160°F	0/200°F	25/125°F	50/300°F	50/500°F
-40/70°C	-10/100°C	0/50°C	10/150°C	10/250°C

- 3" Dial, 9" Stem .....No. 3000R9
- 5" Dial, 9" Stem .....No. 5000R9
- 3" Dial, 12" Stem .....No. 3000R12
- 5" Dial, 12" Stem .....No. 5000R12
- 3" Dial, 24" Stem .....No. 3000R24
- 5" Dial, 24" Stem .....No. 5000R24
- 3" Dial, 36" Stem .....No. 3000R36
- 5" Dial, 36" Stem .....No. 5000R36

**Seedburo Lab Long Stem Digital Thermometer**

Digital stem style digital thermometer with 8" stainless steel stem with protective cover. NIST Traceable with Certificate. Range -50°/200°C (-58°/392°F) Resolution 0.1° with accuracy ±1.0°C between 20°-120°C. Net wt: 8 oz, Actual dims: 9" (L) x 7/8" (W) x 1/2" (H), Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 6" (H).



Lab Long Stem Digital Thermometer .....No. ACC3108DIG

**Seedburo Special Dial Thermometer**

2" Dial, 8" Stainless Steel Stem, Dual Temperature Range. Net wt: 4 oz, Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 10" (H).

0 to 220°F/-10 to 100°C, Division: 2°F/1°C .....No. 2250R



**Pocket Dial Thermometers**

Constructed of corrosion resistant stainless steel with 1" dial and 5" stem with recalibrator, plastic case and pocket clip. Net wt: 4 oz, Ship wt: 1 lb, Ship dims: 7" (L) x 3" (W) x 5" (H).



- 0/220°F Range, 2° Divisions .....No. 500R
- 50-500°F Range, 2° Divisions .....No. 500R3
- 40/160 °F Range, 2° Divisions .....No. 500R1
- 0-150°C Range, 2° Divisions .....No. 500R4
- 25-125 °F Range, 2° Divisions .....No. 500R2
- 0-250°C Range, 2° Divisions .....No. 500R5

**Glass Pocket Thermometers**

Glass thermometer filled with non-toxic liquid spirit. Aluminum case with pocket clip. 6 1/2" Long. Net wt: 4 oz, Ship wt: 1 lb, Ship dims: 7" (L) x 3" (W) x 5" (H).



- 0/120°F Range, 1° Division .....No. 212
- 5/45°C Range, 0.5° .....No. 212C
- 0/220°F Range, 2° Division .....No. 212H
- 0/220°F and -20/110°C Range, 2°/1° Division .....No. 212D

**Seedburo Glass Grain, NIST Traceable and Refill Thermometers**

Part No.	Description	Length	Temperature Range	Divisions	Immersion	Traceable to NIST
No. 208	Seedburo Easy-Read	12"	30-120°F	1°	N/A	No
No. 30591	Enviro-Safe®	200mm	-10 to 110°C	1°	50mm	Yes
No. 30597	Enviro-Safe®	200mm	20-230°F	2°	50mm	Yes
No. 212R	Glass Refill	5 3/8"	0-120°F	1°	N/A	No
No. 212HR	Glass Refill	5 3/8"	0-220°F	2°	N/A	No
No. 212CR	Glass Refill	5 3/8"	-5 to 45°C	.5°	N/A	No
No. 212DR	Glass Refill	5 3/8"	0 to 220°F/-20 to 110°C	2°/1°	N/A	No



**Data Technologies S25 Seed Counter**

The S25 seed counter is the perfect counter for QA purposes. Its ability to count all types of seeds, its small footprint and its simple operation make it the preferred choice of seed companies of all sizes. Some of the benefits of the S25 are faster counting, automatic, precise and reliable TSW (thousand seed weight) calculations. The S25 can count anything from flower seed to field crop seed. The multi-language PC touch-panel interface is extremely user-friendly. There are no mechanical changes required between different seed types. This counter delivers nearly 100% accuracy. The counting range of seed size is 0.5–18mm. The S25 has a counting speed of up to 6,000 Tomato seeds per minute. The S25 counter also has the option of manual and automatic calibration modes. This model requires compressed air for operation. Net wt: 55 lbs, Actual dims: 55" (L) x 45" (W) x 65" (H), Ship wt: 80 lbs, Ship dims: 66" (L) x 52" (W) x 76" (H).

Data Technologies QA Seed Counter .....No. S25



**Data Technologies S60 Seed Counter**

The Data Technologies S60 seed counter was developed primarily for seed manufacturers who need to quickly and accurately count large quantities of seeds. The S60 is the counter of choice for packing seeds of all sizes. This is a great counter if there is a need to increase sample sizes so that the data is more statistically representative. Some of the key benefits of the S60 are that no changes are needed between different samples; it has no limitations for seed size, it has automatic precise TSW (thousand seed weight) calculations, and it is extremely user friendly. The S60 has nearly 100% accuracy with a counting range of 0.5–25mm, a counting speed of up to 4,000 Corn seeds per minute and multi-language interface. This model requires compressed air for operation. Net wt: 115 lbs, Actual dims: 71" (L) x 47" (W) x 86" (H), Ship wt: 168 lbs, Ship dims: 98" (L) x 64" (W) x 90" (H).

Data Technologies Large Seed Counter .....No. S60



**Data Technologies S60 C&W Seed Counter and Weighing**

The ground breaking DATA S60 C&W combines counting and weighing in a single added-value solution when processing or packaging seeds in bulk. The DATA S60 C&W is equipped with an inline load cell that automatically calculates an accurate TSW (thousand seed weight) for counted seeds. The TSW is displayed on the DATA C&W console and transmitted to the packing system controller. It is ideally suited for field crop such as Corn, Soybeans, Cotton, Beans, Sweet Corn and others that are sold by numbers of seeds but often handled according to thousand seed weight. The S60 C&W works by pouring seeds directly into the top hopper of the counter. A sensor in the hopper automatically activates the seed counter, which starts vibrating and feeding seeds through the counter. The counter stops when there are no seeds left in the hopper. Then, the counted seeds are weighed and the TSW is calculated. The TSW is displayed on the operator console and transmitted to the packing machine. The S60 C&W has

99.99% accuracy, rapid bulk counting and emptying, automatic TSW calculation with no minimal sampling interval, real time TSW communication to the packing system, and accommodates counting of seeds from 0.5mm–25mm. This model requires compressed air for operation. Net wt: 115 lbs, Actual dims: 71" (L) x 47" (W) x 86" (H), Ship wt: 168 lbs, Ship dims: 98" (L) x 64" (W) x 90" (H).

Data Technologies Large Seed Counter and Weighing .....No. S60 C&W



### SPAD 502 Chlorophyll Meter

The SPAD 502 Chlorophyll Meter instantly measures the amount of chlorophyll or "greenness" of your plants. Nitrogen needs can be assessed by comparing in-field SPAD readings to adequately fertilized check or reference strips. This allows you to adjust your nitrogen program to actual plant needs and reduce yield-limiting deficiencies or costly over-fertilizing. The SPAD 502 features an optical measurement system offering density difference at two wavelengths with a measurement area of 2mm x 3mm (approximately 3/32" x 1/8"). The meter has two LED light sources, silicon photodiode receptor and space for 30 data sets.



The SPAD 502DL includes built-in data logger, so you can compile SPAD readings for statistical analysis and an RS-232 port for communicating with a PC and/or portable GPS receiver. Use geo-referenced data to correlate N measurements to yield maps or download the data into mapping software. This robust field-data collection device has a capacity of 1,488 measurements when coupled with a GPS receiver or 4,096 measurements when used without GPS. Requires software running on Windows 3.1 or higher. GPS/DGPS cable required for geo-referenced operation. Repeatability within ±0.3 SPAD value between 0 and 50. Includes 2 AA alkaline batteries (1.5V). Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 10" (L) x 7" (W) x 6" (H).

SPAD 502 Chlorophyll Meter without Data Logger .....	No. 2900P
SPAD 502 Chlorophyll Meter with RS-232 Data Port and Built in Data Logger (Including Software).....	No. 2900PDL
GPS/DGPS Cable for SPAD502 and SPAD502PDL Chlorophyll Meter.....	No. 2900C

### Seedburo UV Meter

Monitor critical UV (ultra violet) radiation. This portable hand-held meter provides a measure of the UV filtering capacity of transparent plastic and glass barriers used below electric lamps. The 250–400 nanometer (nm) range has crop-specific response on growth and physiologic processes. This range includes harmful UV light (UVB) which affects plant color. Meter features a digital LCD display and is powered by a 9V Alkaline battery (included). Net wt: 8 oz, Ship wt: 1 lb, Ship dims: 8" (L) x 6" (W) x 4" (H).



**Range:** 0 to full sunlight  
**Measurement range:** 250–400nm (in units  $\mu\text{mol m}^{-2}\text{s}^{-1}$ )  
**Temperature response:** 32°F–122°F (0°C–50°C)

Seedburo UV Meter .....	No. 3414
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### Seedburo Quantum UV Meter

Quantum sensors measure light energy at the specific wavelengths plants actually use for photosynthesis. Research indicates that older lux and foot-candle meters could have error rates up to 45% when used to estimate light quantum available for plant growth. The Quantum Meters measure Photosynthetic Photon Flux (PPF) as  $\mu\text{mol m}^{-2}\text{s}^{-1}$  for Photosynthetically Active Radiation (PAR) in the range of 400–700 nm. Quantum meters can be used in the field, laboratory, above or below plants, in growth rooms and greenhouses. Meter features a digital LCD display. Powered by a 9V Alkaline battery (included). Actual dims: 5" (L) x 2.8" (W) x 1" (H), Net wt: 8 oz, Ship wt: 1 lb, Ship dims: 8" (L) x 6" (W) x 4" (H).



**Range:** 0 to full sunlight  
**Measurement range:** 250–400nm (in units  $\mu\text{mol m}^{-2}\text{s}^{-1}$ )  
**Temperature response:** 32°F–122°F (0°C–50°C)

Quantum Light Meter .....	No. 3415
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### Temperature - Humidity - CO2 Monitor

This monitor is ideal for providing the temperature, humidity and CO2 from indoor air quality (IAQ) in an office, warehouse, seed storage or greenhouse areas. Measures the ambient temperature, relative humidity (RH), dew point, wet bulb temperature and the CO2 levels. Adjustable high and low volume audible alarm levels. Min/Max memory +data hold feature. Ambient Temp: 14°–140° F (-10° to 60° C), Resolution: 0.1°, Accuracy: ± 0.9°F. (±0.6°C), CO2 measurement range/resolution: 0–5000ppm/1 ppm. Powered with four AA alkaline batteries (included). Net wt: 1 lb, Actual dims: 8.2" (L) x 2.8" (W) x 2.2" (H), Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 5" (H).



Temperature Humidity CO2 monitor .....	No. CDM77535
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### Traceable Digital Thermometer

This max/min thermometer is perfect for indoor or outdoor, easy-to-read display shows high, low and current temperature, available in Fahrenheit or Celsius. Each unit is supplied with a serial-numbered certificate provided from ISO 17025, mounting tape, pre-cut Velcro® squares, and AAA battery. Temperature range: -13 to 158°F (-25 to 70°C). Accuracy: ±0.1°C. Net wt: 8 oz, Actual dims: 3 1/2" (L) x 3/4" (W) x 4 1/4" (H), Ship wt: 1 lb, Ship dims: 12" (L) x 3" (W) x 10" (H).



Traceable Digital Thermometer, -25 to 70°C.....	No. 314C
Traceable Digital Thermometer, -13 to 158°F.....	No. 314F



MADE IN USA IL700EP

**Dickey-john® Instalab® 700 Analyser**

The Instalab® 700 analyzer offers reliability and accuracy in fixed filter testing that is simple to operate and affordable. Quality design and construction ensures the most reliable NIR results available. The Instalab® 700 has a patented rotating sample cup which virtually eliminates problems associated with sample non-homogeneity. The cup rotation is computer-controlled, with 120 readings taken at 3° intervals and averaged for each wavelength. The optional liquid sample cup has a non-rotation feature for measurements of liquids and oils. The Instalab® 700 is dependable in design and built for trouble-free operation in any environment – from lab to production line.

Completely customizable, the instrument allows filters to be changed to adjust the bandwidth for product constituents, including protein, cellulose, sugar, ash, starch, oil and fat, alcohol, cotton and polyester. The Instalab® 700 is an analytical upgrade from the Instalab® 600 series predecessor, which allows for porting of the Instalab 600's extensive constituent library to the Instalab® 700.

**Product Applications**

- Flour Milling
- Ethanol production
- Feed Processing
- Food Ingredients
- Meat Processing
- Dairy Processing
- Grain Processing

**Constituents**

- Protein
- Oil/Fat
- Moisture
- Starch
- Fiber
- Ash
- And more...

**Benefits and Features:**

- Easy to use
- Intuitive color touch screen, reducing operator training
- Tungsten halogen light source
- Memory storage for numerous calibrations
- Sample cup interchangeability
- Liquid sample cup for oils and liquids
- USB, Ethernet Ports – Multiple ports for software upgrades, USB devices, printer and peripherals such as a mouse and scanner.
- File management
  - > Storage of 3000 records
  - > Export analysis data
  - > Product calibration loading via USB memory stick
- Simple slope and bias adjustment for every calibration

Net wt: 34 lbs, Actual dims: 14.25" (L) x 15.52" (W) x 13.93" (H), Ship wt: 40 lbs, Ship dims: 19" (L) x 19" (W) x 20" (H). Power requirements: 120/220 VAC (50/60Hz) Universal switching power supply range: 90–260 VAC (50/60Hz)

Instalab IL710EP with 1445, 1722, 1759, 2345 nm .....**No. IL710EP**  
*Food ingredients and grain, meat, dairy, poultry, fishmeal and bonemeal products, ethanol also used in research applications*

Instalab IL710FG with 650, 2139, 2270, 2345 nm .....**No. IL710FG**  
*For flour milling operations; Moisture, protein, starch, sugar and alcohol*

Instalab IL710FM with 650, 1759, 2270, 2345 nm..... **No. IL710FM**  
*General purpose dry milling of grain and animal feeds*

Instalab IL710MC with 1445, 1722, 1734, 1759 nm..... **No. IL710MC**  
*For food ingredients and grain, meat, dairy, poultry, fishmeal and bonemeal products*

Instalab IL710SB with 1759, 1818, 1982, 2336 nm ..... **No. IL710SB**  
*Determination of protein and oil in soybeans, wet milling*

Instalab IL704 Moisture and Protein Analysis .....**No. IL704**  
*For products such as wheat and/or flour, barley, milo or oats*

Instalab IL706 Moisture, Protein, Oil/Fat, Starch and Fiber.....**No. IL706**  
*For products such as wheat, corn, soybean, sunflower, rapeseed, barley, milo, oats and alfalfa*

Instalab IL707FM with 650 nm Moisture, Protein, Oil/Fat, Starch, Fiber and Ash ..... **No. IL707FM**  
*For products such as wheat, corn, soybean, sunflower, rapeseed, barley, milo, oats and alfalfa, also has a special filter for ash*

Instalab IL707 with 1759 nm.....**No. IL707**  
*For general purpose dry milling of grain*

Optional Printer, USB Connection.....**No. GAC-P25/USB**



GAC-P25/USB

### Port-A-Pic Grain Inspection Table

Seedburo's Port-A-Pic Grain Inspection Table features six (6) 32 watt fluorescent tubes mounted in a fixture suspended 36" above the picking surface. The light produced meets USDA-AMS/FGIS requirements (150–200 footcandle using GE Croma 75 fluorescent lamps or equivalent). Picking surface is 48" (L) x 18" (W) and covered with Formica® that meets USDA-AMS/FGIS requirements. Unit is easy to assemble and operates on 115V, 60Hz. **Table:** Net wt: 22 lbs, Actual dims: 48" (L) x 18" (W) x 1½" (H). **Fixture:** Net wt: 17 lbs, Actual dims: 48" (L) x 15¾" (W) x 4" (H).



Ships in three cartons:

**Table with Brackets:** Ship wt: 35 lbs, Ship dims: 52" (L) x 19" (W) x 7" (H).

**Fixture, Bulbs and Cord:** Ship wt: 25 lbs, Ship dims: 51" (L) x 26" (W) x 6" (H).

**Lens:** Ship wt: 20 lbs, Ship dims: 51" (L) x 26" (W) x 6" (H).

Port-A-Pic Grain Inspection Table Complete .....	No. IT100
Port-A-Pic Grain Inspection Table, Less Fixture, Bulbs and Brackets.....	No. IT100L
Fixture with Six (6) Bulbs.....	No. IT100-FIXTURE
Color Master 75, Fluorescent Light Tube, T8, 32 watt, 1" diameter .....	No. FGIS-BULB T8
Color Master 75, Fluorescent Light Tube, T12, 40 watt, 1½" diameter.....	No. FGIS-BULB

### Purity Workboard and Diaphanoscope

Seedburo's combination Purity Workboard and Diaphanoscope provides a convenient work area on a smooth opal plexiglass surface for seed and grain analysis. A light placed under and shining through the glass assists in critical examination of the sample. Used by grain inspectors and seed analysts, the Purity Workboard and Diaphanoscope is ideal for grain grading and checking for stress cracks, germ damage, and seed viability. Unit features a removable sample drawer. Net wt: 8 lbs, Actual dims: 32" (L) x 14" (W) x 4" (H), Ship wt: 11 lbs, Ship dims: 35" (L) x 17" (W) x 8" (H).



Purity Workboard and Diaphanoscope with Fluorescent Bulb, 110V, 50/60Hz.....	No. 135
Purity Workboard and Diaphanoscope with Fluorescent Bulb, 220V, 50/60Hz.....	No. 135/A
Replacement Glass (Only) .....	No. 135G
Replacement, 110 Volt, Fluorescent Bulb .....	No. 135BF
Replacement, 220 Volt, Fluorescent Bulb .....	No. 135BF/A

### Seedburo Hand Tally

This four-digit hand counter records to 9999. White numerals on a black background for easy reading. Thumb pressure on the button produces an audible click with each increase in count. Hand Tally features a large finger ring and turn-off (zero) knob. Allows for greater accuracy in seed counts and many other applications. Actual dims: 1¾" Diameter x 1⅛" W. Ship wt: 1 lb, Ship dims: 7" (L) x 5" (W) x 3" (H).



Seedburo Hand Tally .....	No. HT
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### Digital Hand Tally

A hand-held counter with 4 digit LCD display and large positive action count button actuator. To reset, all you need to do is hold the On/Off button for 3 seconds. A "beeper", which can be disabled, sounds every count to verify a count has been registered. Made of high impact resistant plastic combining light weight with outstanding durability. Operates on 1 AG10 button style 1.5V battery (included) or equivalent. Net wt: 0.7 oz, Actual dims: 2.4" (L) x 1.4" (W) x 0.5" (H), Ship wt: 1 lb, Ship dims: 7" (L) x 5" (W) x 3" (H).



Digital Hand Tally.....	No. HTD	Digital Hand Tally with Add/Subtract Function.....	No. HTDAS
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### Seedburo Tetrazolium Powder

Used by seed testing laboratories and universities; 2, 3, 5. Triphenyl Tetrazolium Chloride is a seed testing compound used to determine seed viability. Distinguishing between viable and dead tissues of the embryo on the basis of their relative respiration rate in the hydrated state. Ship wt: 2 lbs, Ship dims: 7" (L) x 7" (W) x 7" (H).



Tetrazolium Powder, 50 gram Jar.....	No. 3126*
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\*Tetrazolium is also available in 1g, 10g, 25g & 100g, please call us for prices.

**Seedburo 901 Carousel Count-A-Pak® Seed Counter**



Seedburo has updated the seed counting technology with our latest Count-A-Pak Seed counter. It now has a touch panel display, Fiber optic counting module and updated communication capabilities. With the 901 Carousel seed counter you can have an 8 chute Carousel ready to load 8 envelopes. You can program the bag count you need, start the count and do something else while the counter does the job. If you need more than 8 envelopes or bags simply re-load on the fly or re-load new bags when it is completed and press start to continue. You can also use the 901 for a total counter, single batch, and repeating batch counter. Accuracy is ±1 at 1000 or .1%.

The 901 can count seeds as small as 1mm and as large as 18mm. The 901 has two USB ports to connect a paper printer or barcode label printer. You can also interface with a USB bar code scanner as well as connect to your smart phone via

bluetooth. The unit has Wi-Fi and wired Ethernet to pass data to a computer or to monitor counting data remotely. The 901 can be programmed to count to a programmed batch and stop or a total count. You can also program the number of bags and the count for each bag with a Product ID and Lot code for 100 different seeds.

The standard 901 Carousel Counter offers two operating modes: the **total count** of a lot and a **batch count** of a lot. You can program the 901 to count a set number of seeds into one bag from 1–999,999.

The counting module offers programmable response times from 10, 15, 50, 250, 500, 1000 and 2000 micro seconds. This allows the operator to optimize for fast response, long distance or noisy environments.

Another feature of the 901 Carousel Seed counter counting module is it can be calibrated by the user at any time. If the counter numbers turn **red**, the user can select Calibrate button and the counter will reset the calibration. Also, the counter uses a closed loop system to automatically adjust the light threshold on the fly. This means no more adjusting the light output with a potentiometer or needing to open the case to access the potentiometer.

The 901 Power supply supports AC Input voltage range is from 85VAC–265VAC. The power input frequency range is 47–63 Hertz.

Want to collect data from the counter? Connect the counter to Wi-Fi to keep track of the time and date. Add a product ID, lot code and start counting; the 901 will store data in a file and the file displays as follows:

Date	Time	Product ID	Lot Code	Bag	Count
1/01/2019	08:09:00	Corn1020	18020100	1	100
1/01/2019	08:11:10	Corn1020	18020100	2	100
1/01/2019	08:13:20	Corn1020	18020100	3	100

**901C:** Net wt: 45 lbs, Actual dims: 16.1" (L) x 15.6" (W) x 16" (H), Ship wt: 50 lbs, Ship dims: 18" (L) x 18" (W) x 16" (H).

**Carousel:** Net wt: 37 lbs, Actual dims: 26" (L) x 19" (W) x 12" (H), Ship wt: 45 lbs, Ship dims: 29" (L) x 22" (W) x 14" (H).

- 901 Carousel Seed Counter with 10" Bowl, 110V, 60Hz.....No. 901C-10/B
- 901 Carousel Seed Counter with 10" Bowl, 220V, 50Hz.....No. 901C-10/C
- 901 Carousel Seed Counter with 10" Shallow Bowl, 110V, 60Hz.....No. 901C-10S/B
- 901 Carousel Seed Counter with 10" Shallow Bowl, 220V, 50Hz.....No. 901C-10S/C
- 901 Required Crating ..... No. 901/DOM



## Seedburo 901 Dual Chute & Totalizer Seed Counter

The Seedburo 901 Dual Chute & Totalizer Seed Counter models have all of the same technology as the new 901 Carousel Seed Counter; with a touch panel display, fiber optic counting module and updated communication capabilities. The 901 can count seeds as small as 1mm and as large as 18mm. The 901 has two USB ports to connect a paper printer or barcode label printer. You can also interface with a USB bar code scanner. The unit has Wi-Fi, and wired Ethernet to pass data to a computer or to monitor counting data remotely. The 901 can be programmed to count to a programmed value and stop or a total count. You can also program the number of bags and the count for each bag with a product ID and lot code for 100 different seeds variety.

The standard 901 has two operating modes, the total count of a lot and a Batch count of a lot. You can program the 901 to count a set amount into one bag from 1–999,999. The accuracy is ±1 at 1000 or .1%. The 901 dual chute model is also equipped with a bag detection sensor, so you do not spill precious seed.

The 901 totalizer seed counter is essentially a batch totalizer, but there are three operating modes which may be selected for the 901 dual chute model:

### Total

Counts the total number of seeds in a given lot through one chute. The feeder stays on until manually stopped or approximately 2 minutes after the last seed is counted.

### Single Batch

A single quantity of seeds counted from a larger bulk amount. The set point (number of seeds in a batch) is preset in the set point display prior to counting. The 901 counts this number of seeds into one chute and then stops the feeder, changes the diverter gate position, and reloads the terminal count. In order to count another batch, it is necessary to press the start switch again. For instance, to count exactly 38 seeds into a bag, the COUNT display is set to 38 before starting the feeder. When 38 seeds have been counted into the bag, the diverter gate will switch to prevent any more seeds from falling into that chute and



the feeder will stop. Another Batch may be counted by changing the bag or putting a bag on the other chute at this time and pressing START again.

### Repeat Batch

Counts a single quantity of seeds from a larger bulk amount into one chute, then changes the diverter gate to the other chute, reloads the terminal count, and counts another batch into that chute. This action continues, alternating chutes, and requires the operator to change bags each time one is filled (i.e., if bag detection has been selected, the counting will terminate if a previously filled bag is not removed before the diverter gate switches back to that chute). The counting will terminate if a bag is not present on the delivery chute and bag detection has been selected. The bag count display indicates the number of bags counted.

**901D & 901T:** Net wt: 45 lbs, Actual dims: 16.1" (L) x 15.6" (W) x 16" (H), Ship wt: 50 lbs, Ship dims: 18" (L) x 18" (W) x 16" (H).

901 Batch Count & Totalizer w/ 10" Bowl, 110V, 60Hz.....	<b>No. 901D-10/B</b>	901 Totalizer w/ 10" Bowl, 220V, 50Hz .....	<b>No. 901T-10/C</b>
901 Batch Count & Totalizer w/ 10" Bowl, 220V, 50Hz.....	<b>No. 901D-10/C</b>	901 Totalizer w/ 10" Shallow Bowl, 110V, 60Hz.....	<b>No. 901T-10S/B</b>
901 Batch Count & Totalizer w/ 10" Shallow Bowl, 110V, 60Hz ..	<b>No. 901D-10S/B</b>	901 Totalizer w/ 10" Shallow Bowl, 220V, 50Hz.....	<b>No. 901T-10S/C</b>
901 Batch Count & Totalizer w/ 10" Shallow Bowl, 220V, 50Hz ..	<b>No. 901D-10S/C</b>	901 Totalizer w/ 7" Bowl, 110V, 60Hz.....	<b>No. 901T-7/B</b>
901 Batch Count & Totalizer w/ 7" Bowl, 110V, 60Hz .....	<b>No. 901D-7/B</b>	901 Totalizer w/ 7" Bowl, 220V, 50Hz.....	<b>No. 901T-7/C</b>
901 Batch Count & Totalizer w/ 7" Bowl, 220V, 50Hz .....	<b>No. 901D-7/C</b>	901 Printer.....	<b>No. 901-PRINTER</b>
901 Totalizer w/ 10" Bowl, 110V, 60Hz .....	<b>No. 901T-10/B</b>	901 Required Crating .....	<b>No. 901/DOM</b>

**Count-A-Pak® Seed Counters**

★ MADE IN  
★ USA 801-10/B



**SAVES MONEY    SAVES ON LABOR    SAVES TIME**  
**MAINTAINS LABELING    MONITORS BAGGING**  
**CERTIFICATION    PROCESSES**

When counting is critical, count on the Seedburo 801 Count-A-Pak with an easy to operate membrane touch panel that allows the user to program the 801 while visually keeping track of the seed count, sensitivity and speed settings. All functions or adjustment are controlled from this panel.

The microprocessor controls also allow the user to set the 801 to turn on and off, a bag detection feature that prevents double filling of bags or spilling of seed when a bag is not present. The 801 control console is adaptable for either a 7" or 10" feeder base with bowl. Serial data interface capabilities allow for direct connection to a printer, data logger or computer. An optional foot switch, 801-FS, gives you total hands free operation.

The electromagnetic vibrator action of the bowl moves the seeds upward along the track. Selective devices in the bowl arrange the seeds into a single file, one layer in depth, before they are discharged.

**Totalize**

The 801 registers complete counts on pre-weighed or volumetrically measured samples for assistance in calibrating bagging scale or determining seed count by pound, kilo or other sample weight and can save producers money due to bag over/under filling.

**Batch Count**

Accurately counts a predetermined number of seeds in a single batch for smaller packaging operations or where only small and valuable seed lots are available.

**Repeat Batch**

Used for the continual repetition of a single batch size; often used in trial planting where accurate seed count is critical.

**Multiple Batch**

Used for counting numerous batches of seeds with a variety of counts and quantities.

As a seed travels down the chute, a microprocessor-controlled sensor detects it. Unlike 'electric-eye' counters, this sensor sensitivity is adjustable. For the user, it means that chaff or other undesirable matter will not be counted. A quick disconnect feature on the bowl allows easy and complete clean out of the feeder bowl between lots.

The 801 Count-A-Pak is available with a 7", 10" or 10" shallow feeder bowl to accommodate seed sizes from small vegetable to large grain. In addition, the 10" regular and 10" shallow bowl are interchangeable. (We suggest that the factory calibrate the feeder base to work at its optimum when the two 10" bowls types are used on the same feeder base.)

**Specifications:** Power: 110V/60Hz, 110V/50Hz and 230V/50Hz.  
**Control Console:** Net wt: 18 lbs, Actual dims: 13<sup>3</sup>/<sub>4</sub>" (L) x 11" (W) x 8" (H), Ship wt: 21 lbs, Ship dims: 19" (L) x 13" (W) x 14" (H).  
**Feeder Base:** Net wt: 40 lbs, Actual dims: 15<sup>1</sup>/<sub>4</sub>" (L) x 13" (W) x 15" (H), Ship wt: 45 lbs, Ship dims: 25" (L) x 17" (W) x 16" (H).

801 with 10" Regular Bowl Complete, 110V/60Hz.....	No. 801-10/B
801 with 10" Shallow Bowl Complete, 110V/60Hz.....	No. 801-10S/B
801 with 7" Regular Bowl Complete, 110V/60Hz.....	No. 801-7/B
*Spare Parts Kit for 10" Bowl, 110V/60Hz.....	No. 801-10SPK
*Spare Parts Kit for 7" Bowl, 110V/60Hz.....	No. 801-7SPK
Optional Foot Switch Pedal 1/10 ft. Cable for All Models.....	No. 801-FS
Required Packing for All Models.....	No. 801/DOM
801 with 10" Regular Bowl Complete, 230V/50Hz.....	No. 801-10/C
801 with 10" Shallow Bowl Complete, 230V/50Hz.....	No. 801-10S/C
801 with 7" Regular Bowl Complete, 230V/50Hz.....	No. 801-7/C
801 with 10" Regular Bowl Complete, 230V/60Hz.....	No. 801-10/E
801 with 10" Shallow Bowl Complete, 220V/60Hz.....	No. 801-10S/E
801 with 7" Regular Bowl Complete, 220V/60Hz.....	No. 801-7/E
*Spare Parts Kit for 10" Bowl, 230V/50Hz.....	No. 801-10SPK/A
*Spare Parts Kit for 7" Bowl, 230V/50Hz.....	No. 801-7SPK/A
Replacement Spring 1/16".....	No. RS16
Replacement Spring 1/32".....	No. RS32
Replacement Spring 3/64".....	No. RS64

\*Kit consists of replacement springs, clear and frosted glass.

### Count-A-Pak® Seed Totalizer

This counter has the potential to save producers valuable seed, time, labor and money in ensuring bagging scales are properly calibrated each day. Determine seed count per pound or 1000 kernel weights with the 77 Totalizer. The speed of the feeder is adjusted by a built-in control on the feeder base. With 2" LCD readout, the counter displays total count of the seed which is easily read under most lighting conditions. Available with a 7", 10" or 10" shallow bowl, you'll find a suitable counter for almost any need.

**Specifications:** Power: 110V/60Hz, 110V/50Hz (220V via transformer), 175 watts. **Control Box:** Actual dims: 15" (L) x 10" (W) x 5" (H). **Feeder Base:** Actual dims: 9" (L) x 9" (W) x 9" (H). **Both:** Net wt: 35 lbs, Ship wt: 41 lbs, Ship dims: 19" (L) x 15" (W) x 22" (H).



77-10/B

**COUNTS SEEDS IN A GIVEN WEIGHT OR VOLUME  
QUICKLY, ACCURATELY AND SIMPLY**

- Seed Totalizer with 10" Bowl, 110V/60Hz ..... **No. 77-10/B**
- Seed Totalizer with 10" Shallow Bowl, 110V/60Hz ..... **No. 77-10S/B**
- Seed Totalizer with 7" Bowl, 110V/60Hz ..... **No. 77-7/B**
- Transformer for 220 Volt Operation ..... **No. K25**
- Spare Parts Kit for 10" Bowl, 110 or 220V ..... **No. 7710/SPK\***
- Spare Parts Kit for 7" Bowl, 110 or 220V ..... **No. 777/SPK\***
- Replacement Frosted Glass Only (each) ..... **No. 77FG**
- Replacement Clear Glass Only (each) ..... **No. 77CG**
- Required Packing for All Models ..... **No. 77/DOM**

\*Kit consists of replacement springs, clear and frosted glass

### The Quick Disconnect Feeder Bowl Comes Standard on Model 801 Only



**Unlock Mechanism**



**Remove and Dump**



**Replace and Lock**

The following chart gives approximate bowl capacities, average feed rates\* during catch counting process and time required to empty a full bowl.

Variety	Average Speed	10" Bowl Capacity	10" Bowl Time to Empty	7" Bowl Capacity	7" Bowl Time to Empty	10" Shallow Bowl Capacity	Time to Empty
Corn	160	3,600	20–25 min	650	4–5 min	1,500	9–11 min
Soybean	200	7,000	30–40 min	1,200	5–7 min	2,300	12–15 min
Popcorn	225	9,000	35–45 min	1,500	6–8 min	3,500	13–17 min
Wheat	265	30,000	1¾–2 hrs	4,500	15–20 min	10,000	35–45 min
Milo	315	40,000	2–2¼ hrs	5,000	15–20 min	11,500	39–45 min

\*The average speed (seed/minute) shown are for batch counting. Totalize counting can be 2–3 times faster. Capacity is approximate number of seeds in a full bowl.

**Seedburo Microprocessor Germinator**  
 One of The Most Technically Advanced Germinators Available



★ MADE IN  
 ★ USA MPG3000/B

Seedburo's Microprocessor-Controlled Germinator provides unmatched consistent reproducible environmental conditions automatically for uninterrupted operation. The user-friendly state-of-the-art touch-screen is easy to use and allows the user the control of almost any combination of temperature, light intensity, humidity parameters, and time options with greater accuracy than typical electromechanically controlled units.

This large and highly advanced test chamber is extremely versatile, meeting many test requirements that may require a controlled single set point temperature, alternating temperature patterns, light and dark or alternating light periods. Accurate and reliable controls are easy to use, making this an excellent choice for running special tests. The unit has the ability to easily store data in the PLC and retrieve repetitive test procedures with the use of the USB port located next to the touch screen. Test data is recorded permanently for clear interpretation and later downloaded to a supplied USB.

The "Flow-Thru" air distribution system is comprised of an independent heating system and separate cooling system, as well as a humidification via a water atomizer. All components are self-contained and completely enclosed for operator safety. The air pattern created circulates conditioned air throughout the chamber and assures minimal temperature variance between test trays. The MPG3000 is standard with interior full-view see-thru split doors, for periodic inspection of samples with minimal disruption to the temperature/humidity balance in the interior chamber. Test trays are perforated for greater air flow and are resistant to rusting or mineral deposits build-up, making cleaning simple. There are 6 vertically mounted "Cool Bright" LED lighting strips within tubes, three (3) mounted on the interior of the front door, as well as three (3) located on interior rear wall, allowing for several levels of light conditions throughout the entire 28.5 cubic feet of interior.

MPG3000 is constructed entirely of high-grade commercial type 304/18-8 stainless steel, including rigid tubular and welded base frame, for greater durability, easy cleaning and prevention of rodent infestation. Outer doors have magnetic gasket seals and heavy duty polished hardware.

Net wt: 725 lbs, Actual dims: 53" (L) x 32.9" (W) x 81.7" (H), Ship/Export wt: 1150 lbs, Ship/Export dims: 58" (L) x 40" (W) x 92" (H).

**Instrumentation**

- Lighted on/off switch
- Programmable touch screen
- PLC data storage, USB downloadable

- Simple on/off switch
- USB data/printer port

**Control Panel**

- **Touch screen controller:** Large full color display for easing programming of: Relative humidity, Temperature, Test and Cycle(s), Time Remaining, Program Recall, Editing, Time of Day, Test Duration, Run/Program, or Auto/Manual modes (F/C, Real Time Clock, Data Download Function, Heat/Cool and Light/Dark Level(s))

**Temperature, Humidity and Lighting**

- **Temperature range:** 1.6°C–54.4°C (35°F–130°F), Precision: 1-degree increments ±2°, Uniformity: ±7°F
- **Wet Range:** 0–95% sprays water on time and duration, active humidity based on Rh set point desired
- **Light Level Adjustable:** Off/Low/Medium/High
- **Low:** Two strips of LEDs, 1800 lumen each (total of 3600 lumen)

- **Medium:** four strips of LEDs, 1800 lumen each (total of 7200 lumen)
- **High:** Six strips of LEDs, 1800 lumen each (total of 10,800 lumen), 6500°K wavelength, illumination color white, highly reflective stainless steel surfaces for greater light spread

**Interior Capacity**

- **Capacity:** 25.6 Cubic ft.
- **Interior Dimensions:** 29½" (L) x 25½" (W) x 61" (H)
- **Trays:** 10 included, perforated aluminum 20.0" x 25.375", can hold 40 trays on 1.5" spacing

Microprocessor Germinator, 115V, 60Hz.....	No. MPG3000/B	Extra Trays, 20" x 25.375" .....	No. MP6
Microprocessor Germinator, 230V, 50Hz.....	No. MPG3000/C	Crating for Domestic Shipping or Exporting, Required.....	No. MPG/EX
Microprocessor Germinator, 230V, 60Hz.....	No. MPG3000/E		



## Seedburo Stainless Single or Double Chamber Germinators

D7440 and S6920 are classic style Germinators and provide consistent reproducible environmental conditions. The touchscreen allows user to control almost any combination of temperature, light intensity, humidity and time options, with greater accuracy than typical electromechanically controlled units.

### Construction

Heavy duty welded tubular stainless steel base, 18 gauge 304 stainless exterior and interior, high density foam insulates the entire cabinet, non-conductive materials separate the interior chamber from the exterior, and the doors are fully gasket sealed. Aluminum trays lift out for easy cleaning. Recessed reservoir drain is easily accessible and a screened base prevents rodent infestation. Units are completely mobile on large 5" heavy-duty casters.

### Heat/Refrigeration Systems

Elements are totally enclosed for efficient heat transfer and operator safety. Uniform refrigeration is maintained through the use of a 1/3HP condensing unit. All refrigerant lines are copper and fully insulated. Temperature range: 0°C–55.6°C (32°–132°F), sensitivity ±0.5°C or better.

### Air-Humidity Circulation

Unique forced air circulation design maintains an even, continuous, moist airflow throughout the cabinet. Perforated trays further enhance even humidity distribution to test samples.

### Instrumentation

On/Off Main Power Switch (per side on dual unit), Programmable Touch Screen, with Large Full Color Display for Programming, Humidity, Temperature, Test and Cycle Time Remaining, Time of Day, Test Duration, Run/Program Auto/Manual Modes (F°/C°), Real Time Clock, Data Download Function, Test Cycles, Heat/Cool and Light/Dark, Relative Humidity, Light Level, USB Interface for Data Download and Software Updates.

### Temperature

- Adjustable Range: 0°C–56°C (32°F–132°F). Precision 1-degree increments ±0.6°C (1.8°F), uniformity ±6°F
- Temperature Sensor Sensitivity: +0.5°C (1°F) or better
- Compressor 1/3HP Refrigerant R404

**S6920:** Net wt: 340 lbs, Actual dims (with casters): 28.4" (D) x 28.6" (W) x 64.6" (H), Ship wt (crated): 670 lbs, Ship dims: 33" x (L) 33" x (W) x 74" (H).

**D7440:** Net wt: 512 lbs, Actual dims (with casters): 28.4" (D) x 56.2" (W) x 64.6" (H), Ship wt (crated): 945 lbs, Ship dims: 37" (L) x 63" (W) x 80" (H).

### S6920 Single Chamber Germinator

Single Chamber Germinator, 110V/60Hz.....	No. S6920/B
Single Chamber Germinator, 220V/60Hz.....	No. S6920/E
Single Chamber Germinator, 220V/50Hz.....	No. S6920/C
Required Domestic Shipping and Export Crating .....	No. S6/EX
Locking Doors.....	No. SLDOOR
Push Handles .....	No. SPHANDLE
Full Perimeter Bumpers.....	No. SFPBUMPER
Extra Tray .....	No. SXTRAY
Extra Tray Slides, Per Pair.....	No. STSLIDE



### Illumination

- Light is an on/off function with two white LED strips (~700 lumens each) full length rear mounted to ensure full light coverage throughout interior
- Total 1400 Lumens
- 6500°K wavelength (daylight equivalent)
- Interior highly reflective stainless steel surfaces for greater light spread

### Interior Capacity

9.95 cu. ft. **Model S6920**, 23.5" (D) x 22.5" (W) x 32.5" (H) (Chamber size)

19.9 cu. ft. **Model D7740**, 23.5" (D) x 22.5" (W) x 32.5" (H) (Per Chamber)

### Trays

**Model D77440** includes 20 Perforated Aluminum Trays (10 per chamber) on 3" spacing (7.62cm), can hold 40. Tray size measures 17" x 19".

**Model S6920** includes 10 Perforated Aluminum Trays on 3" spacing (7.62cm), can hold 20. Tray size measures 17" x 19".

(Additional trays can be ordered to increase capacity)

### D7440 Double Chamber Germinator

Double Chamber Germinator, 110V/60Hz.....	No. D7440/B
Double Chamber Germinator, 220V/60Hz.....	No. D7440/E
Double Chamber Germinator, 220V/50Hz.....	No. D7440/C
Crating for Domestic Shipping or Exporting, Required.....	No. D7/EX
Locking Doors.....	No. DLDOOR
Push Handles .....	No. DPHANDLE
Full Perimeter Bumpers.....	No. DFPBUMPER
Extra Tray .....	No. DXTRAY
Extra Tray Slides, Per Pair.....	No. DTSLIDE

**Achieva Basic Style Console Germinator**



The Achieva Model A3920 is our fully automated “wet” style console germinator, which sprays based on time and duration and displays Rh%. It is packed with all the features you expect from Seedbuero. Used for plant growth, propagation of seeds, germination test and incubation that requires a controlled environment (hot/cold cycles and light/dark operations). The air circulation system helps assure uniform temperature in both the heat and refrigeration test modes with conditioned air and maintaining a continuous flow throughout

the unit. Perforated aluminum trays are flanged to keep contents from shifting and may be turned over to form a flat shelf.

Equipped with a touch screen computer controller, the unit can be set in either “auto” or “manual” mode which constantly monitors and adjusts cabinet temperature utilizing both heating and cooling systems. Features a hermetically sealed air cooled refrigeration system and enclosed heat system operating in tandem to maintain set point temperature in heat or cool modes, cool bright white LED light system and ‘rain system’. Unit may be set for manual or automatic reset alternately control heat/cool, light/dark cycles for the required duration of your test.

A built-in heavy duty misting pump has a unique air flow assuring continuous ‘rain’ circulation for more reliable seed testing in both hot and cold cycles. Large capacity bottom reservoir location and interior drain recirculates water supply, reducing the need for technician to monitor water level.

The cabinet utilizes thick wall foam-in-place insulation. Touch screen controls are easily read, operated, and fully programmable. A data logger records temperature at your desired time interval and time span. Data is easily downloaded to any Windows® based PC or laptop computer via USB port.

The Achieva features include an advanced cooling refrigeration system that is hermetically-sealed and uses an oil-cooler to improve operation in high ambient conditions. Exterior is grey texture-coated steel. A smooth white interior produces an enhanced light reflection for propagation tests. Interior stainless steel air duct, fan and evaporator cover assures greater air flow and even air distribution. An oversized heavy duty door, handle and door edge protector provide greater operator safety. Made in USA.

**Instrumentation**

- Lighted on/off switch
- Programmable computer touch screen controller with large full color display for easy programming and display of: relative humidity, temperature, test and cycle(s), time remaining, program recall, editing, time of day, test duration, run/program or auto/manual modes (F°/C°), real time clock, data download function, heat/cool and light/dark light level(s)
- USB interface for data download and software updates
- System uses pump and vertical spray nozzle system to introduce humidity/ simulate rain.
- Additional shelves can be ordered to increase capacity

**Temperature**

- **Adjustable Range:** 0–55.6°C (32°–132°F). Precision 1-degree increments ± 0.6°C (1.8°F), uniformity ±7°F
- **Temperature Sensor Sensitivity:** +0.5°C (1°F) or better

**Illumination**

- Lights are an on/off function
- 2 Strips of LEDs, 900 lumens each, total of 1800 lumens.
- Illumination color white, 6500k wavelength
- Interior reflective surfaces for greater light spread

**Interior Capacity**

- 16.4 cu. ft.

- **Trays:** 6 Perforated Aluminum trays are Included (18.0" x 26")
- **Chamber Capacity:** Holds 28 trays on 1.5" (3.81cm) spacing
- Compressor 1/3HP Refrigerant R-134a, amp load: 13.65A, 120V, 1PH

**Dimensions**

- **Interior dims:** 20" (D) x 27" (W) x 52.5" (H) (50.8 x 68.58 x 133.35cm)
- **Net wt:** 280 lbs (127kg)
- **Actual dims (with Casters):** 32" (L) x 34.25" (W) x 70" (H) (81.28 x 86.99 x 177.8cm)
- **Ship/Export wt:** 580 lbs
- **Domestic Ship dims:** 42" (L) x 40" (W) x 85" (H) (106.68 x 101.6 x 215.9cm)

Single Chamber, 110V, 60Hz.....**No. A3920/B**  
 Single Chamber, 220V, 50Hz.....**No. A3920/C**  
 Extra Perforated Tray, 18" x 26"..... **No. ATRAY**

Extra Wire Rack, 18" x 26" ..... **No. ASHELF**  
 Crating for Domestic Shipping or Exporting, Required.....**No. A3/EX**  
 Tray for Holding Ragdolls ..... **No. ATRAY-RD**

## Seedburo Achieva Dry Germinator Single Chamber Models

Exceptional quality germinator is fully automated, creating an accurately controlled, dry test environment for covered samples. The design allows for simultaneous testing of different samples within each container. The advanced air circulation system assures the technician of even, constant temperatures enveloping each container with conditioned air using both a heat and refrigeration system with a continuous air flow throughout the unit. Perforated aluminum trays are flanged to keep contents from shifting and may be turned over to form a flat shelf.

The SDA8700 Dry Germinator is equipped with a touch screen controller, for heat and cool modes. Lights can be on or off in either mode. Digital display data logger stores both temperature and humidity readings at the desired time interval and duration. Data is easily downloaded to any Windows® based PC or laptop computer. Software and download cable included. Each unit is equipped with interior cool white bright LED light strips to provide for complete light/dark photo testing.

This model has a heavy-gauge stainless edge protector and handle. The door has spring-loaded door closer and magnetic gasket for positive seal. Heavy duty stainless steel air duct, fan motor and evaporator cover to prevent damage to vital parts. This is a fully-contained, hermetically-sealed refrigeration system with no additional plumbing needed. White, poly-coated steel interior is bright, durable and easy to clean. The unit has 4 casters, two are lockable. Exterior surfaces are textured steel. The 2½" of wall insulation make these units some of the most energy efficient in the industry. Quiet, bottom-mounted compressor, 1/3HP, provides plenty of capacity for all kinds of applications. Interior dimensions are 23¾" (D) x 27" (W) x 53" (H), 22 cu. ft., amp load 13.65 at 120V/1Ph.

### Instrumentation

- Lighted on/off switch
- Programmable computer touch screen controller with large full color display for easy programming and display of temperature, test and cycle(s), time remaining, program recall, editing, time of day, test duration, run/program or auto/manual modes (F°/C°), real time clock, data download function, heat/cool and light/dark light level(s)
- USB interface for data download and software updates

### Temperature

- **Adjustable Range:** 0–55.6°C (32°–132°F). Precision 1-degree increments ± 0.6°C (1.8°F), uniformity ±7°F
- **Temperature Sensor Sensitivity:** +0.5°C (1°F) or better

### Illumination

- **LED Strip Lumens:** 20–22
- **Color Temperature:** 5,000–5,500°K (daylight equivalent)

### Interior Capacity

- 16.4 cu. ft.
- **Trays:** 6 Perforated aluminum trays are Included (18.0" x 26")
- **Chamber Capacity:** Holds 28 trays on 1.5" (3.81cm) spacing
- Additional shelves can be ordered to increase capacity



SDA8700/B

MADE IN  
USA

Net wt: 395 lbs, Actual dims: 32" (L) x 34.6" (W) x 70" (H), Ship/Export wt: 590 lbs, Ship/Export dims: 40" (L) x 42" (W) 85" (H).



SDA8700/B Controller

Dry Single Chamber, 110V, 60Hz ..... No. SDA8700/B  
 Dry Single Chamber, 220V, 50Hz ..... No. SDA8700/C  
 Crating for Domestic Shipping or Exporting, Required..... No. SDA/EX  
 Extra 18" x 26" Perforated Tray..... No. ATRAY

**Achieva Precision Table Top Germinator**



Seedbuero's Achieva tabletop germinator offers features similar to our larger units, but these units will save you both space and money! The ATTGPT is ideal for small volume seed labs that require precision, but do not require a full size germinator.

The ATTGPT germinator is equipped with a programmable computer touch screen controller. Large full color display for easy programming and display of: test and cycle(s), time remaining, program recall, editing, time of day, test duration, run/program or auto/manual modes, real time clock, data download function, heat/cool and light/dark levels. Lights can be on or off in either mode. A digital display data logger stores both temperature and humidity readings at the desired time interval and duration. Data is easily downloaded to any Windows®-based PC or laptop computer. Software and download cable included. Each unit is equipped with interior cool white bright LED light strips to provide for complete light/dark (lights are not adjustable) at 180 lumens, 6500k. Interior has reflective surfaces for greater light spread.

Temperature range is between 5°C–40°C, ± 1.1°C (41°F–104°F, ± 2°F). A Digital temperature display shows both set-point and actual cabinet temperature. An internal fan distributes air evenly and gently with minimal temperature stratification. Heat is maintained by a long-life, stainless steel, and low watt density heating element. Uniform cooling is maintained through the use of an air cooled hermetically sealed condenser compressor unit. The ATTGPT is a dry style germinator designed for containerized germination testing. Two open wire shelves, 20" x 14" at 2½" spacing, are included. Interior dims: 19" (L) x 20.75" (W) x 24.5" (H). Net wt: 75 lbs, Actual dims: 20" (L) x 23.14" (W) x 39.53" (H), Ship/Export wt: 285 lbs, Ship/Export dims: 36" (L) x 41" (W) x 50" (H).

Achieva Table Top Germinator, 115V, 60Hz.....	No. ATTGPT/B
Achieva Table Top Germinator, 220V, 50Hz.....	No. ATTGPT/C
Crating for Domestic Shipping or Exporting, Required.....	No. ATTGPT/EX



**Seedbuero Light-Dark Germinator**

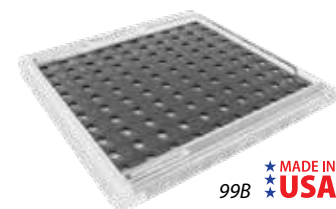
A clear, angled plexiglass top allows light in and any condensation formed drains off without dripping on the samples. Stainless steel inside and out. High-density foam provides a non-absorbent, insect free thermal barrier to provide an even temperature within the chamber. Eight aluminum 15" x 21" trays are included, providing a total of 2520 square inches of testing area. A water/ice pan is included. Fill with water or ice when additional humidity or below ambient temperatures are required. Heat is set by a digital controller and can be set from 5°C–40°C (41°F–104°F). Digital display and rubber feet are standard. Interior dims: 16.9" (D) x 18.65" (H) x 21.82" (W), Net wt: 90 lbs, Actual dims: 24.08" (L) x 19.87" (W) x 26.51" (H), Ship/Export wt: 320 lbs, Ship/Export dims: 36" (L) x 32" (W) x 54" (H).

L-D Germinator, 110V, 50/60Hz, 1PH.....	No. 548
L-D Germinator, 220V, 50/60Hz, 1PH.....	No. 548/A
Replacement Heating Element, 110V.....	No. 54H
Replacement Heating Element, 220V.....	No. 54H/A
Replacement Thermostat.....	No. 54TR
Replacement Digital Controller.....	No. 54DC
Replacement Thermometer.....	No. 548T
Replacement Tray.....	No. 548-TRAY



### Seedburo Counting and Placement Trays

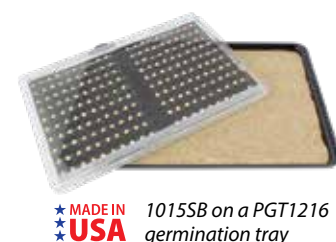
The Seedburo Counting and Placement Trays are constructed of durable acrylic material with brass screws. Each 2-piece tray features a spring-loaded encasement that allows for quick, uniform discharge of seed. Ideal for placement on germination pads or for quick seed counts. These trays are washdown safe to avoid cross contamination or treatment build-up. Standard trays are made to count 100 seed; custom sizes can be made to count 50 seeds and/or other commodities. Custom frame size, hole size and hole count available, contact us for quote.



Model	Frame Size	Commodity	Commonly Used With Tray Size
No. 99B	9" x 9"	Soybean	19.5" x 18.75"
No. 99C	9" x 9"	Corn	19.5" x 18.75"
No. 99W	9" x 9"	Wheat	19.5" x 18.75"
No. 99BARLEY	9" x 9"	Barley	19.5" x 18.75"
No. 912B	9" x 12"	Soybean	16" x 24" Food Tray
No. 912C	9" x 12"	Corn	16" x 24" Food Tray
No. 912S	9" x 12"	Sorghum	16" x 24" Food Tray
No. 912W	9" x 12"	Wheat	16" x 24" Food Tray
No. 715B	7" x 15"	Soybean	17" x 19" Seedburo Germ.
No. 715C	7" x 15"	Corn	17" x 19" Seedburo Germ.
No. 715W	7" x 15"	Wheat	17" x 19" Seedburo Germ.
No. 99-CUSTOM	9" x 9"	Custom	19.5" x 18.75"
No. 912-CUSTOM	9" x 12"	Custom	16" x 24" Food Tray
No. 915-CUSTOM	9" x 15"	Custom	16" x 24" Food Tray
No. 715-CUSTOM	7" x 15"	Custom	17" x 19" Seedburo Germ.

### Food Tray Sized Counting and Placement Trays

Just like the Seedburo Counting and Placement Trays above, these trays are constructed of durable acrylic material with brass screws. Each 2-piece tray features a spring-loaded encasement that allows for quick, uniform discharge of seed. Ideal for placement on larger food trays for use with sand or germination papers or for quick seed counts. These trays are washdown safe to avoid cross contamination or treatment build-up. Standard trays are pre-drilled with two repetitions of 100 seeds for a total of 200 openings with approximately 2" between the repetitions. The food tray sized counting boards are ideal for walk-in germination rooms. Custom frame size, hole size and hole count available, contact us for quote.



Model	Frame Size	Commodity	Commonly Used With Tray Size
No. 1015SB	10 <sup>3</sup> / <sub>4</sub> " x 15 <sup>3</sup> / <sub>4</sub> "	Soybean	16" x 24" Food Tray

Other service tray sizes available.

### Germination Trays

Germination trays are molded from high-strength, glass-reinforced composites. The fiber component provides strength and dimensional stability. The outstanding physical properties for which these products are known are a result of the synergy of resin matrix and glass reinforcement. Unlike plastic trays and containers, composite products are dimensionally stable and will not bend or sag under loads. And unlike wood and metal, they will not warp, corrode or bend. The durability that results from composites construction ensures years of dependable performance. The PGT1216 top outside dimensions are 17.75" (L) x 11.75" (W) x 1" (H) with a 3/8" lip. The bottom inside dimensions are 16.13" (L) x 10.75" (W) x .91" (H) and fit our 1015SB Placement Tray and can be used with a variety of our Blotters, Versapak and Paper Toweling on page 78.



Glass Fiber Reinforced Germination Tray.....No. PGT1216

### Deluxe Dissecting Kit

The Seedburo dissecting kit, for seed technologists, will keep all of your tools in one spot! Kit comes with in a large trifold vinyl pouch which holds the following instruments: 6" Scale/Ruler, Scalpel Handle #4 with Blade, Angular Sharp 5" Forceps, Mall and Probe Seeker, 4" Sharp Scissors, 5" Blunt/Sharp Scissors, Sharp Straight Needle, Arrow Needle, Angular Sharp Needle and Dropper. Net wt: 1/2 lb, Actual dims: 7 1/2" (L) x 5" (W) x 1 1/2" (H), Ship wt: 1 lbs, Ship dims: 10" (L) x 5" (W) x 4" (H).



Dissecting Set.....No. DSET10 Replacement Scalpel Blades .....No. DSETB



Assorted germination blotter paper

**Seedbuero Germination Blotters**

Seedbuero Seed Germination Blotters are manufactured for specific porosity, water absorption, thickness and weight for the seed industry. These papers are available in three different weights and colors. Blue blotter paper is 26 point, White blotter is 22 point and Tan blotter is 28 point. All are sold in packages of 100 sheets.

- 18½" x 16½" Blue ..... **No. 382**    12" x 16" Tan ..... **No. 385T**  
(Series S & D)
- 18½" x 16½" Tan ..... **No. 382T**    12" x 16" White ..... **No. 385W**
- 18½" x 16½" White..... **No. 382W**    21" x 15" (548)..... **No. 394**
- 6" x 9½" Blue ..... **No. 383**    10" x 14" ..... **No. 41**
- 6" x 9½" Tan ..... **No. 383T**    10" x 14" Tan ..... **No. 41T**
- 6" x 9½" White ..... **No. 383W**    10" x 14" White ..... **No. 41W**
- 12" x 16" Blue ..... **No. 385**    Waterproof Pen ..... **No. 300P**  
*For Germination Papers and Pollination Bags*



**Seedbuero Versapak Germination Paper**

Seedbuero K-22 seed germination paper is made for the seed industry under the guidelines of the A.O.S.A. The paper is made to a .24" thickness and is edge embossed. High-water absorbency capacity and a 5 to 7 ph range are standard specifications. 100 sheets per box.

- 10" x 14" ..... **No. 87**    16.5" x 24" ..... **No. 398**
- 12" x 15" ..... **No. 384**    21" x 15" ..... **No. 399**
- 17" x 19" ..... **No. 396**    18" x 270' Roll..... **No. 401**



**Non-Toxic Paper Toweling**

Paper toweling is pH neutral, brown in color, and meets ASTM standards for germination. Price per 1,000 sheets.

- Regular Weight (38# Paper) 12" x 18" ..... **No. 400PT**
- Extra Heavy Weight (76# Paper) 12" x 18" ..... **No. 400HPT**



**Indented Pads**

Seedbuero Indented Pads for 3" x 3" with 100 indentations and are made of the same material as the Seed Germination Blotters (1,000 pads per bundle).

- Indented Pads, Per 1,000 ..... **No. 28**



Left to right: DS92E, DS94E, DS98E, DS916E

**Seedbuero Inverted Display Bottles**

These lustrous, clear glass bottles are made especially for displaying samples of seeds, grains and many other products. Ideal for showing product in different stages of manufacture or for displaying varietal differences in seeds and grains.

- 2 oz Bottle, 38mm (D) x 95mm (H) ..... **No. DS92E**
- 4 oz Bottle, 51mm (D) x 121mm (H)..... **No. DS94E**
- 8 oz Bottle, 63mm (D) x 152mm (H)..... **No. DS98E**
- 16 oz Bottle, 70mm (D) x 208mm (H) ..... **No. DS916E**



**Seedbuero Measures**

Convenient set of nine plastic measures. Can be used in measuring all kinds of seed. Carefully made to insure consistent volume. Each measure is numbered. Progressively larger sizes that are not based on a specific volume reference.

- Seed Measures, Set of 9 ..... **No. 297**



**Sample Container**

Heavy gauge plastic. Complete with cover. Diameter 2¾". Depth ⅝" (12 per box)

- Sample Container..... **No. 298**



**Pyrex Glass Petri Dish**

Cover fits loosely to provide proper ventilation. Diameter 4". Depth ⅝"

- Petri Dish ..... **No. 296**



**Analytical Dishes**

Disposable aluminum dish, smooth sides, 90 ml. capacity. Sold in boxes of 100.

- 25D
- 27⅞" Diameter, ¾" Deep (Box of 100) ..... **No. 25D**

- Aluminum Analytical Dish w/ Cover, 76mm diam. x 19mm deep.... **No. 25**  
*Sold as each*



**Seed Containers**

Plastic rectangular seed container with friction fitting lids. Sold in standard carton quantity only.

Left to right: 293, 294

- Dim: 6¾" (L) x 4⅓⅓" (W) x 2⅜" (H), Carton of 40 ..... **No. 293**

- Dim: 7⅞" (L) x 5⅞" (W) x 3¾" (H), Carton of 18 ..... **No. 294**

## Canvasback® Pollination Bags

★ MADE IN  
★ USA



The same trusted pollinating bags you have grown to value are now the Seedburo "Canvasback®" brand. They shed water rather than soaking it up, which prevents color deterioration, print fade or running of print. The bags are available in a combination of options such as colored stripes, colored single stripe, calendar with a single stripe or calendar with stripes and plain.

Add the following part numbers to indicate stripe color choices; for example T410-BK for black stripes BK-BLACK, BL-BLUE, BN-BROWN, G-GREEN, LB- LIGHT BLUE, P-PINK, PU-PURPLE, R-RED, O-ORANGE and Y-YELLOW (be sure to include the hyphen [-]). If you want striped bags with a calendar, add the color BK and then C for calendar – a T410-BKC would be black striped bag with calendar. If you want bags with a calendar only, add CAL to the end of each part number. Bags can also be printed in more than one color, please contact us to discuss your needs and current pricing. The letter code 'H' after the part number indicates heavy-duty paper.

Catalog Number	Size in Inches (Width/Gusset/Length)	Packed in Cartons of 1,000's	Description	Color Stripe(s)
<b>Grain Bags</b>				
No. G16	1½ x 6	2	Grain Bag - Glassine	
No. G27	2 x 7½	2	Grain Bag - Waxed Glassine	
No. G28	2 x 8½	2	Grain Bag - Waxed Glassine	
<b>Shoot Bags</b>				
No. S26 <sup>1</sup>	2½ x 6¼	5	Heavy Duty, White Waxed Wet Strength	Black, Blue, Green, Red, Yellow
No. S27* <sup>5</sup>	1⅞ x 2⅞ x 1 x 7	5	White Waxed	Black, Blue, Brown, Green, Orange, Purple, Red, Yellow
No. S27HG	1⅞ x 2⅞ x 1 x 7	5	Heavy Duty, Glassine	
No. S28*	1⅞ x 2⅞ x 1 x 8½	5	Long White Waxed	Black, Blue, Green, Orange, Purple, Red, Yellow
No. S310	3¾ x 3¾ x 2½ x 10½	3	White Waxed	
No. S37	3 x 7	5	White Waxed	
No. S38*	2½ x 1 x 8½	5	White Waxed	Black, Blue, Red
No. S38H	2½ x 1 x 8½	3	Heavy Duty, White Waxed Wet Strength	
No. S39 <sup>1</sup>	3¼ x 3¾ x 2 x 9	3	White Waxed	Red
No. S39H	3¼ x 3¾ x 2 x 9	3	White Waxed	
No. S411	3⅞ x 4⅞ x 2¼ x 11	3	White Waxed	
<b>Tassel Bags</b>				
No. T410*	4¼ x 4¾ x 2½ x 10	1	Natural Kraft Tassel Bag	Black, Blue, Green, Orange, Pink, Purple, Red
No. T412*	4¼ x 4¾ x 2½ x 12½	1	Natural Kraft Tassel Bag	Black, Blue, Green, Orange, Pink, Purple, Red, Yellow
No. T415*	4¼ x 4¾ x 2½ x 15½	1	Natural Kraft Sorghum Bag	Black, Blue, Green, Orange, Pink, Purple, Red, Yellow
No. T415H	4¼ x 4¾ x 2½ x 15½	1	Heavy Duty, Natural Kraft Sorghum Bag	
No. T514* <sup>2,3</sup>	5¼ x 5¾ x 4¼ x 14	1	Natural Kraft Tassel Bag	Black, Blue, Green, Light Blue, Orange, Pink, Purple, Red, Yellow
No. T514H	5¼ x 5¾ x 4¼ x 14	1	Heavy Duty, Natural Kraft Tassel Bag	Black, Blue, Green, Purple, Red, Yellow
No. T514W	5¼ x 5¾ x 4¼ x 14	1	White Waxed Tassel Bag	
No. T614* <sup>2,3</sup>	5½ x 6½ x 4 x 14½	1	Natural Kraft Tassel Bag	Black, Blue, Green, Orange, Purple, Red, Yellow
No. T615*	6¼ x 6¾ x 4¾ x 15½	1	Natural Kraft Tassel Bag	Black, Blue, Green, Light Blue, Orange, Pink, Purple, Red, Yellow
No. T615H*	6¼ x 6¾ x 4¾ x 15½	1	Heavy Duty, Natural Kraft Tassel Bag	Black, Blue, Green, Purple, Red, Yellow
<b>Millet Bags</b>				
No. M315	3 x 15	1	Natural Kraft	
No. M315G*	3 x 15	1	Waxed Glassine	Black, Blue, Green, Red
No. M318*	3 x 18	1	Natural Kraft	Black, Blue, Green, Red
No. M318G*	3 x 18	1	Waxed Glassine	Blue, Red
<b>Tree Bags</b>				
No. A620	6¼ x 6¾ x 4¾ x 20½	1	Natural Kraft	
No. A620H	6¼ x 6¾ x 4¾ x 20½	1	Heavy Duty, Natural Kraft	
No. A721	7½ x 6 x 21	1	Heavy Duty, Natural Kraft	

\*Available with colored stripes. <sup>1</sup>Available with colored single stripe. <sup>2</sup>Available with colored stripes and calendar. <sup>3</sup>Available with colored single stripe and calendar.

<sup>4</sup>Available with two colored stripes and calendar. <sup>5</sup>Available with colored checkered pattern or spotted circles.



**Polyethylene Pollination Bags**

Constructed of high-density polyethylene, these pollination bags are ideal to prevent foreign natural insect pollination while allowing to pass the appropriate levels of sunlight and moisture. The bags are very easy to use. Simply position it over the developing flower and tie at the bottom. When timing is appropriate for pollination, the bags may be easily slit open, with scissors or a penknife. After manual pollination, the bag is closed using either a twist tie or paperclip. Once seeds are ready to harvest the stalk may be cut providing a handy carrier, until the seeds can be harvested. These bags can be used for numerous plants and crops as they are available in a variety of sizes and can be heat-sealed or sewn to best match your specific requirements.

Catalog Number	Bag Size	Minimum Order Per Case
No. 31016	9" x 12" Sewn	1,000
No. 31017	10" x 12" Heat Sealed	1,000
No. 31023	16" x 18" Heat Sealed	1,000
No. 31026	18" x 20" Heat Sealed	1,000
No. 31028	18" x 42" Sewn	1,000
No. 31037	16" x 48" Sewn	1,000
No. 31040	7" x 12" Heat Sealed	1,000

\*Available in many sizes, please contact us for additional information.



**Canvasback™ Harvest Mesh Bags**

These versatile non-run, breathable weave bags are excellent low cost options for segregating small lots of seed or ear corn for further processing or drying. They are virgin heat resistant poly woven in bright, fade resistant colors with a black flexible woven drawstring that quickly closes the bag and acts as a handle for transport. The light weight bales make transport and organization easy for anyone. These bags allow for improved storage of many products! Each size listed below is available in blue, fluorescent green, green, purple, red, white and yellow.

Catalog Number	Bag Size	Description	Minimum Order Per Case
No. H0808-B*	8½ x 8½	Mesh Bags - Blue	1,000
No. H0816-B*	8½ x 17	Mesh Bags - Blue	1,000
No. H1120-B*	12⅞ x 19	Mesh Bags - Blue	1,000
No. H1531-B*	14¾ x 30½	Mesh Bags - Blue	400

\*Available in Fluorescent Green, Green, Purple, Red, White, and Yellow.



**Coffee Bags**

The Tin Tie Kraft Bags are usually used for coffee but are also a short-term storage solution for grain, seed or other dry good samples. The polypropylene inner lining maintains the desired sample moisture content so that the sample condition does not degrade. The reclosable tin tie top gives convenient access, allowing customers to easily open and reseal as needed. These bags come in ½ pound, 1 pound or 5 pound sizes and are sold in cases of 1,000.

- Coffee Bags, ½ pound..... No. COFFEEBAG
- Coffee Bags, 1 pound..... No. COFFEEBAG1
- Coffee Bags, 5 pound..... No. COFFEEBAG5

COFFEEBAG



### Spear Sample Envelopes

The fold down, tuck-in flaps resist sifting of fine seed and grain. Made of heavy jute stock to protect your finest samples, they are ideal for storage or mailing. Spear envelopes are available in 8 sizes from 1 ounce to 16 ounces. Minimum order per size is 1,000. The standard color is manila but can be made in blue, green, salmon, pink or white. Please contact us for additional information.



Model	Capacity	Size	Ship Weight	Ship Dimensions
No. 1SE*	1 oz	3" x 4½"	2 cartons, 6 lbs each	2 cartons each, 12" x 6" x 6"
No. 2SE*	2 oz	3½" x 5¼"	2 cartons, 8 lbs each	2 cartons each, 13" x 8" x 8"
No. 4SE* <sup>1</sup>	4 oz	4" x 6"	2 cartons, 10 lbs each	2 cartons each, 13" x 9" x 9"
No. 6SE* <sup>1</sup>	6 oz	4½" x 7"	2 cartons, 13 lbs each	2 cartons each, 13" x 10" x 10"
No. 8SE* <sup>1</sup>	8 oz	5" x 8"	2 cartons, 16 lbs each	2 cartons each, 13" x 11" x 11"
No. 10SE* <sup>1</sup>	10 oz	5½" x 9"	2 cartons, 19 lbs each	2 cartons each, 21" x 15" x 13"
No. 12SE* <sup>1</sup>	12 oz	6" x 10"	2 cartons, 23 lbs each	2 cartons each, 13" x 14" x 13"
No. 16SE* <sup>1</sup>	16 oz	7" x 11½"	2 cartons, 30 lbs each	2 cartons each, 16" x 13" x 16"

\*Available in the following colors: blue, green, salmon, pink, yellow or white.

\*1 Polyethylene Liners available for these sizes.

### Plastic Bag Inserts

Polyethylene Liners for Spear Envelopes 2 mil are economic and perfect to protect against variation of the moisture content of your samples. Minimum order per size is 1,000. We can insert the liners into the envelopes or ship separately. The liners are available in many sizes; please contact us for additional information.



Model	Capacity	Size	Ship Weight	Ship Dimensions
No. 6SE-LINER	6 oz	4½" x 7"	2 cartons, 13 lbs each	2 cartons each, 13" x 10" x 10"
No. 8SE-LINER	8 oz	5" x 8"	2 cartons, 16 lbs each	2 cartons each, 13" x 11" x 11"
No. 10SE-LINER	10 oz	5½" x 9"	2 cartons, 19 lbs each	2 cartons each, 21" x 15" x 13"
No. 12SE-LINER	12 oz	6" x 10"	2 cartons, 23 lbs each	2 cartons each, 13" x 14" x 13"
No. 16SE-LINER	16 oz	7" x 11½"	2 cartons, 30 lbs each	2 cartons each, 16" x 13" x 16"

No. LINER INSERTION FEE (Factory Insertion of Liner Into Envelope, Optional, Per 1000)

### Coin Envelopes

These small Brown Kraft envelopes are ideal for sending or storing samples. Sold in quantities of 1,000. Specify gummed or ungummed flaps when placing the order. Additional features include: self-sealing latex gum, perforations, and printing. Please call for prices. Ship wt: 10 lbs, Ship dims: 14" (L) x 10" (W) x 8" (H).

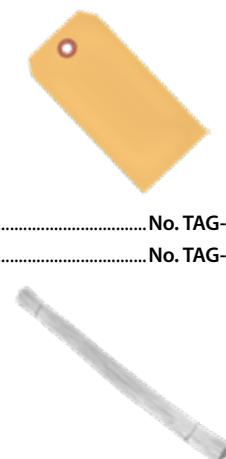


3½" x 5½", Gummed or Ungummed ..... No. COIN-305.5 Latex Self-Seal Gum for Coin Envelopes ..... No. COIN-LATEX  
 3½" x 6½", Gummed or Ungummed ..... No. COIN-307 Perforations for Coin Envelopes ..... No. COIN-PERFS

### Manila Tags

Medium weight manila tags, all purpose 13 point, 100% chemical wood pulp stock. These tags have an eyelet reinforcement and are sold in quantities of 1000.

2¾" x 1¾" ..... No. TAG-1  
 3¼" x 1⅝" ..... No. TAG-2 5¾" x 2⅞" ..... No. TAG-7  
 4¼" x 2⅞" ..... No. TAG-4 6¼" x 3⅞" ..... No. TAG-8



### Annealed Wire Tags

Used for attaching tags and labels to all kinds of bags, locks, entry doors or any item requiring labeling for identification. These tag wires are made of bright, annealed 26 gauge wire and are packed in bundles of 1,000 wires. Wire is 12" long. Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H).

Annealed Tag Wire ..... No. 441



**Wood Garden Stakes**

Environmentally friendly garden stakes are essential to many outdoor projects. These 1½" (W) x 12" (L) stakes are available in natural wood to paint or write on or orange-coated for higher visibility and longer life. Orange coating is waterborne and nontoxic. These biodegradable stakes are made from New England White Birch. Each stake features a pointed end to push into the ground easily. Minimum order 250 stakes. If there is a different color or size needed please contact us.

- Natural Wood Garden Stakes, Case of 250 ..... **No. STAKES**
- Orange Coated Wood Garden Stakes, Case of 250 ..... **No. STAKES ORANGE**



APRON-PLB

**Pollination Bag Aprons**

These handy aprons are used with any brand of pollination bags. They are perfect to hold bags, tags or pollination accessories that are carried into the field. Easy to clean, both aprons are poly mesh construction to reduce heat and prevent pollen accumulation with 2 large and 5 small pockets and are available in navy blue or red.

**No. APRON-PLB** and **No. APRON-PLR**, large pocket apron is 15" (H) x 28" (W) overall – large pocket is 10" top to bottom, 3" projection, and 8" side to side. **No. APRON-PSB** and **No. APRON-PSR** is 15" (H) x 27" (W) overall – large pocket is 10" top to bottom, 3" projection and 6" side to side. Net wt: ¾ lbs, Ship wt: 2 lbs, Ship dims: 13" (L) x 10" (W) x 3" (H).

- Large Pollination Apron, Blue ..... **No. APRON-PLB**
- Small Pollination Apron, Blue ..... **No. APRON-PSB**
- Large Pollination Apron, Red ..... **No. APRON-PLR**
- Small Pollination Apron, Red..... **No. APRON-PSR**



**Stapler**

This heavy duty plier stapler is an indispensable tool to assure each pollination bag is closed properly over each pollinated ear, tassel or entire plant. Chromed steel housing and hardened steel parts make it highly durable for use at busy fields. Hand guard loop and removable staple channel for easy cleaning. Uses ¼" and ⅝" staples. Net wt: 1 lb, Actual dims: 7" (L) x 5" (W) x 1" (H), Ship wt: 2 lbs, 8" (L) x 8" (W) x 4" (H).

- Heavy Duty Plier Stapler with Flat Crown ..... **No. STAPLER**



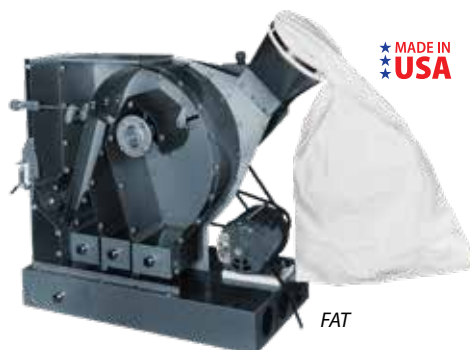
**Seed Inspectors Duffel Bag**

This handy duffel bag will hold the tools and instruments you need when heading to a site for sampling and inspection or while on the road. Don't bother trying to stuff all those little tools you need into your pockets, or clipping items to your belt, or risk dropping them, this multi-pocket roomy duffel will hold those tools for you. Made of sturdy 600-denier polyester fabric this duffel features a three-sided top zipper large compartment, two zip end pockets, a large front zip pocket and an internal "valuables" pocket, hard plastic feet to prevent wear on material, padded grab-handle, and removable shoulder strap. Net wt: 1¾ lbs, Actual dims (when extended): 20" (L) x 11½" (W) x 11½" (H), Ship wt: 3 lbs, Ship dims: 18" (L) x 12" (W) x 6" (H).

- Seedbuero Inspectors Duffel Bag (Black) ..... **No. SEC-DUFFEL**

### Fractionating Aspirator

The Fractionating Aspirator is an impeller type aspirator that utilizes terminal velocity to separate light materials from heavy materials and partitions them into fractions. It can upgrade seedlots by separating seeds within same size classes into density gradients. Empty and partially filled seeds can sometimes be removed by fractionating aspirators, an efficient device for specific gravity separations. The unit provides adjustable, four stage, high pressure air aspiration for complete cleaning and separation. Ship wt: 170 lbs, Ship dims: 21" (L) x 35" (W) x 39" (H).



- Fractionating Aspirator, 110V, 60Hz .....No. FAT
- Fractionating Aspirator, 220V, 50Hz ..... No. FAT/A

### Seedburo "General" Seed Blower

The General Seed Blower is designed to handle a wide variety of seeds types. Small seeds like Rye grass and Fescue (up to 5 grams) require the small tube and the seed cup; low density seeds such as brome grass (5 grams) or wheat grass (10 grams) use the large tube and seed cup. Heavy seeds such as Argentine Bahia grass can also be blown successfully. An air-regulating gate used to control airflow will increase or decrease the flow of air in relation to each turn of the hand wheel, allowing for greater uniformity. A calibrated dial assists in air regulation. The air passes through a stainless steel perforated baffle after leaving the plenum. This evenly distributes the air before entering a converging cone on the underside of the screen in the seed cup. The cup is machined from a solid block of aluminum and incorporates a removable stainless steel wire mesh screen.



The Pyrex® tubes are permanently treated to resist static. The air supply fan is driven by a DC motor through an AC/DC converter which is wired for 115 Volt, 60Hz power source (optional 220 Volt, 50Hz). The cabinet unit is constructed of heavy gauge stainless steel. A digital timer is mounted on front of unit. **Seed Blower (less tube and cup):** Net wt: 38 lbs, Actual dims: 13" (L) x 15¾" (W) x 19½" (H), Ship wt: 46 lbs, Ship dims: 24" (L) x 22" (W) x 17" (H). **Large or small tube:** Ship wt: 9 lbs, Ship dims: 40" (L) x 16" (W) x 8" (H).

Seedblower with both small and large tube sets

- Seedblower with Large Tube Kit, 115V, 60Hz.....No. HMC67L/B
- Seedblower with Small Tube Kit, 115V, 60Hz ..... No. HMC67S/B
- Seedblower with Large Tube Kit, 220V, 50/60Hz .....No. HMC67L/C
- Seedblower with Small Tube Kit, 220V, 50/60HZ .....No. HMC67S/C
- Large Tube Kit (3" Diameter), with Ring and Cup .....No. HMC-LTK
- Small Tube Kit (1½"), with Ring and Cup..... No. HMC-STK
- Domestic Packing..... No. HMC/DOM
- Export Crating .....No. HMC/EX
- Tube Set Packing .....No. HMCT/DOM

### Hammer Mill

The High Volume Hammer Mill is perfect for large or small operations. This hammer mill pulverizes a large range of products. The most popular application for the hammer mill is to grind grains into a coarse flour to be fed to livestock. This model has a heavy duty cast iron and steel construction for tough and long lasting reliability. The top chamber tilts open for easy inspection, maintenance, sizing screens and changing screens. The rotor shaft is 1¾" dia. steel with regreasable flange-mounted bearings. The hammer mill comes standard with hardened, free swinging steel hammers that are reversible front to back and end to end for maximum utility. The hammer mill is mounted on a 16" inch tall mobal frame that makes the bottom discharge feature easy to install over a pail, pit or hopper and is completely open with a 6" inch by 6" inch throat opening for full and quick through-put. The mill also comes with one installed screen of your requested perforation size. Optional screen sizes are: ½", ¼", ⅜", ⅛", 3/16", 1/4", 3/8", 1/2" inch round perforation. Net wt: 290 lbs, Actual dims: 38" (L) x 29" (W) x 53" (H), Ship wt: 350 lbs, Ship dims: 45" (L) x 40" (W) x 45" (H).



Operating RPM	Motor Size	Floor Space	Bottom Discharge	Feed Opening	Hammers Required
3500-3800	2HP	38" (L) x 29" (W)	24" x 36"	6" x 6"	6" x 6½"

- High Volume Hammer Mill, 230V, 60Hz.....No. MILL-10



★ **MADE IN USA**  
757 with 757-M tube set, sold separately

**Seedbuero South Dakota Seed Blower**

The 757 South Dakota Seed Blower utilizes airflow through a column generated by a blower motor combination. Separations are accurately controlled by a calibrated valve cap in the top of the column. We offer three column sizes: small 1½" I.D. x 23¼" H, medium 3" I.D. x 34¼" H, and large 4" I.D. x 35¼" H. Air columns are precision built to trap lightweight seed and chaff, collecting pure seed in the "cup" located at the bottom of the column. The cup has a wire mesh bottom to collect the seed and allow the air to flow through the seed. Mesh sizes are: small (100 mesh), medium (50 mesh) and large (30 mesh). The 757 base measures 16" (L) x 21" (W) x 32" (H). This permits easy viewing of the calibrated air valves on all three-column sizes. Additional features include a 5-minute analog timer, on/off control knob and a hand brake to stop the motor instantly to eliminate coasting of the blower fan. Net wt: 110 lbs, Ship wt: 140 lbs, Ship dims: 25" (L) x 21" (W) x 41" (H). **Tube Sets:** Ship wt: 6 lbs, Ship dims: 21" (L) x 9" (W) x 9" (H).

Seedblower Table, 120V, 50/60Hz, 3450 RPM, 1/3HP Motor.....	<b>No. 757</b>
Seedblower Table, 220V, 50/60Hz, 3450 RPM, 1/3HP Motor.....	<b>No. 757/A</b>
Small Tube Set (1½" column).....	<b>No. 757-S</b>
Medium Tube Set (3" column).....	<b>No. 757-M</b>
Large Tube Set (4" column) .....	<b>No. 757-L</b>
Required Crating .....	<b>No. 757/DOM</b>



★ **MADE IN USA**  
757-RC

**Seedbuero South Dakota Seed Blower Cup Set**

Also available is the 757-RC, 4" tube with removable cup for easy access to the cleaned sample. It has removable containers off the side of the column, in lieu of baffles as in the standard columns. Net wt: 8 lbs, Ship wt: 10 lbs, Ship dims: 21" (L) x 21" (W) x 16" (H).

4" Tube with Removable Cup 30 Mesh .....	<b>No. 757-RC</b>
Extra Cup with 100 Mesh for 757-RC Tube Set .....	<b>No. 757-CUP100</b>
Extra Cup with 50 Mesh for 757-RC Tube Set.....	<b>No. 757-CUP50</b>
Extra Cup with 30 Mesh for 757-RC Tube Set.....	<b>No. 757-CUP30</b>



★ **MADE IN USA**  
SABSC/B

**Air Blast Seed Cleaner**

This cleaner is a tabletop model for final cleaning of small samples. Grain first passes through a screening tray for removal of large debris, then into an air chamber where final separation takes place. Clean grain is collected in a removable catch pan. Chaff and light debris are blown into a second catch pan for inspection and re-cleaning. Standard equipment includes air-intake gate on blower and 2 seed catch pans. Screen sizes ½", ¼", ⅛", ⅜" (not included) wood base, 6 ft. drop cord and switch. Ship wt: 98 lbs, Ship dims: 24" (L) x 18" (W) x 32" (H). Export wt: 100 lbs, Export dims: 25" (L) x 24" (W) x 32" (H). **Screen:** Ship wt: 7 lbs, Ship dims: 18" (L) x 12" (W) x 12" (H).

Seed Cleaner 115V, 60Hz without Screens.....	<b>No. SABSC/B</b>	Screen with ⅜" Opening.....	<b>No. SABSC-S38</b>
Seed Cleaner 220V, 50Hz without Screens.....	<b>No. SABSC/C</b>	Seed Catch Pans.....	<b>No. SABSCP</b>
Screen with ½" Opening.....	<b>No. SABSC-S12</b>	Domestic Crating.....	<b>No. SABSC/DOM</b>
Screen with ¼" Opening.....	<b>No. SABSC-S14</b>	Export Crating .....	<b>No. SABSC/EX</b>
Screen with ⅛" Opening .....	<b>No. SABSC-S18</b>		



### Mater Continuous Seed Blower

The Mater Continuous Seed Blower has the high accuracy of a smaller conventional seed blower, but with a larger capacity. The precision of this machine allows it to efficiently separate seeds and grains of different densities, filled seeds from 'blanks' and chaff, soil particles from grass seeds, and can be used on a broad range of species. An ideal research unit, the continuous seed blower is commonly used by breeders for propagation, pre-cleaning samples for purity testing and certification, and many other applications.

Typical applications are separating denser, more viable seeds for propagation. Riparian restoration specialists clean blanks from native grasses, forbs and herbs. Seed laboratory can pre-clean samples for purity testing and certification. Vegetable and flower seed growers can process lots up to 100kg (220 lbs).

Precision controls regulate air velocity and seed feed rate. Seed is fed to the air stream by a vibratory feeder with variable speed control. The same crack resistant Polycarbonate tubing is used for all seed sizes and types. An infinitely variable electronic blower speed control allows for exacting separations. The air velocity is adjustable from 0.5–18.0 meters per second (98–3540 feet per minute). Uses a Syntron™ vibratory feeder for continuous operation.

Convenient adjustable shelving supports large and small sample containers. For semi-commercial, continuous production, a large hopper and bagging attachments are available. Unit includes Vibratory Feeder with Speed Control and one ESS0770 Hopper 1000cc (32 oz). **Continuous Blower:** Net wt: 150 lbs, Actual dims: 22" (L) x 19" (W) x 74" (H), Ship wt: 265 lbs, Ship dims: 47" (L) x 38" (W) x 24" (H). **Large Hopper with Stand:** Ship wt: 345 lbs, Ship dims: 30" (L) x 39" (W) x 85" (H). Made in USA.



Continuous Seed Blower, 115V, 50/60Hz/1PH.....	No. CB3001
Continuous Seed Blower, 230V, 50/60Hz/1PH.....	No. CB3002
Large Hopper with Stand, No Bagging Accessories: Capacity 132 liters (35 gal US) .....	No. CB1003
Large Hopper with Stand and Bagging Accessories: Capacity 132 liters (35 gal US) .....	No. CB1003-A
Domestic and ISPM 15 Export Crate for Continuous Blower Only .....	No. CB9903
Domestic and ISPM 15 Export Crate for Large Hopper and Accessories Only .....	No. CB9905

### Mater Single Deck Vibratory Separator

The Mater Single Deck Separator, offered by Seedbuero, is used in labs all over the world for handling small quantities of seed and making separations not possible with specific gravity or other machines. With the Mater Vibratory Separator, it is possible to separate even the most difficult seed pairs. Once the proper texture, slope and angle of deck are selected, the easy to read inclinometers clearly display the angles to assure repetitive separations. Vibration amplitudes can be set on the dual vibratory feeder control. The Vibratory Separator is used for separating dodder from Carrots, Crimson Clover, Red Clover and similar seeds. Also used for separating curly dock from Blue Grass and Crimson Clover, morning glory from Soybean, Pigweed from Alfalfa and Alyssum, sweet vernal grass from Ryegrass, milled Bermuda grass from white clover and similar mixtures.

Standard equipment includes fully adjustable funnel style bulk feed hopper, which holds 500cc. Three 1000cc sample boxes for collecting the separated fractions, two Syntron™ brand vibratory feeders, which actuate the bulk feeder and seed deck. Dual digital counters to indicate the vibratory feeder control settings, and polyurethane-coated furniture grade plywood base with rubber vibration damping pad. Ship wt: 132 lbs, Ship dims: 48" (L) x 19" (W) x 23" (H). Made in USA.



Single Deck Vibratory Separator, 115V, 50/60Hz, 90 Watts .....	No. SD1001
Single Deck Vibratory Separator, 230V, 50/60Hz, 90 Watts .....	No. SD1002
Optional Hand Switch with Coiled Cord .....	No. ESS0008
Optional Foot Switch .....	No. ESS0009
Optional Bare Aluminum Deck.....	No. SD0100-B
Optional Polished Stainless Deck .....	No. SD0100-P
Optional Sand Blasted Aluminum Deck.....	No. SD0100-SB
Additional Decks of Various Textures (contact us for specific types and textures).....	No. SD0100-XXX
Domestic and Export Crating for Vibratory Separator - ISPM No. 15 Compliant.....	No. SD9903

### Hand Testing Screens

Seedbuero's hand testing screens are a must for anyone who buys, cleans, or grades seed or grain. They are made of selected straight grained wood with nesting frames. These screens can be stacked together with a blank bottom pan to make several separations at one time.

A generous assortment of sizes will enable you to experiment with various separations and select the correct screens for your larger cleaning or sizing

operations. Our hand test screens are an excellent choice for experimental or laboratory use when only small samples are available. Net wt: 1/2 lb, Ship wt: 3 lbs. All hand testing screens are **MADE IN USA**.

- Hand Test Screens, 12" x 12".....**No. 98-12Q**
- Hand Test Bottom Pan, 12" x 12".....**No. 98-12BQ**
- Screen Perforation Gauge.....**No. PFG**

*\*\* Only available in metric size*

Round Holes (64ths of an inch)		Round Holes (64ths of an inch)		Oblong Holes		Oblong Holes		Wires/Sq. Inch
Inches	MM	Inches	MM	Inches	MM	Inches	MM	10 x 10
1/25	1.016	23	9.127	1/26 x 1/2	0.98 x 12.70	13/64 x 3/4	5.159 x 19.050	12 x 12
1/24	1.058	23 1/2	9.330	1/25 x 1/2	1.02 x 12.70	13/64 x 1 1/4	5.159 x 31.75	14 x 14
1/23	1.102	24	9.525	1/24 x 1/2	1.06 x 12.70	13 1/2/64 x 3/4	5.357 x 19.050	15 x 15
1/22	1.153	24 1/2	9.720	1/23 x 1/2	1.10 x 12.70	13 1/2/64 x 1 1/4	5.357 x 31.75	16 x 16
3/64	1.190	25	9.922	1/22 x 1/2	1.153 x 12.70	14/64 x 3/4	5.556 x 19.050	18 x 18
1/21	1.200	25 1/2	10.120	3/64 x 5/16	1.191 x 7.938	14 1/2/64 x 3/4	5.75 x 19.050	20 x 20
1/20	1.270	26	10.319	3/64 x 1/2	1.19 x 12.70	15/64 x 3/4	5.953 x 19.050	22 x 22
1/19	1.336	26 1/2	10.520	1/20 x 1/2	1.270 x 12.700	15 1/2/64 x 3/4	6.15 x 19.050	24 x 24
1/18	1.410	27	10.716	1/19 x 1/2	1.34 x 12.70	16/64 x 3/4	6.350 x 19.050	26 x 26
1/16	1.587	27 1/2	10.910	1/18 x 3/4	1.410 x 19.050	16 1/2/64 x 3/4	6.55 x 19.050	28 x 28
1/15	1.691	28	11.113	1/18 x 1/2	1.410 x 12.700	17/64 x 3/4	6.747 x 19.050	30 x 30
1/14	1.813	28 1/2	11.310	1/17 x 1/2	1.494 x 12.700	17 1/2/64 x 3/4	6.95 x 19.050	32 x 32
1/13	1.953	29	11.509	1/15 x 1/2	1.691 x 12.700	18/64 x 3/4	7.144 x 19.050	34 x 34
1/12	2.116	29 1/2	11.710	1/15 x 3/4	1.69 x 19.05	18 1/2/64 x 3/4	7.34 x 19.050	36 x 36
6	2.381	30	11.906	4 1/2/64 x 1/2	1.785 x 12.700	19/64 x 3/4	7.541 x 19.050	38 x 38
6 1/2	2.579	30 1/2	12.100	4 1/2/64 x 3/4	1.785 x 19.050	20/64 x 3/4	7.939 x 19.050	40 x 40
7	2.778	31	12.303	4 3/4 x 3/4	1.890 x 19.050	21/64 x 3/4	8.33 x 19.050	45 x 45
7 1/2	2.976	31 1/2	12.500	4 7/8/64 x 1/2	1.934 x 19.050	22/64 x 3/4	8.731 x 19.050	50 x 50
7 3/4	3.080	32	12.700	4 7/8/64 x 3/4	1.934 x 19.050	22 1/2/64 x 1	8.93 x 25.400	55 x 55
8	3.175	33	13.100	5/64 x 1/2	1.984 x 12.700	23/64 x 3/4	9.13 x 19.050	60 x 60
8 1/2	3.373	34	13.949	5/64 x 3/4	1.984 x 19.050	24/64 x 3/4	9.525 x 19.050	3 x 20
8 3/4	3.470	34 1/2	13.690	5.25/64 x 3/4	2.080 x 19.050	28/64 x 3/4	11.110 x 19.050	4 x 18
9	3.572	35	13.890	5 1/2/64 x 1/2	2.182 x 12.700	30/64 x 3/4	11.910 x 19.050	4 x 19
9 1/2	3.770	35 1/2	14.090	5 1/2/64 x 3/4	2.182 x 19.050	32/64 x 3/4	12.700 x 19.050	4 x 20
9 3/4	3.870	36	14.287	5.8/64 x 3/4	2.300 x 19.050	36/64 x 3/4	14.29 x 19.050	4 x 22
10	3.969	38	15.081	6/64 x 1/2	2.380 x 12.700	**	2.15mm x 20mm	6 x 18
10 1/2	4.167	40	15.875	6/64 x 3/4	2.380 x 19.050	**	2.25mm x 20mm	6 x 20
10 3/4	4.270	42	16.669	6/64 x 1 1/32	2.380 x 26.160	**	3.75mm x 20mm	6 x 22
11	4.366	44	17.460	6 1/2/64 x 3/4	2.579 x 19.050	**	4mm x 20mm	6 x 24
11 1/2	4.564	46	18.260	7/64 x 3/4	2.778 x 19.050	**	4mm x 23mm	6 x 26
11 3/4	4.660	47	18.650	7.25 x 3/4	2.88 x 19.050	**	4mm x 31mm	6 x 28
12	4.763	48	19.050	7 1/2/64 x 3/4	2.972 x 19.050	**	4.25mm x 20mm	6 x 30
12 1/2	4.961	50	19.840	8/64 x 3/4	3.175 x 19.050	**	4.25mm x 31mm	6 x 32
13	5.159	52	20.640	8/64 x 1	3.18 x 25.4	**	4.35mm x 20mm	6 x 34
13 1/2	5.357	54	21.430	8/64 x 1 1/4	3.18 x 31.75	**	4.35mm x 31mm	6 x 36
14	5.556	55	21.83	8 1/2/64 x 3/4	3.373 x 19.050	**	4.4mm x 20mm	6 x 38
14 1/2	5.754	56	22.225	8 1/2/64 x 1 1/4	3.37 x 31.75	**	4.4mm x 31mm	6 x 40
14 3/4	5.850	57	22.620	9/64 x 1/2	3.57 x 31.75	**	4.5mm x 20mm	6 x 42
15	5.953	64	25.400	9/64 x 3/4	3.527 x 19.050	**	4.5mm x 31mm	
15 1/2	6.150	1 3/4	31.750	9/64 x 1 1/4	3.57 x 31.75	**	4.75mm x 20mm	
16	6.350	**	5.5mm	9 1/2/64 x 3/4	3.770 x 19.050	**	4.75mm x 31mm	<b>Triangular Holes</b>
16 1/2	6.548	**	7.5mm	9 1/2/64 x 1 1/4	3.77 x 31.75	**	5.25mm x 20mm	9/64 or 5 1/2V
17	6.747	**	10mm	10/64 x 3/4	3.969 x 19.050	**	5.25mm x 31mm	10/64 or 6V
17 1/2	6.945			10/64 x 1 1/4	3.969 x 31.75	**	5.5mm x 20mm	11/64 or 6 1/2V
18	7.144			10 1/2/64 x 3/4	4.17 x 19.050	**	5.5mm x 31mm	12/64 or 7V
18 1/2	7.342			10 1/2/64 x 1 1/4	4.17 x 31.75	**	5.75mm x 20mm	17/64 or 9 1/2V
19	7.541	32/64	12.700	11/64 x 3/4	4.366 x 19.050	**	5.75mm x 31mm	
19 1/2	7.739			11/64 x 1 1/4	4.366 x 31.75	**	6mm x 20mm	
20	7.938			11 1/2/64 x 3/4	4.564 x 19.050	**	6mm x 23mm	
20 1/2	8.136			11 1/2/64 x 1 1/4	4.564 x 31.75	**	6mm x 31mm	
21	8.334			12/64 x 3/4	4.763 x 19.050	**	12mm x 30mm	
21 1/2	8.532			12/64 x 1 1/4	4.763 x 31.75			
22	8.731			12 1/2 x 3/4	4.961 x 19.050			
22 1/2	8.929			12 1/2 x 1 1/4	4.961 x 31.75			

**Screen Shaker**

The Seedburo 98-SS Screen Shaker is designed to use minimal bench space and to accept up to ten 12" x 12" hand testing screens and one bottom pan. A ten minute digital timer supplied with the shaker shuts off the motor and insures consistent results. The shaker comes complete with a 1/3HP 110V, 60Hz or 220V, 50Hz motor. Net wt: 44 lbs, Actual dims: 24" (L) x 19" (W) x 14" (H). Ship wt: 83 lbs, Ship dims: 27" (L) x 24" (W) x 18" (H). **MADE IN USA.**



Screen Shaker with Digital Timer, 110, 60Hz/1Ph.....	No. 98-SSDT
Screen Shaker with Digital Timer, 220V, 50Hz/1Ph.....	No. 98-SSDT/C
Screen Shaker with Spring Wound Timer, 110V, 60Hz/1Ph.....	No. 98-SS
Screen Shaker with Spring Wound Timer, 220V, 50Hz/1Ph.....	No. 98-SS/C
Required Crating.....	No. 98-SS/DOM

**Storage Rack for Hand Screens**

Wood-constructed hand testing screen rack holds either 12 or 24 of Seedburo's 12" x 12" Hand Testing Screens. The rack is an excellent way to prevent damage and organize your screens for a quick visual inspection of the screens you have on hand. **MADE IN USA.**

Specifications for the **No. 98-24SR**: Net wt: 20 lbs, Actual dims: 11 1/4" (L) x 13 3/4" (W) x 30" (H), Ship wt: 30 lbs, Ship dims: 15" (L) x 20" (W) x 40" (H).

Specifications for the **No. 98-12SR**: Net wt: 12 lbs, Actual dims: 11 1/4" (L) x 13 1/4" (W) x 15 3/4" (H), Ship wt: 25 lbs, Ship dims: 15" (L) x 20" (W) x 25" (H).



Storage Rack for 24 Hand Test Screens.....	No. 98-24SR
Storage Rack for 12 Hand Test Screens.....	No. 98-12SR

**Storage Rack for Clipper Office Tester Screens**

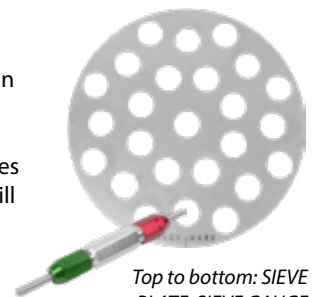
Wood storage rack for the Model 400 Clipper Office Tester and Cleaner screens. This storage rack provides a space saving benefit and helps keep screens organized. The screens remain protected from damage due to random storage and they are then ready for exchanging within the Clipper Office Tester when performing a series of sample runs. The Clipper Office Tester screens are 10" x 15", with the rack specifically constructed to hold this dimension of screen. The storage rack holds 24 screens. Net wt: 13 lbs, Actual dims: 14" (L) x 11.5" (W) x 14.5" (H), Ship wt: 15 lbs, Ship dims: 16" (L) x 13" (W) x 17" (H). **MADE IN USA.**



Storage Rack for Office Clipper Screens.....	No. 40024SR
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**Sieve Inspection Guide and Perforation Gauges**

The system, which Seedburo uses to inspect and approve our grain dockage sieves, includes the use of a inspection guide and the appropriate Go-No Go perforation gauges. The inspection guide is a 12 1/2" diameter stainless steel plate with 25 random 1 1/2" diameter laser cut holes. The edge of the plate is etched with a benchmark to provide a reference point to orient on the sieve during the test. This method provides the random selection of inspection sites for our Go-No Go perforation gauges. We offer these gauges as a dual end reversible, Class Z gauge. The Go end will have a green colored collar and the No Go will have a red collar. We offer gauges in perforation tolerance, either Commercial or Precision to match the official USDA Federal Grain Inspection tolerances. **Inspection plate:** Ship dims: 15" (L) x 15" (W) x 4" (H), while up to 5 each of the **gauges** can be combined into one carton: Net wt: 1 lb, Ship wt: 3 lbs, Ship dims: 9" (L) x 3" (W) x 3" (H). Also available is the teardrop shaped perforation gauge with a range of sizes etched to provide approximate diameter of sieve openings. **MADE IN USA.**



Top to bottom: SIEVE PLATE, SIEVE GAUGE (images not proportionate)

Sieve Inspection Guide Plate.....	No. SIEVE PLATE
Go-No Go Dual End Perforation Gauge (Specify Size of Each End).....	No. SIEVE GAUGE
Perforation Gauge.....	No. PFG



★ MADE IN  
★ USA

400/B with optional  
Back Air Catchall with removable trays

### Clipper Office Tester and Cleaner

The Clipper Model 400 Office Tester and Cleaner offered by Seedbuero is an extremely efficient cleaner for office and laboratory use. This machine will provide accurate, dependable performance for small lot cleaning, testing or sampling. Approximate capacity would be 1 bushel per hour for most crop seeds. It is commonly used in seed plants for sampling large lots of seed for correct screen selection on larger, commercial size cleaners. It is also widely used in university laboratories for agronomy research and testing. Flower and vegetable growers use the Model 400 for specialized cleaning, grading and sizing. The Model 400 has a compact, portable design and features an eccentric (shoe) drive that uses two (2) 10" x 15" screens. One top screen for scalping, one bottom screen for cleaning and grading. Perforated metal or wire cloth screens

are available in over 175 different sizes (For screen perforations, see **page 86**). Other features include a powerful bottom blast fan driven by a three-step pulley, adjustable slide on the air intake openings to provide intermediate air regulation and an optional, removable catchall with either removable trays (shown) or solid bottom to catch air screenings. Net wt: 70 lbs, Actual dims: 25" (L) (45¾" with catchall) x 17" (W) x 23" (H), Ship wt: 110 lbs, Ship dims: 32" (L) x 24" (W) x 32" (H), Export wt: 185 lbs, Export dims: 33" (L) x 25" (W) x 33" (H).

- Office Tester and Cleaner Complete with 2 Screens ..... **No. 400/B**  
1/6HP, 115V, 60Hz/1Ph
- Office Tester and Cleaner Complete with 2 Screens ..... **No. 400/E**  
1/6HP, 230V, 60Hz/1Ph
- Office Tester and Cleaner Complete with 2 Screens ..... **No. 400/C**  
1/4HP, 230V, 50Hz/1Ph
- Office Tester and Cleaner Complete with 2 Screens ..... **No. 400/CE**  
1/4HP, 230V, 50Hz/1Ph Motor, CE Certified

- Back Air Catchall with Solid Bottom (Optional) ..... **No. 400BAC**
- Back Air Catchall with Removable Trays (Optional) ..... **No. 400BACT**
- Extra Perforated Metal Screens ..... **No. 400SM**
- Extra Wire Mesh Screens ..... **No. 400SW**
- Required Domestic Packing ..... **No. 400/DOM**
- Required Export Crating ..... **No. 400/EX**



★ MADE IN  
★ USA

AGM224

### Clipper Model AGM224 Seed and Grain Cleaner

The Clipper AGM224 cleaner is a small cleaner that will provide excellent results and fits the market for those in need of a cleaner between the sample lot size of the Office Clipper and the mid-size capacity of the Eclipse 324 cleaner. This unit is ideal for small production, in lab, or on-farm applications. The AGM224 is a durable cleaner and features a steel frame, galvanized steel shoe, scotch-ply hangers, heavy-duty eccentric (shoe) drive, ball tray cleaning system and plain inlet hopper. Designed with two (2) 24½" x 22¼" screens. The top screen handles scalping, while the bottom screen offers thorough cleaning and grading. An adjustable air separation efficiently completes the cleaning process. With over 175 different screen sizes (perforated metal and wire mesh) available the AGM224 is an extremely versatile machine. Net wt: 575 lbs, Actual dims: 54" (L) x 41" (W) x 67" (H), Ship wt: 895 lbs, Ship dims: 56" (L) x 45" (W) x 70" (H). (For screen perforations, see **page 86**).

#### Approximate Capacities (Bushels Per Hour)

Commodity	Fast Clean	Precision Clean
Soybeans, Wheat, Corn	*50 BPH	*30 BPH
Rice, Oats, Barley	*40 BPH	*25 BPH

*\*Note: Capacities may vary depending on seed condition, moisture content, seed varieties, types, and volume of contaminants to be separated and the percentage of foreign material acceptable in the final product.*

- Clipper AGM224 Cleaner Complete with 2 Screens ..... **No. AGM224**  
¾HP, 110/220V, 60Hz, 1 Ph
- Clipper AGM224 Cleaner Complete with 2 Screens ..... **No. AGM224/A**  
¾HP, 110/220V, 50Hz, 1 Ph
- Extra Standard Metal Perforated Screens ..... **No. AGM224SM**
- Extra Standard Metal Perforated Screens, Cross Slots... **No. AGM224SMCS**

- Extra Square Wire Mesh Screens ..... **No. AGM224SWS**
- Extra Rectangle Wire Mesh Screens ..... **No. AGM224SWR**
- Bagging Auger Attachment ..... **No. AGM224BA**
- Required Domestic Crating ..... **No. AGM224/DOM**
- Required Export Crating ..... **No. AGM224/EX**



### Clipper Eclipse Model 324 Seed and Grain Cleaner

Seedburo's Clipper Eclipse Model 324 cleaner is ideal for small commercial and on-farm applications. The Eclipse Model 324 is a durable, well-built machine. Features a heavy-duty tubular steel frame, 13-ply marine grade plywood shoes, scotch-ply hangers, heavy-duty eccentric (shoe) drive, ball tray screen cleaning system and plain inlet hopper. Designed with three (3) 24½" x 22¼" screens. The top screen handles scalping while the bottom two screens offer thorough cleaning and grading. The bottom two screens can be set to a scalp/sift flow by removing the two-way splitter. Adjustable air separation completes the efficient cleaning process. Over 175 different sizes of perforated metal or wire cloth screens are available. Net wt: 750 lbs, Ship wt: 1000 lbs, Actual dims: 54" (L) x 41" (W) x 63" (H), Ship dims: 57" (L) x 47" (W) x 72" (H). (For screen perforations, see page 86).



#### Approximate Capacities (Bushels Per Hour)

Commodity	Fast Clean	Precision Clean
Soybeans, Wheat, Corn	*80 BPH	*55 BPH
Rice, Oats, Barley	*60 BPH	*35 BPH

*\*Note: Capacities may vary depending on seed condition, moisture content, seed varieties, types, and volume of contaminants to be separated and the percentage of foreign material acceptable in the final product.*

Eclipse 324 Cleaner Complete with 3 Screens, ¾HP, 110/220V, 60Hz, 1 Ph.....	No. ECL324
Eclipse 324 Cleaner Complete with 3 Screens, ¾HP, 110/220V, 50Hz, 1 Ph.....	No. ECL324/A
Extra Standard Metal Perforated Screens.....	No. ECLSM
Extra Standard Metal Perforated Screens, Cross Slot.....	No. ECLSMCS
Extra Wire Mesh Screens.....	No. ECLSW
Required Crating for Domestic or Export.....	No. ECL/DOM

### Clipper Eclipse Model 334 Seed and Grain Cleaner

The Eclipse 334 Cleaner features three (3) screen decks. Each screen is 34" x 34" and the top screen removes product larger than the desired seed. The scalped material is discharged in the front of the machine, while the good product falls through the screen. The bottom two screens can be configured in either a split-sift or scalp-sift configuration. Trash, weed seeds, foreign material and splits drop through the bottom sift screens while the good product passes over them. Next the product is routed through a positive column of air from the bottom blast fan. The aspiration effectively removes light weight trash and dust that may have remained after screening. Constructed with a heavy-duty tubular steel frame with a balanced counter throw and 13-ply marine grade plywood shoes. The Eclipse has ball tray screen cleaning and adjustable bottom air and bottom cleanout air door. The 334 can be easily attached to an auger or vibratory conveyor. Net wt: 1800 lbs, Actual dims: 77" (L) x 53" (W) x 85" (H), Ship wt: 2300 lbs, Ship dims: 82" (L) x 57" (W) x 92" (H). (For screen perforations, see page 86).



#### Approximate Capacities (Bushels Per Hour)

Commodity	Fast Clean	Precision Clean
Soybeans, Wheat, Corn	*250 BPH	*120 BPH
Rice, Oats	*190 BPH	*75 BPH

*\*Note: Capacities may vary depending on seed condition, moisture content, seed varieties, types, and volume of contaminants to be separated and the percentage of foreign material acceptable in the final product. Capacities shown above are for the split-flow arrangement.*

Eclipse 334 Cleaner Complete with 3 Screens, 2HP, 110/220V, 60Hz, 3Ph.....	No. ECL334
Eclipse 334 Cleaner Complete with 3 Screens, 2HP, 230/460V, 50Hz, 3Ph.....	No. ECL334/A
Extra Standard Metal Perforated Screens.....	No. ECL3SM
Extra Standard Metal Perforated Screens, Cross Slot.....	No. ECL3SMCS
Extra Wire Screen.....	No. ECL3SW
Required Crating for Domestic or Export.....	No. ECL334/DOM



★MADE IN USA★

MICRO/F

**Clipper Micro Debearder**

The Clipper Micro Debearder was originally designed to debeard barley for microbrew houses and malt companies, but has become one of the most versatile machines in the product conditioning line. With improvements such as increased drum material thickness, hardened hammers and a new style machined stress proof drive shaft. The Clipper Micro Debearder is a multi-purpose machine available with various motor sizes and voltages along with optional variable speed controls to handle a wide range of jobs with ease. The Barley version is designed to operate at a slower 642 RPM for a gentler processing of malt barley. Features include a heavy duty ten-gauge steel housing, interchangeable heat treated hammers, 4.75" square inlet, built in discharge aspiration connection for pneumatic clean out along with one top inspection door and variable speed drive. The perfect equipment to compliment the Eclipse line of seed cleaners.

**Applications**

- Debeard Barley to improve test weight
- Hull "whitecaps" in Wheat
- Break up Spelt clumps
- Clip Oats to remove excess fibers, increase test weight
- De-awn Bronco grass (in Oats), Dill seed, Celery seed
- Polish Tomato seed, remove mold from Pepper balls, Coffee beans, and Cassia (Cinnamon) bark
- Break up Alfalfa pods, grass clusters, Flax balls, crested Wheat, Fescues or Brome grass

Net wt: 350 lbs, Ship wt: 450 lbs, Actual dims: 42.5" (L) x 40.5" (W) x 38.5" (H), Ship dims: 48" (L) x 42" (W) x 36" (H). (For screen perforations, see page 86).

Micro Debearder, with Drive Pkg., 3HP, 60Hz, TEFC, 3 Ph, 968 RPM.....	No. MICRO/F
Micro Debearder, with Drive Pkg., 3HP, 50Hz, TEFC, 3 Ph, 968 RPM.....	No. MICRO/G
Micro Debearder, with Drive Pkg., 3HP, 60Hz, TEFC, 1 Ph, 968 RPM.....	No. MICRO/B
Micro Debearder, with Drive Pkg., 3HP, 50Hz, TEFC, 1 Ph, 968 RPM.....	No. MICRO/C
Micro Debearder, with Drive Pkg., 3HP, 60Hz, TEFC, 3 Ph, 968 RPM, Variable Drive with VFD.....	No. MICROV/B
Micro Debearder, Barley Version, with Drive Pkg., 3HP, 60Hz, TEFC, 1 Ph, 642 RPM.....	No. MICROB/B
Micro Debearder, Barley Version, with Drive Pkg., 3HP, 60Hz, TEFC, 3 Ph, 642 RPM.....	No. MICROB/F
Optional Surge Hopper with Site Glasses.....	No. MICRO-SH
Required Crating for Domestic or Export.....	No. MICRO/DOM



RMT115

**Rice Micro Tester**

The RIMAC Rice Micro Tester is a compact and handy machine that can be used to test samples of rice prior to a full production run to determine approximate total white rice yield in the whitening process. Used around the world in laboratories, research stations and educational institutions. Main features are the small sample size to complete test, total recovery of grain in short test cycle, only 1-2 cups of brown rice required to complete the test. This quick whitening of the rice samples brings the sample to the desired degree of whiteness for a quick inspection. Integrated 1/3HP 115 volt, 60Hz electric motor.

Net wt: 53 lbs, Actual dims: 15" (L) x 10" (W) x 12" (H), Ship wt: 69 lbs, Ship dims: 18" (L) x 14" (W) x 18" (H).

Rice Micro Tester, 1/3HP, 115/230V, 50/60Hz, 1Ph.....	No. RMT115
Replacement Screen.....	No. RMT001
Replacement Emery Roller.....	No. RMT002
Required Wooden Box for Domestic or Export.....	No. RMT/DOM

**Mater ErgoStation Seed Inspection System**

The ErgoVision Seed Inspection System delivers greater productivity with less operator fatigue and offers a variety of optical systems fitted to the ErgoStation, an ergonomically designed workstation. The seed analyst adjusts the ErgoStation to comfortably fit them rather than force them to adapt to a single position workstation. This helps the seed analysts avoid costly neck and back pains and serious arm and wrist problems. It relieves the seed analysts from sitting in stressful body positions for hours at a time improving productivity and morale.

The basic ErgoStation is supplied as follows: contoured front, independently adjustable rest for both right and left arms, easy access to controls, 2 storage compartments, white laminated plywood work surface, substantial plywood base with rigid stainless risers, and a non-slip, vibration damping, closed cell rubber base pad. Base unit requires no power. Made in USA.

The ErgoStation can be customized to suit individual laboratory requirements with a choice of optic packages: Mantis Magnifier Head, standard 76mm pod mount microscopes such as Leica or Zeiss or video cameras. To facilitate analysis, the ErgoStation can be supplied with two vibratory feeders with dual adjustable controls, a trough for bulk feeding, quick-change inspection trays and a positioning slide for the selected optics package. A choice of hand switch, foot switch and seed hoppers and inspection trays are available to fit your specific requirements. A right/left handed convertible version and a single feeder model for large seeds are available as well. Call or write for specifications and prices. Ship wt: 125 lbs, Ship dims: 44" (L) x 26" (W) x 17" (H).



Basic ErgoStation..... **No. ESS2000** Domestic and ISPM 15 Export Crate..... **No. ESS9902**  
*No Accessories Included (No Power Required)*

**Single Feeder ErgoStation:** for large seeds with 1" vibratory feeder and foot operated feeder speed control. Supplied without Linear Positioning Slide. Requires seed hopper and quick-change inspection tray.

Single Feeder ErgoStation, 115V, 50/60Hz..... **No. ESS2701**  
 Single Feeder ErgoStation, 230V, 50/60Hz..... **No. ESS2702**  
 Domestic and ISPM 15 Export Crate..... **No. ESS9902**  
*Ship wt: 130 lbs, Ship dims: 44" (L) x 26" (W) x 17" (H).*



ESS2701

**Dual Feeder ErgoStation** with 2 vibratory feeders, dual control and seed trough. With Linear Positioning Slider for optics and adapter or mount. Requires seed hopper and quick-change inspection tray.

Dual Feeder ErgoStation, 115V, 50/60Hz..... **No. ESS2001**  
 Dual Feeder ErgoStation, 220V, 50/60Hz..... **No. ESS2002**  
 Hand Switch with Coiled Cord, Dual Feeders..... **No. ESS0008**  
 Foot Switch for Dual Feeders ..... **No. ESS0009**  
 Domestic and ISPM 15 Export Crate..... **No. ESS9902**  
*Ship wt: 135 lbs, Ship dims: 44" (L) x 26" (W) x 17" (H).*



ESS2001

**ErgoStation Accessories and Optics**

Seed Hopper, Standard Sized (contact us for available models).....**No. ESS02XX**  
 Seed Hopper, Large Sized (contact us for available models).....**No. ESS07XX**  
 Quick Change Inspection Trays (contact us for available models) .....**No. ESS03XX**  
 Microscopes: Leica or Zeiss (contact us for available models)..... **No. ESS9XXX**  
 Video Camera Systems (contact us for available models) ..... **No. ESS0XXX**  
 Optics Adapters for Microscopes or Video Cameras (contact us for available models).....**No. ESS05XX**  
 Fiber Optic Illuminator, Dolan-Jenner Fiber-Lite Mi-Led, CE 110-240V, 50/60Hz..... **No. ESS9620**  
 Mantis Elite Magnifier Head (as shown in photo) Less Lens..... **No. ESS9300**  
 Mantis Mount, Manual Adjustment for Mantis Magnifier Head..... **No. ESS9201**  
 Mantis Mount, Vernier Adjustment for Mantis Magnifier Head ..... **No. ESS9202**  
 Domestic and ISPM 15 Export Crate, Ship wt: 147 lbs, Ship dims: 44" (L) x 26" (W) x 24" (H) ..... **No. ESS9922**



ESS9620



**Mater Laboratory Debearder (Batch or Continuous)**

The Mater Laboratory Debearder is ideal for research with difficult seeds and requirements for rapid cleaning of many samples. Seeds come with a variety of awns, beards, glumes and other appendages that make them difficult to handle in processing. The Mater Laboratory Debearder, offered by Seedbuero, is customized to fit the appendages to be removed. This unit is user configurable by allowing you to choose interchangeable impellers and drums for your types of seeds. In addition to a selection of drums and impellers, the user can purchase this unit to do single batches or with a vibratory feeder for continuous operation, which works well with free flowing seed. The basic debearder is supplied less the drum and impeller or brush assembly. Select those items that best suit your requirements or contact us for recommendations.

**Batch Debearder:** Ship wt: 132 lbs, Ship dims: 41" (L) x 18" (W) x 18" (H).

**Continuous Debearder:** Ship wt: 149 lbs, Ship dims: 42" (L) x 18" (W) x 18" (H).

**Typical Applications Include**

- Remove appendages and hulls or break-up multiple florets.

- Prepare seeds to freely flow through automated planting equipment.
- Add an abrasive liner to scarify seeds for optimum germination.
- Separate seeds from seed heads or extract seeds from fibrous matrix.

Batch Debearder, 115V/60Hz..... <i>With DB0100 End Plate, No Discharge Port</i>	<b>No. DB3001-800</b>
Batch Debearder, 230V/50Hz..... <i>With DB0100 End Plate, No Discharge Ports</i>	<b>No. DB3002-800</b>
Continuous Debearder, 115V/60Hz..... <i>With DB0160 End Plate with Adjustable Discharge Ports, Vibratory Feeder and Feeder Controller (As Shown in Photo)</i>	<b>No. DB3101-800</b>
Continuous Debearder, 230V/50Hz..... <i>With DB0160 End Plate, Adjustable Discharge Ports, Vibratory Feeder and Feeder Controller</i>	<b>No. DB3102-800</b>
Domestic and ISPM 15 Export Crate for Batch or Continuous Debearder and Up to 3 Drums.....	<b>No. DB9903</b>

**Drums**

Drum Assembly, Perforated, 1.5mm Holes, Plated.....	<b>No. DB0500-1.5</b>
Drum Assembly, Perforated, 2mm Holes, Plated .....	<b>No. DB0500-2</b>
Drum Assembly, Perforated, 2.5mm Holes, Plated.....	<b>No. DB0500-2.5</b>
Drum Assembly, Perforated, 3mm Holes, Plated .....	<b>No. DB0500-3</b>
Drum Assembly, Perforated, 4mm Holes, Plated .....	<b>No. DB0500-4</b>
Rubber Wrap for Perforated Drum Assemblies .....	<b>No. DB0570</b>
Drum Assembly, Unperforated, Plated.....	<b>No. DB0600</b>
Drum Assembly, Unperforated, 1.5mm Ribs, Plated .....	<b>No. DB0650</b>
Drum Assembly, Unperforated..... <i>With Removable Stationary Tines, Plated</i>	<b>No. DB0680</b>

**Agitators and Brushes**

Brush Holder Assembly .....	<b>No. DB0201</b>
Brush Strip Pair, Extra Fine 0.4mm Nylon Bristles .....	<b>No. DB0260</b>
Brush Strip Pair, Fine 0.5mm Nylon Bristles.....	<b>No. DB0265</b>
Brush Strip Pair, Fine 0.5mm Crimped Nylon Bristles.....	<b>No. DB0266</b>
Brush Strip Pair, Medium 0.6mm Nylon Bristles.....	<b>No. DB0270</b>
Brush Strip Pair, Coarse 1.0mm Polypropylene Bristles .....	<b>No. DB0275</b>
Impeller Agitator Assembly with Fixed Tines .....	<b>No. DB0400</b>
Paddle Assembly with Wipers.....	<b>No. DB0700</b>
Replacement Paddle Wiper, Pair, Urethane.....	<b>No. DB0730</b>

*(Other Impeller and Drum Kits available – Call for quote or assistance)*

**End Plates**

End Plate Assembly Plated with Shaft Bushing, No Exit Ports; Supplied with Batch Debearder .....	<b>No. DB0100</b>
End Plate Assembly with Discharge Ports and Adjustable Port Covers; Supplied with Continuous Debearder.....	<b>No. DB0160</b>
End Plate Assembly with Shaft Bushing and 1.5" Diameter Discharge Tube for Customer Aspirator .....	<b>No. DB0165</b>



**Accessories**

Setting fixture, shown in photo with brush holder assembly and brushes, quickly configures clearance of brushes or paddles with separate positions for different diameter drums comes with Spacer Set: 1.0, 1.5, 2.0, 2.5, and 3.0mm clearances.

Setting Fixture for Brushes and Paddles.....	<b>No. DB0900</b>
Large Spacer Set: 3.5, 4.0, 4.5 and 5.0mm Clearances .....	<b>No. DB0905</b>



**Seedburo Laboratory Oat Huller**

The Seedburo Oat Huller is designed to minimize breakage during hulling operation. Hulling a 50 gram sample takes approximately one minute. Hulls and fuzz are separated from the groats and are sorted into two separate collection canisters, allowing for quick weighing of fractions. The fractions allow the lab technician to check for heat and frost damage, mold, weathering, discoloration and odor. The unit's simple and rugged design nearly eliminates the need for spare parts. The unit comes complete with 1/3HP, single phase motor, and requires compressed air at 100 psi. Net wt: 115 lbs, Ship wt: 218 lbs, Ship dims: 27" (L) x 42" (W) x 90" (H). Export wt: 300 lbs, Export dims: 90" (L) x 42" (W) x 28" (H).



Oat Huller, 110V, 60Hz .....	No. OH5095/B
Oat Huller, 220V, 50Hz .....	No. OH5095/C
Oat Huller, 110V, 50Hz .....	No. OH5095/D
Oat Huller, 220V, 60Hz .....	No. OH5095/E
Required Domestic Crating .....	No. OH5095/DOM
Required Export Crating .....	No. OH5095/EX

**Huller/Scarifier**

The Huller/Scarifier is designed and constructed to hull/scarify seeds without damage, if operated properly. Upon entering the hulling chamber, the seed is rubbed against a heavy, rubber-lined outer wall by the inside cylinder. This action will hull and/or scarify the toughest of seeds without damage to the seed. Model 2 hulls, scarifies and removes chaff in one operation. Hulling cylinder available in three types: Perf-grip, Linard, Urethane. Huller is available in 50Hz or 60Hz and in 230V, 380V, or 460V. Please advise which voltage and hertz you require. **Model2:** Ship wt: 600 lbs, Ship dims: 50" (L) x 45" (W) x 42" (H), Export wt: 700 lbs, Export dims: 55" (L) x 48" (W) x 45" (H). **Cylinder:** Ship wt: 65 lbs, Ship dims: 26" (L) x 17" (W) x 16" (H).



**Features:**

- All-Steel Construction
- Settling Chamber and Exhaust Fan
- Variable Speed Drive
- Feed Control Hopper
- Adjustable Air Control

**Hulls/Scarifies:**

- Clover Seeds
- Grass Seeds
- Quinoa Seeds
- Lespedeza
- Millet
- Alfalfa
- Barley
- Birdfoot Trefoil
- Kudzu
- Any many other seeds

Huller/Scarifier with Aspiration, 5 HP, TEFC 3PH Motor, Please Advise Voltage and Hertz.....	No. MODEL2A
Huller/Scarifier less Aspiration, 5 HP, TEFC 3/60/230, 460 or 575 Motor, Please Advise Voltage and Hertz.....	No. MODEL2
Replacement Cylinder, Perf-grip.....	No. MODEL2P
Replacement Cylinder, Urethane.....	No. MODEL2U
Required Domestic Crating .....	No. MODEL2/DOM
Required Export Crating .....	No. MODEL2/EX

*Please contact Seedburo for proper cylinder, capacity or free product evaluation.*



STS-MC3

**Mobile Precision Air Separator**

Seedbuero offers SeedTech Systems Mobile and Wall Mounted Separators, a breakthrough in cleaning and upgrading seed quality. These Separators use the pressurized vacuum method to provide high efficiency cleaning and sorting based on moisture and tissue development of seeds density and thus dramatically improve seed germination. SeedTech's Separators have been proven to recover seed losses from other processing machines. As much as

25-50% more seed yield has been gained from the recovery with the same or higher germination.

The STS-MC3 uses the vacuum and selectable air velocity to lift light, split and other seed debris up through the column and into batching compartments. The vacuum operates with a built-in computer allowing for a multitude of settings to get the best product separations available on your valuable seed. The mobile cabinet feature provides a portable and locking caster wheel operation and a vacuum system built-in the cabinet for quieter operation.

The SeedTech STS-MC3 Separator has the following features: built-in computer operated vacuum system, portable and locking wheel, control panel and cabinet, permanent continuous feed separation, responsive air and product control, LCD digital keypad operation, and total visibility of all product movement.

There is a safety flow relay switch to prevent seed contamination, no mechanical maintenance required, fast and simple calibration, environmentally clean, fits in small spaces and operates at up to 880 CFM. Capacity up to 150 lbs per hour. Overall dims: 48" (L) x 42" (W) x 89" (H), Ship wt: 995 lbs, Ship dims: 54" (L) x 54" (W) x 96" (H).

Mobile Metal Cabinet Precision Separator, 230V, 1Ph, 50/60Hz .....**No. STS-MC3**  
Also available in 3PH  
Required Crating..... **No. STS-MC3/DOM**

**WALL MOUNT PRECISION AIR SEPARATORS**



STS-WM3

**STS-WM3**

The Deluxe Precision Separator, STS-WM3, is the largest of our wall mounted separators and includes a built-in acrylic shelf for the vibratory feeder and seed hopper. It also includes a seed collection box, LED programmable computerized keypad vacuum control up to 800 CFM vacuum with locking casters wheels. Separates up to 150 lbs per hour depending upon species. Total system draws 16.9 AMPS. Actual dims: 70" (L) x 24" (W) x 84" (H), Ship data: total of three (3) crates, 140 cu. ft. 500 lbs.

Wall Mount Deluxe Precision Separator, 230V, 50/60Hz, 1Ph .....**No. STS-WM3**  
Also available in 3PH  
Required Crating..... **No. STS-WM3/DOM**



STS-WM2D

**STS-WM2D**

The STS-WM2D Precision Separator is the medium size deluxe separator that includes two upper seed collection cups, built-in acrylic shelf for the vibratory feeder and feed hopper. Also includes a seed collection box, built-in computerized digital keypad controller. This system has up to 580 CFM programmable computerized keypad controlled vacuum with locking casters

wheels. Capacity is up to 125 lbs per hour depending upon the species. Total system draws 16.9 AMPS. Actual dims: 63" (L) x 22" (W) x 84" (H), Ship data: total of 3 crates, 84 cu. ft., 475 lbs.

Wall Mount Deluxe Precision Separator, 230V, 50/60Hz, 1Ph .....**No. STS-WM2D**  
Required Crating..... **No. STS-WM2D/DOM**



STS-WM2E

**STS-WM2E**

The STS-WM2E Precision Separator is the small size deluxe separator that includes two upper seed collection cups, built-in acrylic shelf for the vibratory feeder and feed hopper. Also includes a seed collection box, built-in computerized digital keypad controller. This system has up to 225 CFM programmable computerized keypad controlled vacuum settings. Capacity is up

to 95 lbs per hour depending upon the species. Total system draws 17.4 AMPS. Actual dims: 58" (L) x 22" (W) x 62" (H), Ship data: total of 3 crates, 76 cu. ft., 475 lbs.

Lab Precision Separator, 230V, 50/60Hz, 1Ph .....**No. STS-WM2E**  
Required Crating..... **No. STS-WM2E/DOM**



STS-WM2

**STS-WM2**

The STS-WM2 Lab Precision Separator is the same size as the STS-WM2E but operates using a shop vacuum and comes with a manual crank handle for vacuum calibration. It includes two basic upper chamber seed collection containers, vibratory feeder and seed collection box. A built-in acrylic shelf and controller enclosure is standard, as is a 110V/60Hz/1PH, 195 CFM shop vacuum unit. The 230V/50Hz/1PH shop vacuum is rated at 175 CFM. Capacity is up to 95 lbs per hour. Total system draws 16 AMPS. Actual dims: 54" (L) x 22" (W) x 62" (H), Ship data: total of three (3) crates, 51 cu. ft., 250 lbs.

Lab Precision Separator, 115V/60Hz/1Ph, 16 Amps.....**No. STS-WM2**  
Required Crating..... **No. STS-WM2/DOM**

## WESTRUP LABORATORY EQUIPMENT

### LA-K Gravity Separator

The Westrup LA-K gravity separator for laboratory use is designed for batch and continuous flow separation of small volumes of seed or grain, which have already been separated with regard to width, length, and thickness. The gravity separator exploits the smallest differences in the specific weight of the product, and it is therefore possible to separate heavy kernels with high germination ability from light and less viable kernels. The gravity separator can also be used in laboratories for recycling or in chemical factories. The machine is constructed of steel with the oscillating grading deck of laminated wood; mounted on a convenient worktable.

The Westrup gravity separator has a positive pressure deck fan system with air volume throttle and interchangeable deck coverings. You can order our full size or reduced area decks for smaller lot sizes. The deck pitch is adjustable in both directions and the eccentric strokes and lengths are also adjustable. A tachometer is provided to monitor deck agitation frequency. The LA-K separates material into five product density fractions and collection trays are included. The unit is rated at 220 lbs (100kg) per hour on wheat. Complete with 4/5HP motor which requires 870 watts of power and generates 0–500 RPM, and one full or reduced area deck. Ship wt: 800 lbs, Ship dims (with stand): 50" (L) x 34" (W) x 66" (H).



Laboratory Gravity Separator with Full Sized Deck..... **No. LA-K/B**  
110V, 60Hz/1PH  
Laboratory Gravity Separator with Full Sized Deck..... **No. LA-K/C**  
220V, 50Hz/1PH  
Laboratory Gravity Separator with Full Sized Deck..... **No. LA-K/D**  
110V, 50Hz/1PH

Crating Charge .....**No. LA-K/DOM**  
Additional Full Size Deck Cover.....**No. LA-KD**  
Additional Reduced Area Deck .....**No. LA-KDR**  
Aspiration Hood.....**No. LA-KA**  
Large Feed Hopper .....**No. LA-KH**

### LA-LS Air Screen Cleaner

The Westrup LA-LS air/screen cleaner is a precision/fine cleaner for laboratory use as well as for small scale production in research stations, institutes etc. The LA-LS can be used for batch and continuous flow separation. It is very well-suited for preparation of all seed types such as vegetable seed, grain, oil seed, grass seed, clover seed, etc. as well as for flower seed and spices. It is capable of a continuous cleaning capacity of up to 120kg per hour on wheat. The machine is constructed of steel with sieveboat of laminated wood and mounted on a convenient worktable.

Cleaner includes steel table stand, top vibratory feed hopper, main eccentric drive with variable speed drive, one main shoe with short pre-scalp, and two main screens for scalping and sifting. Main screens with ball screen cleaning, pre and final aspiration, settling chamber with collection tray for lifted product and calibrated air controls. There is an inspection window in final air column, a bottom bag filter and side-mounted cyclone dust collector with bottom-mounted fan with adjustable air gates including white enamel collection pans for prime and cull products. The LA-LS is available in either 50 or 60Hz, 110 (with autotransformer) or 220V with start/stop and supplied with a 4/5HP motor with an RPM of 0–500 and requires 870 watts of power. Includes one set of screens; Sieveboat with 1 short scalping screen 250mm x 250mm and 2 long grading/fines screens 250mm x 500mm; screen area 0.34 m<sup>2</sup>; long screens with rubber ball cleaning; variable speed drive with frequency converter and digital readout. Ship wt: 660 lbs, Ship dims (with stand): 50" (L) x 44" (W) x 75" (H).



Air Screen Cleaner, 110V, 60Hz/1PH ..... **No. LA-LS/B**  
Air Screen Cleaner, 220V, 50Hz/1PH ..... **No. LA-LS/C**  
Main Screen No. 1 (1.0mm–1.95mm Perf.).....**No. LA-LSMS1**  
Main Screen No. 2 (2.00mm and Larger Perf.).....**No. LA-LSMS2**  
Pre-scalp Screen No. 1 (1.0mm–1.95mm Perf.).....**No. LA-LSPS1**

Pre-scalp Screen No. 2 (2.00mm and Larger Perf.).....**No. LA-LSPS2**  
Optional 3 Main Screens In a 'Z' Configuration..... **No. LA-LSZ**  
Large Feed Hopper .....**No. LA-LSH**  
Outlet Pipe Connections for Discharge to Floor Buckets.....**No. LA-LSOP**  
*Does Not Include Buckets*

Contact us for additional accessories not listed.



**LA-T Laboratory Indent Cylinder Separator**

The Westrup LA-T indented cylinder for laboratory use is designed for continuous flow (or batch) separation where kernels with different lengths but otherwise similar dimensions can be separated from each other. Short kernels are separated from long ones, broken kernels from whole ones, and also round seeds from oblong ones. Continuous cleaning capacity of up to 150kg (330 lbs) per hour on wheat can be achieved. The machine is constructed of steel and mounted on a convenient worktable.

The LA-T features quick-change cylinders, variable speed cylinder drive, a vibrating conveyor for liftings discharge, and two collection trays. The unit is supplied with one cylinder and operates on a 1/5HP motor that requires 90 watts of power and an eccentric shaft that operates at 18 or 40 RPM. The cylinder is 16" in diameter and 20" long. The Indent Separator can be converted to accommodate perforated cylinders in place of indents with the addition of the conversion kit offered below. Ship wt: 800 lbs, Ship dims (with stand): 50" (L) x 34" (W) x 63" (H).

Laboratory Indent Cylinder Separator, 110V, 60Hz/1PH.....	<b>No. LA-T/B</b>
Laboratory Indent Cylinder Separator, 220V, 50Hz/1PH.....	<b>No. LA-T/C</b>
Conversion Kit for Perforated Cylinders.....	<b>No. LA-G</b>
Additional Cylinders, Please Specify Indent or Perforated Hole Sizes.....	<b>No. LA-TC</b>



**LA-H Laboratory Brush Machine**

The Westrup Brush Machine, distributed by Seedbuero, features a set of adjustable brushes with interchangeable wire or perforated metal mantles for scarifying, polishing, and hulling seed – considered for pre-treatment of seeds before proper cleaning and grading. The brush machine is used for separating seeds

From pods or flowers, removing hair from seeds, splitting twin seeds, separating shells from seeds etc. Including a steel table stand, top feed hopper, main drive with two step pulley, woven wire mantle with internal brush agitation, one set of brushes (adjustable in two directions and independent of each other), discharge gate with calibrated opening, collection pans for thru product and end discharge product and dust suction including vacuum. Available in 220V or 110V, 50 or 60Hz, single phase power with start/stop. It operates with a 3/4HP motor and requires 1550 watts. The brush shaft revolves at 500–700 RPM. Ship wt: 800 lbs, Ship dims (with stand): 50" (L) x 32" (W) x 58" (H).

Laboratory Brush Machine, 110V, 60Hz/1PH.....	<b>No. LA-H/B</b>
Laboratory Brush Machine, 220V, 50Hz/1PH.....	<b>No. LA-H/C</b>
Optional Inlet Hopper with Vibratory Feeder.....	<b>No. LA-HVF</b>
Additional Mantles.....	<b>No. LA-HM</b>
Additional Set of Brushes.....	<b>No. LA-HB</b>
Frequency Converter for Variable Brush Speed.....	<b>No. LA-HFC</b>
Support Cage for Lighter Round Wire Type Mantles.....	<b>No. LA-HSC</b>

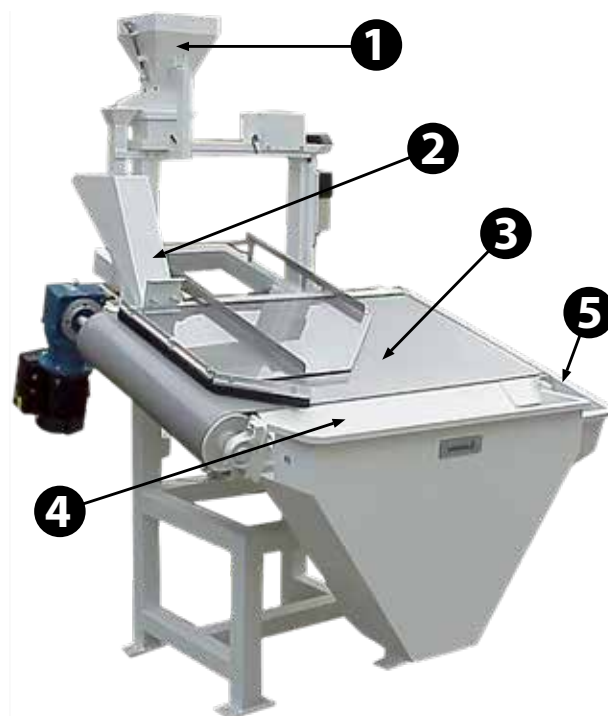


### LA-BG Laboratory Belt Grader

The LA-BG Belt Grader for laboratory use is designed for separation of rough surface seeds from smooth surface seed, or round seeds from other shaped seeds. For example vegetable seeds such as beet seeds, which have a rough texture, can be sorted from smooth seeds which will roll off the belt faster, whereas the texture of the radish seed holds onto the belt and allows the sorting to be done. The same is true of flower seeds such as primula and begonia. The machine is fitted with an inlet hopper and vibratory feeder with start/stop and potentiometer.

The PVC belt is 600mm wide with adjustable inclination via electrical actuator and with digital display. The unit is complete with adjustable belt drive from 10–30 RPM and counter for RPM as well as gearmotor. Built of steel construction.

Cleaning procedure: The product enters through the inlet hopper fitted with a vibratory feeder in the bottom. The feed pipe leads the product down to the belt. The round particles roll down the belt and are let out into the hopper. The more angular particles are led with the belt to the outlet. Ship wt: 1600 lbs, Ship dims: 60" (L) x 60" (W) x 76" (H).



#### Cleaning Procedure

1. The product enters through the inlet hopper (1) fitted with a vibratory feeder in the bottom.
2. The feed pipe (2) leads the product down to the belt (3).
3. The round particles roll down the belt and are led out into the hopper (4).
4. The more angular particles are led with the belt to the outlet (5).

Laboratory Belt Grader, 110v, 60Hz, 1PH.....	No. LABG
Laboratory Belt Grader, 220V, 50Hz, 1PH.....	No. LABG/C
Mandatory Export Crating .....	No. LABG/EX

### Mater Pneumatic Seed Scarifier

This seed scarifier is ideal for research or repetitive laboratory work on small samples. Easy to use, quick to load and process small seed samples. Clean out quickly with a blast of compressed air. This tool functions as two instruments in one: it can be used as either a scarifier or a debearder. With the abrasive liner it functions as a scarifier. Slip in the smooth tempered steel insert and it becomes a debearder. Capacity of up to three (3) grams. The diameter of the chamber is 2" (51mm) with a length of 3" (76mm). The unit includes: quarter turn valve with ¼ NPT (US thread) inlet, pressure gauge, one abrasive liner, and one tempered steel insert. This instrument requires compressed air at a minimum of 75 psi. Net wt: 6 lbs, Actual dims: 10" (L) x 6" (W) x 6" (H), Ship wt: 8 lbs, Ship dims: 12" (L) x 8" (W) x 8" (H).



Pneumatic Seed Scarifier (Includes One Each: PSS1010 and PSS1015).....	No. PSS2000
Replacement Abrasive Liners, Standard, Pkg. of Two.....	No. PSS1010
Replacement Abrasive Liners, Coarse, Pkg. of Two .....	No. PSS1011
Replacement Abrasive Liners, Extra Coarse, Pkg. of Two .....	No. PSS1012
Replacement Abrasive Liners pack of Two Each Grit: 80, 120, 150, 180 .....	No. PSS1013
Replacement Tempered Steel Inserts, Pkg. of Two.....	No. PSS1015
Inlet Adapter Fitting, ¼ NPT (US thread) to ¼ BSPT (Metric Thread).....	No. PSS1020



**Heavy-Duty Enclosed and Open Spiral Separators**

Spiral Separators are commonly used to separate good round-shaped seed from splits, weed seeds, chaff, hulls, stems, etc. and can be used to separate one kind of seed from another depending on their shape and size. They can be used to clean round-shaped products such as Soybeans, Canola, Mustard, Peas, Vetch, Coriander, Peas, Millet, Milo, Alfalfa, Peppercorn and much more.

Operating by gravity, the separator contains a spiral (or spirals) that are fed from a top hopper with an adjustable feed plate. The seed leaving the hopper runs over a cone divider which spreads the seeds evenly onto the inner flights. As material flows down the flights, the round seeds will travel at a much faster speed than the non-round material. Their momentum increases until the round seeds run over the edge of the inner flights, drop into the outer flights, and discharge through a spout at the bottom of the separator. The non-round materials remain on the small, inner flights and slide down to a separate discharge spout at the bottom.

Enclosed spiral separators are built into a cabinet using the cabinet as the framework and stand for the spiral. Reasons for enclosing spiral separators in cabinets are to decrease dust that is released into the air and to create a more uniform organized way to install this equipment into a seed cleaning line.

Determining the correct Spiral Separator to be used will depend on the diameter, shape, and weight of the material being separated. There is no single size spiral that will separate all types of materials. The degree of pitch and diameter of the inner flights on a spiral will determine the quality of separation. In some applications different types of materials that have similar size and weight may be separated on the same spiral, but the quality of separations may vary. **It is recommended that a sample be submitted for factory testing to determine which Spiral Separator will best meet your requirements.**

**Eco-friendly Process**

Since there are no moving parts, no power is required to operate the separators. When the feed has been properly set, the separator continues to operate automatically as long as there is seed in the hopper.

**Long-lasting Durability**

Heavy-duty construction manufactured with welded galvanized steel to withstand heat and vibration. Stainless steel available – Call for quote.

**Thorough Separation**

With four separating turns they help ensure effectiveness.

**Heavy-duty Lab Spiral Separator**

Standard Features: Four total inner flights – 3", 4", 5", 6". Position the (removable) feed hopper onto the flight that matches the material you are separating. Actual dims: 22" (L) x 22" (W) x 54" (H), Ship wt: 180 lbs, Ship dims: 28" (L) x 28" (W) x 66" (H).

Galvanized Lab Spiral Separator, 4 Turns..... **No. LAB4G**

**Heavy-Duty Single and Double Open and Enclosed Spiral Separators**

Standard Features: Four turns of separation, inner flight sizes are available in half-inch increments from 3" through 8" (part numbers shown from 4"-7" in full inch increments), left or right hand discharge. Pitch is determined by application. **Single Open Spiral:** Actual dims: 22" (L) x 22" (W) x 74" (H), Ship wt: 235 lbs, Ship dims: 28" (L) x 28" (W) x 82" (H). **Double Open Spiral:** Actual dims: 22" (L) x 40" (W) x 78" (H), Ship wt: 325 lbs, Ship dims: 28" (L) x 44" (W) x 84" (H).



Single Spiral Separator – Left Hand Discharge		Double Spiral Separator – Right Hand Discharge	
No. 40SHLG	Galv. Single Spiral Separator, 4" Flight	No. 40DHRG	Galv. Double Spiral Separator, 4" Flight
No. 50SHLG	Galv. Single Spiral Separator, 5" Flight	No. 50DHRG	Galv. Double Spiral Separator, 5" Flight
No. 60SHLG	Galv. Single Spiral Separator, 6" Flight	No. 60DHRG	Galv. Double Spiral Separator, 6" Flight

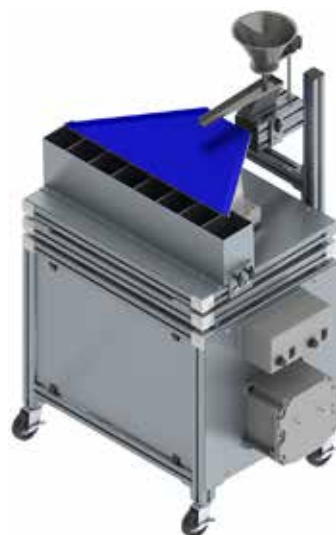
Enclosed Style Spiral Separators	
No. E150	Single Spiral Enclosed Separator
No. E2100	Double Spiral Enclosed Separator
No. E4200	Four Spiral Enclosed Separator

The above Spiral Separators are available in stainless steel. Enclosed Spiral Separators are also available in 1-10 core units with capacity of 50-500 BPH. Contact us for pricing and availability on these additional models.

### Oscillating Shape Sorter

The oscillating vibratory seed shape sorter is a great piece of precision equipment to help you quickly and easily sort rounds from non-round seed. The principle of operation is gravity and vibration in the same application. The oscillating shape sorter drops raw seed from a vibratory feeder on to the inclined vibratory table. The table vibration allows flat and semi-flat seed to walk up the table while the rounds roll straight off the table. There are 8 individual trays that can collect product that vibrates or rolls off the table. This equipment works well for very small seeds such as flower seeds. The capacity for this equipment ranges from 1–50 lbs per hour. Net wt: 165 lbs, Actual dims: 24" (L) x 30" (W) x 48" (H), Ship wt: 310 lbs, Ship dims: 38" (L) x 38" (W) x 58" (H).

Oscillating Sorter, 110V, 60Hz..... **No. OSC**  
 Oscillating Sorter, 220V, 50Hz..... **No. OSC/C**



### Belt Seed Grader

The belt seed grader performs an exceptional job of separating round material from non-round material. This can be used to separate weed seeds or mis-shaped seed or debris out of your seed lots. With an open flat belt design there is no area for cross-contamination to trap material when processing seed. Separating splits or broken kernels out of seed samples is very common with this equipment. The capacity for this belt grader is 1–5 bph depending on the commodity. Net wt: 300 lbs, Actual dims: 24" (L) x 42" (W) x 48" (H), Ship wt: 500 lbs, Ship dims: 51" (L) x 37" (W) x 58" (H).

Belt Seed Grader, 110V, 60Hz..... **No. BSG**  
 Belt Seed Grader, 220V, 50Hz..... **No. BSG/C**



### Portable Spiral Seed Cleaner

This Mobile Spiral Separator is a flexible portable alternative to stationary cleaners. It is a specialty cleaner that is the perfect solution for on-site cleaning of many commodities like Canola, Mustard, and Soybeans mixed with Corn. These portable cleaners can be used on other 'round from flat' separations, where there is a high percentage of round product with a small portion of flat or irregular seed. Four core spiral separators are mounted on tandem axle trailers to ensure most capacities or location demands can be met! These cleaners are versatile and can be configured with a gooseneck or bumper hitch trailer. Included are a seed hopper, inlet and outlet conveyors. Perfect for any firm that travels to perform 'on-site' cleaning! Image shows two 4-core spiral separators, but these cleaners can be configured to your specific needs. Please call us for a customized quotation.

Portable Seed Cleaner, 110V, 60Hz..... **No. PSC**  
 Portable Seed Cleaner, 220V, 50Hz..... **No. PSC/C**



## Large Plot Thresher

The Almaco Large Plot Thresher is a versatile, high-capacity machine perfect for threshing large plots of Cereals, Forages, Legumes and Small Grains, Ship dims: 134" (L) x 82" (W) x 75" (H), Ship wt: 2650 lbs, Export dims: 122" (L) x 82" (W) x 75" (H), Export wt: 2750 lbs.



### Standard Equipped:

- Overshot-style cylinder and concave with 14" diameter x 17<sup>5</sup>/<sub>8</sub>", with your choice of cylinder type
- Variable speed v-belt drive for threshing cylinder, cylinder speed range 300–1500 RPM
- Adjustable enclosed overshot concave matched to threshing cylinder type
- Steel feeding table, hinged opposite operator
- Operators platform
- Metal shaker pan
- Centrifugal fan winnowing blower with control shutter
- Canvas deflector baffles
- Winnowing pan with adjustable angle
- Seed collecting chute with side exit opposite operator
- V-belt drives for low maintenance and quiet operation
- Safety guards
- Screw-type leveling jack and trailer hitch for 2" ball (50mm)
- Rubber cushion axle assembly, tapered roller bearings, 15" rims and radial tires
- Combination tail/stoptlights, turn signals, rear reflectors
- Strawpuller assembly

### Selection Guide For Each Cylinder/Concave Style

Cylinder/Concave	Crops
Square-spiked tooth (most aggressive)	Cereals, Oats, Rice, Wheat, etc.
Round-spiked tooth	Sorghum, Soybeans
Metal raspbar	Grasses, Field Peas, Soybeans, Sunflower
Rubber-coated metal raspbar	Sorghum, Soybeans, Field Peas

Please select a Base Model and one each from: Power Configurations, Sieve Configurations, Threshing Cylinder and Concave Configurations, Machine Options and Accessories, and Domestic or Export Required Packing

Base Model	Power Configurations	Sieve Configurations	Threshing Cylinder and Concave Configurations	Machine Options and Accessories	Required Packing
No. SLPT	5HP, 220V/60Hz Electric Motor No. SLPT-A1	6mm Graepel Sieve (Grass) and Tailrake No. SLPT-C1	Rubber Raspbar No. SLPT-B1	Seed Catch Bucket No. SLPT-D1	Domestic Packing No. SLPT/DOM
	5HP, 220V/50Hz Electric Motor No. SLPT-A2	10mm Graepel Sieve for Small Seeded Crops and Tailrake No. SLPT-C2	Spiked Tooth No. SLPT-B2	Seed Tag Holder No. SLPT-D2	Export Packing Charges No. SLPT/EX
	8HP Honda Gas Engine with Elec. Start No. SLPT-A4	18mm Graepel Sieve and Tailrake No. SLPT-C3	Metal Raspbar No. SLPT-B3	Pneumatic Seed Delivery To Operator No. SLPT-D3	
	8HP Honda Gas Engine with Elec. Start with High Amp Charger No. SLPT-A5	20mm Graepel Sieve and Tailrake No. SLPT-C4	Metal Raspbar with Threshing Cylinder E-Brake No. SLPT-B4	Air Compressor with Horizontal Air Tank No. SLPT-D4	
	10HP Diesel Engine with Elec. Start No. SLPT-A7	22mm Graepel Sieve and Tailrake No. SLPT-C5		Electric Engagement Clutch for Threshing Cylinder Drive No. SLPT-D5	
		SN Sieve for Corn No. SLPT-C7			



## Low Profile Thresher

The SLPR is our most versatile thresher. It is preferred for duplicating results obtained with commercial combines; with a large capacity it is perfect for handling multiple crops including Cereals, Corn, Forages, Legumes, Sunflowers, and Small Grains. The Seedburo SLPR uses a metal raspbar cylinder and quick-adjust underslung concave (for easy feeding of bushy plant material) cylinder. Speed is adjusted via a single lever. Interchangeable cylinders are not needed. Design advantages include high capacity, easy interior inspection, and low machine height for safe, efficient operation from ground level. Ship dims: 122" (L) x 76" (W) x 67" (H), Ship wt: 2130 lbs, Export wt: 1730 lbs, Export dims: 98" (L) x 51" (W) x 62" (H).

### Standard Equipped:

- Enclosed cylinder, 14" (D) x 17 $\frac{5}{8}$ " (W) with 8 metal rasp bars
- Underslung, open-grated concave with single lever to adjust front and rear clearance
- Variable speed v-belt drive for threshing cylinder, speed range 300–1500 RPM
- Deflector-beater strawpuller
- Canvas deflector baffles
- Metal shaker pan
- Winninging pan with adjustable angle to control seed loss
- Clean grain chute with side exit
- Centrifugal fan winnowing blower with control shutter
- V-belt drives for low maintenance and quite operation
- Safety guards
- Screw type leveling jack and trailer hitch for 2" ball (50mm)
- Rubber cushion axle assembly, tapered roller bearings, 15" rims and radial tires
- Taillight assembly with stoplights, turn signals and rear reflectors



**Please select a Base Model and one each from: Power Configurations, Sieve Configurations, Threshing Cylinder Feed Configurations, Threshing Cylinder Drive Configurations, Concave Configurations and Domestic or Export Required Packing.**

Base Models	Power Configurations	Sieve Configurations	Threshing Cylinder Feed Configurations	Threshing Cylinder Drive Configurations	Concave Configurations	Required Packing
Gas and Electric No. SLPRGE	5HP, 220V/60Hz Electric Motor No. SLPR-A1	6mm Graepel Sieve (Grass) and Tailrake No. SLPR-E1	Feed Pan No. SLPR-B1	Standard Variable Speed Drive No. SLPR-C1	Standard Wire Spacing Concave No. SLPR-D1	Domestic Packing No. SLPR/DOM
Diesel Only No. SLPRD	5HP, 220V/50Hz Electric Motor No. SLPR-A2	10mm Graepel Sieve and Tailrake No. SLPR-E2	Belt Feed Conveyor No. SLPR-B2	Standard Variable Speed Drive and Cylinder Slow Down Drive No. SLPR-C2	Grass Wire Spacing Concave No. SLPR-D2	Export Packing Charges No. SLPR/EX
	8HP Honda Gas Engine w/ Elec. Start No. SLPR-A4	18mm Graepel Sieve and Tailrake No. SLPR-E3		Standard Variable Speed Drive and Electric Engagement Clutch No. SLPR-C3		
	8HP Honda Gas Engine w/ Elec. Start w/ High Amp Charger (For Use w/ Electric Accessories) No. SLPR-A5	20mm Graepel Sieve and Tailrake No. SLPR-E4		Cylinder Slow Down Variable Drive No. SLPR-C4		
	10HP Diesel Engine w/ Elec. Start No. SLPR-A7	22mm Graepel Sieve and Tailrake No. SLPR-E5				
		SN Sieve for Corn No. SLPR-E7				

## Small Bundle Thresher

Ideal for threshing small sheaves of grain and other similar crops, the large feed housing and threshing cylinder increase efficiency without sacrificing sample purity. Cleaning pan is removable and comes with four interchangeable wire screens; 1/8", 1/4", 3/8" and 1/2" mesh. Cylinder and blower speeds are adjustable via interchangeable pulleys. Ship wt: 430 lbs, Ship dims: 42" (L) x 31" (W) x 49" (H), Export wt: 400 lbs, Export dims: 35" (L) x 33" (W) x 48" (H).



★ MADE IN  
★ USA  
SSBTGE

### Standard Equipped:

- Your choice of threshing cylinder, overshot style, with matching concave
- Feeding hopper
- Grain rebounding baffle
- Auxiliary beater and strawpuller
- Bladed type winnowing blower with adjustable air intake
- Removable recleaning pan
- Interchangeable screens for recleaning pan
- V-Pulleys and V-Belts
- Safety cover guard screens
- 10" x 1.75" ball bearing semi-pneumatic wheels
- Hand truck-type handles
- Grain catch pan

### Selection Guide For Each Cylinder/Concave Style

Cylinder/Concave	Crops
Square-spiked tooth (most aggressive)	Cereals, Oats, Rice, Wheat, etc.
Round-spiked tooth	Sorghum, Soybean
Metal raspbar	Grasses, Field Peas, Soybeans, Sunflower
Rubber-coated metal raspbar	Sorghum, Soybeans, Field Peas

Please select a Base Model and one each from: Power Configurations, Threshing Cylinder and Concave Configurations, Extra Cylinder, Extra Concave, Optional Accessories, Export Spare Parts Kit, and Domestic or Export Required Packing.

Base Models	Power Configurations	Threshing Cylinder and Concave Configurations	Extra Cylinders	Extra Concaves	Optional Accessories	Export Spare Parts Kits	Required Packing
Gas and Electric No. SSBTGE	1HP, 110V, 60Hz Electric Motor No. SSBT-A1	Round Spiked No. SSBT-B1	Rubber Raspbar (Inverted V-Belt) No. SSBT-C3A	Rubber Coated Metal Raspbars No. SSBT-C4A	Extra Seed Catch Pan No. SSBT-C1	Electric Model No. SSBT-SPKE	Domestic Packing No. SSBT/DOM
Diesel Engine No. SSBTD	1HP, 220V, 60Hz Electric Motor No. SSBT-A2	Square Spiked No. SSBT-B2	Rubber Coated Metal Raspbars No. SSBT-C3B	Square Spiked No. SSBT-C4B	Removable Sacking Chute No. SSBT-C2	Gas Model No. SSBT-SPKG	Export Packing Charges No. SSBT/EX
	3.5HP Briggs and Stratton Engine No. SSBT-A3	Rubber V-Belt Raspbar T.C. and Rubber Coated Steel Rasbar Concave No. SSBT-B3	Square Spiked No. SSBT-C3C	Round Spiked No. SSBT-C4C			
	4HP Honda Engine No. SSBT-A4	Rubber Coated Steel Raspbars No. SSBT-B4	Round Spiked No. SSBT-C3D	Rubber Raspbar Inverted-V No. SSBT-C4D			
	4.2HP Yanmar Diesel Engine No. SSBT-A5	Metal Raspbars No. SSBT-B5	Metal Raspbars No. SSBT-C3E	Metal Raspbars No. SSBT-C4E			
	1HP 220V 50Hz Electric Motor No. SSBT-A6						

## Single Plant Belt Thresher

The SSPBT is designed specifically for threshing single plants of Edible Beans, Soybeans, Sugar Beets, or other similar crops that have padded grains or heads of grains. It has adjustable clearance between the belts to regulate threshing aggressiveness. The air column cleaning system will help clean and keep seed samples pure. There is a feeding chute and side delivery seed collection chute. Ship wt: 730 lbs, Ship dims: 50" (L) x 34" (W) x 63" (H), Export wt: 660 lbs, Export dims: 50" (L) x 36" (W) x 64" (H).

### Standard Equipped:

- 14" wide threshing belt
- Hinged safety cover guards
- Easily accessible start switch and safety kill switch
- Adjustable clearance between belts to regulate threshing aggressiveness
- Air column cleaning system for clean seed samples
- US standard size drive components and parts
- Quiet operations for indoor use
- Feeding tray directs crop into threshing area
- Side delivery seed collection chute
- Spring loaded door on seed chute to allow bagging small samples
- Spring loaded door can be locked in open position for continuous threshing
- Designed for use by single operator
- Trash containment curtain
- Clear plastic window installed in seed chute
- Electric models come with seed chute light



**Please select a Base Model and one each from: Power Configurations, Belt Type, Frame Type, Optional Accessories, Upper Trash Deflector, and Domestic or Export Required Packing.**

Base Models	Power Configurations	Belt Types	Frame Types	Optional Accessories	Upper Trash Deflectors	Required Packing
Electric Only No. SSPBTE	¾HP, 110V/60HZ Electric Motor No. SSPBT-A1	Upper and Lower Chevron No. SSPBT-B1	Axles with Tongue (Wheel Truck) No. SSPBT-C1	Root Cutter with Hand Grip on Thresher No. SSPBT-E1	Standard Trash Deflector No. SSPBT-D1	Domestic Packing No. SSPBT/DOM
Gas and Diesel No. SSPBTG	¾HP, 220V/60Hz Electric Motor No. SSPBT-A2	Upper and Lower Mini-Cleat Lock No. SSPBT-B2	Axle Lift Option for above No. SSPBT-C1A	Lighted Seed Chute (Standard On Elec. Units) No. SSPBT-E2	Trash Deflector with Window and Flipper No. SSPBT-D2	Export Packing Charges No. SSPBT/EX
	¾HP, 220V/50Hz Electric Motor No. SSPBT-A3	Upper and Lower Smooth No. SSPBT-B3	Stationary Stand (Elec. Models Only) No. SSPBT-C2	Seed Chute Extension for Feeding into Envelopes (One Included) No. SSPBT-E3	Threshing Plenum Adaptor with Window and Flipper No. SSPBT-D3	
	3HP, Air Cooled Gas Engine No. SSPBT-A4	Upper Smooth, Lower Chevron No. SSPBT-B4	Stationary Stand with Casters (Elec. Models Only) No. SSPBT-C3	Tag Holder No. SSPBT-E4		
	4.2HP, Air Cooled Diesel Engine No. SSPBT-A5	Upper Smooth, Lower Mini-Cleat Lock No. SSPBT-B5		Catch Bucket No. SSPBT-E5		
		Upper Chevron, Lower Mini-Cleat Lock No. SSPBT-B6				



**Hi-Resolution Seed Sorter**

The LabSeed 1000 color sorter is the highest detection resolution seed sorter on the market today with 0.042mm pixel resolution. The LabSeed 1000 was designed for the small to medium batch and continuous flow seed cleaning industry. It is user friendly and perfect for quick change overs between samples or seed lots. A hopper quickly feeds the product to an electromagnetic vibratory feeder that meters the flow into a single layer which slides down a 90mm (3.5") chute. The product is scanned on both sides by cameras programmed to detect defective or foreign material with customized RGB LED lighting with 16 million different hues to customize your sorting.

The LabSeed 1000 features a high resolution 8.5" LCD touchscreen, image reconstruction on the touchscreen and remote support for the lifetime of the machine. The LabSeed can see 22.75 pixels per mm, as opposed to standard sorters which only see 8.53 pixels per mm. This allows highly precise detection of the smallest seeds. If you are looking for a sorter with higher resolution, then look no further than the LabSeed 1000 with monochromatic sorting, though in unique situations, having RGB sensors which provide better results. Please call us to discuss your specific needs so we can make a recommendation for you.

The LabSeed 1000 includes automatic air jet cleaning and an air gun to make cleaning easy. The capacity for the LabSeed is approximately 400 lbs per hour depending on the type of product being cleaned and the contamination percentage. You can sort your samples in dark pixels, light pixels, size of foreign material, and material properties. Optional: remote access through Ethernet or remote control module for touchscreen tablet device. Monochromatic camera included and options for color camera or near-infrared are also available. Color sorters are constantly changing as technology improves – please contact us for our most current models and prices. Net wt: 325 lbs, Actual dims: 31.5" (L) x 26.3" (W) x 51" (H), Ship wt: 500 lbs, Ship dims: 36" (L) x 54" (W) x 54" (H).

**Starting Sample**

**Accepted Material**  
*(High Quality)*

**Rejected Material**  
*(Low Quality, Contaminations)*

**Rice**



**Seedcorn**



**Wheat**



Labseed 2.0, 120V, 60Hz, 1 PH .....	No. LABSEED
Labseed 2.0, 220, 50Hz .....	No. LABSEED/C
Table with Casters for the Labseed .....	No. LABSEED-TABLE



### Single Head Lab Thresher

The Kincaid Single Head Lab Thresher is a laboratory size thresher for use with single plants or small bundles. It can be used to thresh cereals as well as vegetables. The continuous air speed adjustment gives a perfect separation of the threshed crop from the dust and chaff making it suitable for grain breeders and similar research operations. Net wt: 164 lbs, Actual dims: 38" (L) x 20" (W) x 42" (H), Ship wt: 220 lbs, Ship dims: 40" (L) x 24" (W) x 44" (H).

#### Kincaid Single Head Lab Thresher Technical Specs:

- Touchscreen display
- Up to 20 customizable presets for multiple crop types
- Quick disconnect blower column shield for easy cleanout
- Quick disconnect threshing drum cover for easy cleanout or belt replacement
- 110V power supply
- 1/2 HP threshing motor
- 0-1250 RPM adjustable speed
- Manual threshing speed dial
- 0-3200 RPM adjustable speed column blower fan
- Manual fan dial
- Ramp-up cleanout button

#### Key Features

- Easy to use
- Faster cleanout
- Customizable settings presets



Single Head Lab Thresher.....	No. LABTHRESHER/B
<i>110V/60Hz, 1/2 Ph, 1.5 HP Electric Motor</i>	
Required Domestic Crating .....	No. LABTHRESHER/DOM

### Corn Sheller

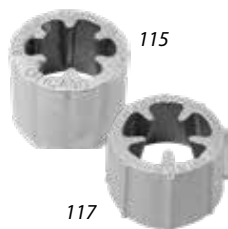
Seedburo's Corn Sheller is made of durable cast iron and is suitable for shelling ear corn with hand crank operation, approximately 10 seconds per ear. Clamps on to bins or barrels. Cob ejector included. Also hulls black walnuts. Net wt: 16 lbs, Actual dims: 10" (L) x 9 1/2" (W) x 12" (H), Ship wt: 18 lbs, Ship dims: 13" (L) x 13" (W) x 10" (H).



Corn Sheller.....	No. 116
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### Hand Corn Shellers

Cast aluminum. Rotary movement of wrist shells samples. Ear corn sheller measures 2 1/2" at large end, 1 7/8" at small end, popcorn sheller measures 2 3/8" at large end and 1 3/4" at small end. Ship wt: 1 lb, Ship dims: 8" (L) x 8" (W) x 4" (H).



Hand Sheller.....	No. 115
Popcorn Sheller.....	No. 117

### Corn Husking Peg

Suede eyelet adjustment at end. Heavy metal pin, plated 4 1/2", 3 finger compartments with suede lace for securing. Ship wt: 1 lb, Ship dims: 8" (L) x 8" (W) x 4" (H).



Husking Peg .....	No. 114
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### Corn Husking Pin

Combination 4 3/4", heavy steel plated pin with curved forefinger guard and heavy leather eyelet adjustment at end. Ship wt: 1 lb, Ship dims: 8" (L) x 8" (W) x 4" (H)



Husking Pin.....	No. 118
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### Corn Husking Hook

Heavy steel curved palm plate with corrugated hook in one piece. Palm pad and wristband, double hand strap. Ship wt: 1 lb, Ship dims: 8" (L) x 8" (W) x 4" (H).



Husking Hook .....	No. 119
Husking Hook; Left Hand.....	No. 119L



LPB500

### Land Pride Broadcaster Seeder

- Breaks-up and feeds nearly any dry, chaffy native seed and plant material with long awns, flowerheads and straw
- Handles unprocessed native seed: Spear, Needle and Thread, Porcupine, Wild Rye and Awned Wheat Grasses
- Eliminates expensive and time-consuming native seed cleaning
- Heavy-duty, aggressive, offset agitator, tractor-mounted 3 point hitch, PTO drive
- Also accurately seeds normal flowable, native, forage grass and grain seed and spreads granular fertilizer
- Seeds a 10–12 ft/3.1–3.7 m swath
- Adjustable dual hopper bottom openers to calibrate seeding rate
- 3 models with volume capacities of 5.8, 9.4 and 11.2 cu. ft (4.7, 7.5 and 9 bu or 0.17, 0.27 and 0.32 cu. m)
- Tough, waterproof, elastic vinyl hopper cover for seed dust control, rain and wind protection
- Integral hitch to tow harrows and roller packer to ensure good seed to soil contact.

Net wt: 100 lbs, Actual dims: 47" (L) x 47" (W) x 43" (H), Ship wt: 200 lbs, Ship dims: 54" (L) x 54" (W) x 50" (H).

Land Pride Seeder, Maximum Volume Capacity 5.8 cu. ft., 0.17 cu. meters .....	<b>No. LPB500</b>
Land Pride Seeder, Maximum Volume Capacity 9.4 cu. ft., 0.27 cu. meters .....	<b>No. LPB700</b>
Land Pride Seeder, Maximum Volume Capacity 11.2 cu. ft., 0.32 cu. meters.....	<b>No. LPB1000</b>
Required Crating.....	<b>No. LPB/EX</b>



HHSS

### Handheld Portable Seed Stripper

Developed for use in rugged terrain, ecologically sensitive areas, nursery and small plots the Hand Held Seed Stripper (HHSS), harvests a wide variety of native, horticultural and medicinal flower, grass, legume and crop seeds with little environmental impact. It is light and easy to use weighs only 17 lbs/7.7kg and is carried on a shoulder strap (supplied) or optional dual strap shoulder harness (not included). It is powered by a low maintenance, fuel-efficient, CARB-certified, 2-cycle gas engine. This rugged harvester is portable, durable, and trouble free. A collapsible driveshaft makes it easily portable in ATV's, boats, aircraft, on foot and horseback.

Three different 18" (45cm) wide interchangeable stripper reels are included. A heavy-duty ripper reel cuts off tough, round seed heads and pods such as Echinacea, Black-eyed Susan, Silphiums and Rose hips. The medium reel harvests most crop seeds, a variety of warm and cool season grasses, legume plus other wildflower and horticultural seeds. The light duty reel collects light, fluffy seed such as Little Bluestem, Asters and Goldenrods. Any species with an open seedhead at the top or outer edges of a plant can be harvested with the HHSS. Easy to clean as the seed is bagged right from the detachable hopper bag. Used on over 250 species in 44 countries since 1989. Net wt: 17 lbs, Actual dims: 82" (L) x 63" (W) x 24" (H). HHSS Ships in two cartons: **Box #1 (Harvest Draper Head):** Ship wt: 22 lbs, Ship dims: 24" (L) x 24" (W) x 17" (H). **Box #2 (Engine/ Driveshaft):** Ship wt: 15 lbs, Ship dims: 44" (L) x 11" (W) x 11" (H).

Hand Held Portable Stripper.....	<b>No. HHSS</b>	Optional Dual Strap Shoulder Harness.....	<b>No. HHSS-DSSH</b>
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SSH-SBA

### Hand Held Planters

Ideal for small to medium-sized plot planting or for selective replanting of previously seeded plots. Seed is manually dropped into top seed port and is conducted via the seed tube to the closed planting bit. The seed then remains captive within the planting bit, until the planter is rocked forward and the bit is opened. Two models are available. Ship wt: 9 lbs, Ship dims: 12" (L) x 5" (W) x 36" (H).

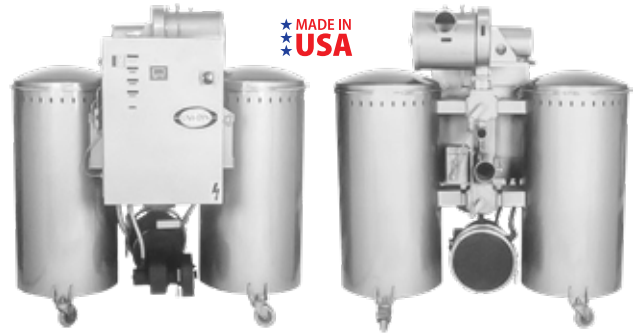
SSH-NBA: narrow barrel, generally preferred in tougher soil conditions or if additional seed depth is required, all metal barrel with an opening of 1 3/8" x 7/8". The bit depth penetration is adjustable to 3". Overall height is 35" and approximate weight is 4 lbs

SSH-SBA, standard barrel model with a wood back, wood handle and foot lever, ideal for planting in well-worked or sandy soils. The barrel opening is 2 1/2" x 3". Height is 33" and approximate weight is 4 lbs

Narrow Hand Held Planter .....	<b>No. SSH-NBA</b>	Replacement Jaw Return Spring.....	<b>No. SSP-S</b>
Standard Hand Held Planter.....	<b>No. SSH-SBA</b>	Required Export (Plywood Box) .....	<b>No. SSH/EX</b>

**Seed Storage Room Dehumidifier**

UNA-DYN dehumidifiers, distributed exclusively by Seedburo, remove moisture from air by forcing it through beds of dry desiccant, a compound that will attract a high percentage of its own weight in water. When a bed of desiccant has removed all the moisture it can hold, it is dried or “reactivated” by blowing hot air through it. While one bed is drying, the other is adsorbing moisture. This shifting from bed to bed is automatic and works in a continual cycle. It is important to order the humidistat with your dehumidifier if you would like to regulate your dehumidifier. If you don't use a humidistat to control your dehumidifier, your dehumidifier will continue to run even when you have reached your desired humidity. This becomes an added energy cost.



Front and back view of the A15SB/E

Humid air enters the dehumidifier at the humid air inlet. This air is filtered and then flows through the desiccant bed where it is dried. It is then forced out the dry air outlet. At the same time, air is drawn into the dehumidifier at the reactivation air inlet. This air is filtered, forced through the valve, across the heater and then through the desiccant bed that has become damp. Here, the heated air removes the moisture and thus reactivates the bed. This air then flows through the valve and is exhausted through the reactivation air outlet carrying the moisture with it in the form of a vapor.

**Features**

- Heavy-duty electrical components.
- Air filters are standard equipment.
- All components accessible without removing duct work or major dismantling.
- Optional Humistat available. Hair element to control relative humidity above 10%.
- Cast and machined aluminum valves.
- Heavy duty construction (14 ga. min.)
- Continuous seam, no spot welding.
- Optional casters and support frame.
- Stationary desiccant beds made of perforated steel. No fly screen, no sagging, flat beds.
- Desiccant easily accessible for periodic replacement.
- Permanent desiccant, nontoxic, non-corrosive.

**Three Models Available**

Model with 230V, 60Hz, 3 PH ..... <b>No. A15SB/E</b>	Model with 230V, 60Hz, 3 PH ..... <b>No. A30SB/E</b>	Model with 230V, 60Hz, 3 PH ..... <b>No. A75SB/E</b>
Adsorption Air Flow of 125 CFM	Adsorption Air Flow of 250 CFM	Adsorption Air Flow of 350 CFM
Connected Load: 9.8 KVA	Connected Load 9.8 KVA	Connected Load: 18.0 KVA
Net wt: 775 lbs, Ship wt: 850 lbs	Net wt: 775 lbs, Ship wt: 900 lbs	Net wt: 800 lbs, Ship wt: 975 lbs
Ship dims: 70" (L) x 47" (W) x 69" (H)	Ship dims: 70" (L) x 50" (W) x 72" (H)	Ship dims: 73" (L) x 52" (W) x 78" (H)

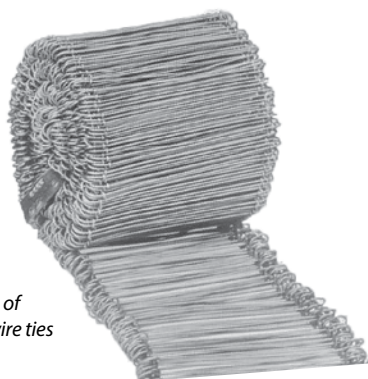
**Other Electrical Specifications Are Available**

Off/On Humistat, Optional (for All Models) .....	<b>No. AH</b>	Casters and Frame for A15 and A30 Model.....	<b>No. A15/30CF</b>
Replacement Adsorption Filter A15 and A30.....	<b>No. AF</b>	Casters and Frame for A75 Model .....	<b>No. A75CF</b>
Replacement Adsorption Filter A75 .....	<b>No. AF75</b>	Replacement Desiccant (200 lb Drum Minimum) .....	<b>No. A30-DESSICANT</b>
Replacement Reactivation Filter (All Models) .....	<b>No. RFA</b>		

**WE MUST HAVE the Following Information in Order to Determine Your Dehumidifier Requirements.**

1. How large is your room? (cu. ft.) \_\_\_\_\_ (Dims: W x L x H) \_\_\_\_\_
2. Is your room \_\_\_\_ air conditioned or \_\_\_\_ refrigerated?
3. What temperature do you maintain in the room? F°: \_\_\_\_\_ C°: \_\_\_\_\_
4. What relative humidity do you wish to hold? \_\_\_\_\_%
5. What is your ambient relative humidity? \_\_\_\_\_% Ambient temperature? F°: \_\_\_\_\_ C°: \_\_\_\_\_
6. How are your walls, ceiling and floor constructed? (i.e. cement, plaster, wood, gypsum, vapor tight) \_\_\_\_\_
7. Is the room \_\_\_\_ completely within a building or \_\_\_\_ have outside walls?
8. Number of: Doors \_\_\_\_\_ Windows \_\_\_\_\_
9. Can they be weather-stripped and made vapor tight? \_\_\_\_ Yes \_\_\_\_ No
10. How many people work in the room? \_\_\_\_\_
11. How often and for how long are the doors opened? \_\_\_\_\_
12. Is the room ventilated? \_\_\_\_\_
13. At what CFM rate? \_\_\_\_\_
14. Voltage Requirements: \_\_\_\_\_ Volts \_\_\_\_\_ Hz

**BAG TYING ACCESSORIES**



Bundle of 5000 wire ties

**Seedburo Loop End Wire Ties**

Our Loop End Wire Ties make bag closing simple, quick and economical. They assure speed and neatness with security and uniformity. These wire ties can be furnished in any gauge from 12–21, ranging in lengths from 3½"–48". Commonly used with our bagging tools No. 219A and No. 220 (shown below). All shipments are made in rolls of 5000 ties.

**Stainless Steel**

Gauge	5"	6"	7"	8"	9"	10"
18 Ga.	No. 5 X 18SS	No. 6 X 18SS	No. 7 X 18SS	No. 8 X 18SS	No. 9 X 18SS	No. 10 X 18SS
16 Ga.	No. 5 X 16SS	No. 6 X 16SS	No. 7 X 16SS	No. 8 X 16SS	No. 9 X 16SS	No. 10 X 16SS

**Galvanized**

Gauge	5"	5½"	6"	6½"	7"	7½"	8"	8½"	9"	10"
18 Ga.	No. 5 X 18	No. 5 1/2 X 18	No. 6 X 18	No. 6 1/2 X 18	No. 7 X 18	No. 7 1/2 X 18	No. 8 X 18	No. 8 1/2 X 18	No. 9 X 18	No. 10 X 18
17 Ga.	No. 5 X 17	No. 5 1/2 X 17	No. 6 X 17	No. 6 1/2 X 17	No. 7 X 17	No. 7 1/2 X 17	No. 8 X 17	No. 8 1/2 X 17	No. 9 X 17	No. 10 X 17
16 Ga.	No. 5 X 16	No. 5 1/2 X 16	No. 6 X 16	No. 6 1/2 X 16	No. 7 X 16	No. 7 1/2 X 16	No. 8 X 16	No. 8 1/2 X 16	No. 9 X 16	No. 10 X 16



220

**Pistol Return Twister**

The Pistol Grip Twister offered by Seedburo features a heavy steel hook with a wooden handle. Commonly used with our Loop End Wire Ties when more than 2½ turn twists may be required. Also used for untying wire ties. Unit requires only a simple "cranking" motion. Ship wt: 2 lbs, Ship dims: 8" (L) x 8" (W) x 4" (H).

Pistol Grip Twister.....**No. 220**



219A

**Spring Return Twister**

This heavy duty twister works great with our Loop End Wire Ties. One pull makes 2½ turn twists. The hook automatically returns to its original position. Ship wt: 3 lbs, Ship dims: 12" (L) x 10" (W) x 6" (H).

Spring Return Twister.....**No. 219A**

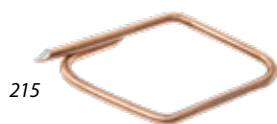


Left to right:  
353-5, 354-C6

**Seedburo Bag Needles**

The Seedburo Bag needles are made of the highest grade imported English steel and are certain to perform to your satisfaction.

5" Straight Spring Eye Needle .....**No. 353-5**      5" Curved Solid Eye Needle .....**No. 354-C5**  
 6" Straight Spring Eye Needle .....**No. 353-6**      6" Curved Solid Eye Needle .....**No. 354-C6**



215

**Diamond Deadlock Tag Fastener**

Made of heavy gauge galvanized steel wire. Available in quantities of 1000 or 5000.

Deadlock Tag Fastener.....**No. 215**



### Fischbein Portable Bag Closer

The rugged Fischbein Portable Bag Closer sews all kinds of paper, textile and poly bags dependably and stands up to the most demanding applications. This closer is simple to operate, even for inexperienced workers. Sews single thread type 101 chain stitch. The bag closer may be hand-held, mounted on a suspension unit, or on a Fischbein Carriage conveyor. An efficient internal oiling system lubricates all moving parts as the bag closer is operated. Housing is cast and machined to close tolerance.



MODEL F

It is available in 110V or 220V AC, or 12V DC versions. The unit is supplied with one package of needles, one cone of thread and operator's maintenance manual. Ship wt: 19 lbs, Ship dims: 15" (L) x 12" (W) x 15" (H).

- Fischbein Bag Closer, 110V, 50/60Hz.....No. MODEL F
- Fischbein Bag Closer, 220V, 50/60Hz..... No. MODEL F/A
- Fischbein Bag Closer, 12V DC Operation ..... No. MODEL F-12

### Bag Sewing Accessories

The Adjustable Reel-Type Suspension Balance holds the Model F Bag Closer within easy reach, relieving fatigue and protecting the closer from accidental damage. Ship wt: 7 lbs, Ship dims: 19" (L) x 13" (W) x 7" (H).



1550



D311N



DE5



D305, D310



D303, D301

#### Bag Closer Suspension

- Reel-Type Suspension Balance ..... No. 1550

#### Crepe Paper Tape (Carton of 10 Rolls, Approximately 1800 ft.)

- Natural Kraft ..... No. D311N
- White..... No. D311W

#### High Quality Thread, 65% Polyester / 35% Cotton Blend

- 8 oz Cones (for All Portable Models) (Each 8 oz Cone Will Sew Approximately 500 ft. Available in Cartons of 10 or 32 Cones)..... No. D305
- 2½ lb Cones..... No. D310
- 18 lb Jumbo Cones (For Belt Conveyor Models) ..... No. D318
- Needles for D, E, and Model F Units (Package of 25) ..... No. DE5

#### Specialty Selected Lubricants (Use These to Insure Maximum Efficiency from Fischbein Bag Closing Equipment)

- Cleaning Lubricant, 1 Gallon (for Cleaning Feed Mechanism Parts)..... No. D301  
*Quickly washes out all traces of abrasive and harmful dirt.*
- Thread Lubricant, 1 Gallon..... No. D302  
*Required for closing waterproofed or specially processed, paper or textile bags. Saturates entire cone in seconds.*
- Lubricating Oil, 1 Quart (for Lubricating All Parts) ..... No. D303  
*Lubricates properly under the most adverse sewing conditions. Flushes out abrasive dust and dirt accumulated on parts.*

### Fischbein Portable Bag Closer with Tape-Sewing Attachment

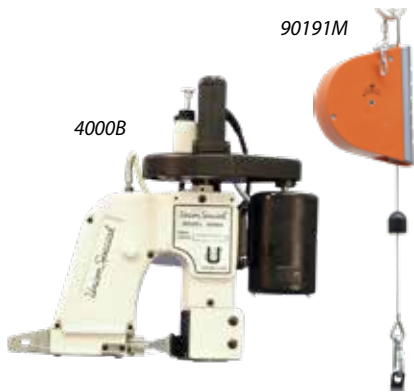
The Tape-Sewing Attachment allows the Model F closer to sew "stitch through tape" closures. The attachment uses 2" wide tape, which is available in the colors listed below. It includes closer, throat attachment, presser foot and tape attachment. Ship wt: 19 lbs, Ship dims: 15" (L) x 12" (W) x 15" (H).



MODEL F-T

- Fischbein Bag Closer, 110V, 50/60Hz.....No. MODEL F-T  
*with Components for Tape Attachment.*
- Fischbein Bag Closer, 220V, 50/60Hz..... No. MODEL F-T/A  
*with Components for Tape Attachment.*
- Replacement Tape Sewing Attachment..... No. 1650

**UNION SPECIAL SEWING MACHINES**



**Union Special Model 4000 Class**

The 4000 is a portable, single thread plain feed machine with built in thread chain cutter for efficient, fast and easy closing of bags. Sewing speed 1600–1800 stitches per minute (depending upon material). Stitch length, 3-1/2 stitches per inch. Sewing capacity 3/16" (12 plies of paper). Stitch/seam type 101 Ssa-1. Net wt: 12 lbs, Ship wt: 16 lbs, Ship dims: 15" (L) x 12" (W) x 16" (H).

- Bag Sewer, Single Thread Chainstitch, 110/125V, 50/60Hz .....No. **4000B**
- Bag Sewer, Single Thread Chainstitch, 220/240V, 50/60Hz ..... No. **4000A**
- Top Lock Spring Balancer.....No. **90191M**
- Hanging Hook (Needed to Hang Machine on Spring Balancer).....No. **90191MA**
- Extra Needles (Pkg. of 1).....No. **D5**



**Union Special Model 2200**

The Union Special Class 2200 combines upper and lower feed for better gripping on both sides of the bag and accommodates all types of bag material, including geosynthetic material.

The 2200 has a fiberglass-reinforced break-resistant polyamide handle and housing for the electric motor and weighs approximately 11 lbs, so it is lightweight and well-balanced for effortless operation. The motor ball bearings are dust-proof and permanently lubricated. Net wt: 11 lbs, Ship wt: 15 lbs, Ship dims: 17" (L) x 9" (W) x 18" (H).

**Standard Equipped:**

- Adjustable stitch length: 3–8 1/2 per inch
- Sewing capacity of up to 3/8" or 24 plies of paper
- Single thread chain or two thread double locked stitch available
- Built-in thread chain cutter
- 1200–1700 stitches per minute (depending upon material)
- Direct drive, fan cooled, 1800 RPM electric motor
- Stand-up feature (can stand in an upright position when not in use)

- Bag Sewer, Two Thread Chainstitch, Type 401, 110V, 50/60Hz ..... No. **2200B**
- Bag Sewer, Two Thread Chainstitch, Type 401, 220V, 50/60Hz .....No. **2200A**
- Bag Sewer, Single Thread Chainstitch, Type 101, 110V, 50/60Hz.....No. **2200BA**
- Bag Sewer, Single Thread Chainstitch, Type 101, 220V, 50/60Hz.....No. **2200AA**
- Top Lock Spring Balancer ..... No. **90191M**
- Hanging Hook (Needed to Hang Machine on Spring Balancer) ..... No. **90191MA**
- Bag Feed-In Guide and Guard (Short)..... No. **2203E**
- Bag Feed-In Guide and Guard (Long)..... No. **2103E**
- Pedestal for Hands-Free Operation, Foot Pedal Operated .....No. **H1400FWS**
- Extra Needles, Pkg. of 50.....No. **2200NEEDLE**

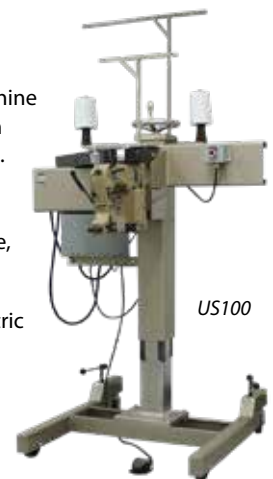


**Union Special Model 80800CN Sewing Head**

The 80800CN is a heavy duty, plain closure, standard style head sewing machine for closing filled bags and sacks with a two thread double-locked chainstitch (stitch style 401). Thread chain cutting by continuously driven nibbler knives. Stitch length adjustable from 6.5–11mm. Sewing capacity on paper up to 32 piles depending on weight of paper. Up to 1800 SPM, depending on stitch length, operation and material. It is used for closing filled bags of burlap, jute, cotton, plastic and paper.

The 80800CN is used with the US100, basic pedestal with sewing motor, electric controls and movable base for use with the 80800CN head. The US100 has a telescopic column with hand wheel height adjustment, which has square, instead of round, construction to reduce unwanted twisting of the column. The US100 also has a swing out sewing machine mounting plate for easy access to the machine for threading, inspection and maintenance work and foot activated switch.

**80800CN:** Ship wt: 72 lbs, Ship dims: 24" (L) x 19" (W) x 19" (H). **US100:** Ship wt: 940 lbs, Ship dims: 48" (L) x 48" (W) x 76"(H).



- Bag Sewing, Single Needle, Plain Closure, Type 401 Stitch..... No. **80800CN**
- Basic Sewing Pedestal, Standard, 230V/3PH/60Hz..... No. **US100**
- Basic Sewing Pedestal, 230V/3PH/50Hz .....No. **US100/C**
- Mandatory Crating Charge for US100 Pedestal (Domestic or Export)...No. **US100/DOM**

## Bucket Elevators

The B3 and C3 series of Universal Bucket Elevators offer smooth elevation of most free flowing materials and provide various capacities to meet most requirements. For fragile materials or for materials weighing more than 60 pounds per bushel, units with slower belt speeds are recommended. All standard units are provided in carbon steel (blue enamel) construction and are shipped “broken down”. These elevators are designed for quick, on-the-job assembly for any installation.

Models with an “easy dump” (ED) are designed to dump the product onto the rear side of the preceding bucket to slow the product before it builds up any speed in its fall. This will greatly reduce the amount of damage that can occur with commodities that require gentler handling.

### Selecting The Proper Model

*These factors should be considered when choosing a bucket elevator*

1. Capacity desired
2. Type of material (commodity)
3. Weight and characteristics of the material
4. Intake and discharge options required
5. Gentleness of handling required
6. Discharge height and overall height

#### Drive Packages for B3 and C3 Elevators (Motor Not Included)

#1 Drive Package .....No. DP1

*Includes V-Belt, Sheaves, Bushings, Motor Mount and Dive Guards*

#1 Backstop .....No. BS1

*The Factory Recommends the Use of a Backstop with Drive Package*

#2 Drive Package .....No. DP2

*Includes Shaft Mounted Gear Reducer, V-Belt, Sheaves, Bushings, Motor Mount and Drive Guard*

#2 Backstop .....No. BS2

*The Factory Recommends the Use of a Backstop with Drive Package*

#4 Drive Package .....No. DP4

*Includes Shaft Mount Wormgear with 3HP, TEFC Motor (Specify Voltage)*



Left to right: Model B3, Model C-3 shown with optional #4 drive package

Model	No. B3-75ED	No. B3-200	No. B3-300	No. C3-175ED	No. C3-500	No. C3-700
Capacity - Free	75 BPH	200 BPH	300 BPH	175 BPH	500 BPH	700BPH
Flowing Material @	94 CFH	250 CFH	375 CFH	220 CFH	630 CFH	875 CFH
75% Bucket Fill	2.7 CMH	7.0 CMH	10 CMH	6 CMH	17 CMH	24 CMH
TPH @ 50 lbs/ft3	2.25	6.25	9.25	5	15	21
TPH @ 75 lbs/ft3	3.5	9.3	14	8	23	32
Belt Speed	82-98 FPM	185 FPM	270 FPM	110-125 FPM	270 FPM	335 FPM
Headshaft RPM	70-90 RPM	170 RPM	250 RPM	85-95 RPM	200 RPM	245 RPM
Bucket Spacing	3¼"			4¼"		
Head Casing	14 Gauge			12 Gauge		
Headshaft Diameter	1¾" Diameter			1¾" Diameter to 60', 1⅞" Diameter Over 60'		
Headshaft Bearing	Ball Bearing Pillow Block					
Head Pulley	4¼" Diameter with Vulcanized Rubber Lagging			5¼" Diameter with Vulcanized Rubber Lagging		
Bucket	3¾" x 3" Plastic or 18 Gauge Steel			6" x 4" Plastic or 18 Gauge Steel		
Belting	4" Wide PVC, Rubber Optional			6½" Wide PVC, Rubber Optional		
Legging	16 Gauge Twin Box Columns					
Boot Casing	12 Gauge					
Bootshaft	1¾" Diameter					
Bootshaft Bearing	1¾" Two Bolt Flange					
Boot Pulley	Slatted, Self Cleaning Style					
Construction	Carbon Steel (Galvanized, 304 Stainless Steel Optional)					
Drive Package	Optional					
Motor	Optional					

## Stackable Polymer Elevator Buckets

Seedburo offers 4B stackable elevator buckets which provide a range of heavy-duty CC style elevator buckets designed to outperform other agricultural buckets by offering greater capacities, longer life and cleaner discharge. This style of 4B buckets are made of virgin HDPE and will nest inside one another for reduced storage and shipping space. This feature will save you on freight charges compared to traditional buckets. The unique patent-pending design includes tapered sides for improved filling and discharge, as well as the Iceberg Edge™ — a thick front lip design which eliminates bowing, therefore maintaining the original capacity and a clean discharge. The CC-S bucket provides greater durability and maximum wear life. Also these buckets feature a wingless profile for closer spacing and greater capacities.



## 4B - CC-S Stackable Bucket

Nominal Size	Part Number	Dimensions				Standard Bolt Holes				Weights and Packaging			
		Length	Projection	Front Depth	Back Depth	Thickness	No. of Holes	Bolt Size	Hole Center	Dist. Down	Weight in lbs	Pkg. Qty.	Pkg. Wt.
3x2	No. CC-SP032	3 <sup>5</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>2</sub>	1 <sup>3</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>16</sub>	2	1/4	1 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	.20	48	11
4x3	No. CC-SP043	4 <sup>5</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>16</sub>	2	1/4	2 <sup>1</sup> / <sub>2</sub>	7 <sup>7</sup> / <sub>8</sub>	.25	48	14
5x4	No. CC-SP054	5 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	1/4	2	1/4	3 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	.45	36	18
6x4	No. CC-SP064	6 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	1/4	2	1/4	4 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	.52	36	20
7x4	No. CC-SP074	7 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>7</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>16</sub>	1/4	3	1/4	2 <sup>11</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	.58	36	22
6x5	No. CC-SP065	6 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	2	1/4	4 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	.82	14	13
7x5	No. CC-SP075	7 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	3	1/4	2 <sup>11</sup> / <sub>16</sub>	1 <sup>7</sup> / <sub>8</sub>	.91	14	14
8x5	No. CC-SP085	8 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	3	1/4	3 <sup>1</sup> / <sub>16</sub>	1 <sup>7</sup> / <sub>8</sub>	.99	14	15
9x5	No. CC-SP095	9 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	3	1/4	3 <sup>5</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1.10	14	16
10x5	No. CC-SP105	10 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	3	1/4	4 <sup>1</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1.20	14	18
11x5	No. CC-SP115	11 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	4	1/4	3	1 <sup>7</sup> / <sub>8</sub>	1.30	14	20
12x5	No. CC-SP125	12 <sup>3</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>32</sub>	1/4	4	1/4	3 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	1.37	14	21
8x6	No. CC-SP086	8 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	3	1/4	3 <sup>1</sup> / <sub>16</sub>	2	1.24	16	21
9x6	No. CC-SP096	9 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	3	1/4	3 <sup>5</sup> / <sub>8</sub>	2	1.37	16	23
10x6	No. CC-SP106	10 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	3	1/4	4 <sup>1</sup> / <sub>8</sub>	2	1.50	16	25
11x6	No. CC-SP116	11 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	4	1/4	3	2	1.58	16	27
12x6	No. CC-SP126	12 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	4	1/4	3 <sup>3</sup> / <sub>8</sub>	2	1.72	16	29
13x6	No. CC-SP136	13 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	4	1/4	3 <sup>5</sup> / <sub>8</sub>	2	1.85	16	31
14x6	No. CC-SP146	14 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>16</sub>	9 <sup>9</sup> / <sub>32</sub>	5	1/4	3	2	1.96	16	33
12x7	No. CC-SP127	12 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	5	7 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>16</sub>	4	5/16	3 <sup>3</sup> / <sub>8</sub>	2	2.65	12	33
14x7	No. CC-SP147	14 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	5	7 <sup>1</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>16</sub>	5	5/16	3	2	3.02	12	37
10x8	No. CC-SP108	10 <sup>13</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	13 <sup>13</sup> / <sub>32</sub>	3	5/16	4 <sup>1</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	3.17	9	30
11x8	No. CC-SP118	11 <sup>13</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	13 <sup>13</sup> / <sub>32</sub>	4	5/16	3	2 <sup>3</sup> / <sub>8</sub>	3.42	9	32
12x8	No. CC-SP128	12 <sup>13</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	13 <sup>13</sup> / <sub>32</sub>	4	5/16	3 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	3.65	9	34
14x8	No. CC-SP148	14 <sup>13</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	13 <sup>13</sup> / <sub>32</sub>	5	5/16	3	2 <sup>3</sup> / <sub>8</sub>	4.15	9	39

## Steel Elevator Bolts

Include Finished Hex Nuts, Split Ring Lock Washer and Fender Washer

Length	Norway 1/4"	Norway 5/16"	Fanged 1/4"	Fanged 5/16"
1"	No. EB141	No. EB5161	No. FB141	No. FB5161
1 <sup>1</sup> / <sub>4</sub> "	No. EB14114	No. EB516114	No. FB14114	No. FB516114
1 <sup>1</sup> / <sub>2</sub> "	No. EB14112	No. EB516112	No. FB14112	No. FB516112

Left: Norway Flat Countersunk Head with hex nut, lock washer and fender washer

Right: Fanged Head Bolt with hex nut, lock washer and fender washer





**Portable Bulk Scale**

The manual Portable Bulk Scale, 864 or 864M, can be used to improve mixing accuracy and save you in time and labor. No part of the beam protrudes above the top of the hopper. The 1,000-pound capacity hopper, made of 12 and 14 ga. steel, rides on large 10" and 6" rubber-tired wheels. The hopper has a quick gravity bottom discharge which is 10" x 14" and is controlled at the operator's end of the buggy. Unit has push handle and wheel brakes. The scale counterweight is included and installed prior to shipping. The weights on the rod cannot fall off with the rod basket in place. The weigh buggy measures 36½" wide and 42" high, front height of the hopper is 32¾" high. The Bulk Scale has a 17 cu. ft. capacity hopper (about 800 lbs of shelled corn) and sits on a beam scale where the main beam reads 1000 lbs x 100 lbs, and the fractional beam reads 100 lbs x 1 lb and the metric unit reads 455kg. x 45kg. on the main beam and 50kg x 200g on the fractional beam.



MADE IN USA

The digital Portable Bulk Scale, 864D, is the same construction at the 864, but has a 120 Plus digital weight indicator with a rechargeable battery pack. The indicator has a large (0.82") six-digit LCD display with printer port (output only) and RS232 communications at up to 38,400 BPS with 500-character print ticket format (printer not included). Reads in pounds and ounces or kilos and grams. Reads in pounds or kilos.

Portable Bulk Scale, Manual Beam, in Pounds.....	<b>No. 864</b>	Domestic Packing for Bulk Scale.....	<b>No. 864/DOM</b>
Portable Bulk Scale, Manual Beam, in Kilos.....	<b>No. 864M</b>	Export Packing for Bulk Scale.....	<b>No. 864/EX</b>
Portable Bulk Scale with Digital Weigh Indicator, in Pounds or Kilos.....	<b>No. 864D</b>		

**Factory Cat Walk Behind Sweeper**

Looking for an easier way to clean-up that flat storage building? Rather than using 10 men with brooms, why not invest in a walk behind sweeper? We've spoken to numerous elevator managers that tell us they have saved tens of man-hours and thousands of dollars in this one investment!

Standard features are all steel construction, powder-coated paint/dichromate plating, 185AH Battery, automatic on-board 25-amp charger, main stainless steel mix broom and poly side broom. There is a 'baghouse' type lifetime Polymer filter that filters particles to 0.1 microns. The side broom picks up dirt in corners and a large main broom under the machine sweeps up the dirt and debris from the floor and packs it into the steel hopper. Meanwhile, the second stage vacuums up the dust and traps it in the 'baghouse filter'. A stainless steel adjustable handle bar makes it easy for all employees to use and it has a 'low-battery' warning light. With an outstanding 3-year parts warranty (excluding wear items) and 1-year labor warranty, it will be your employees favorite piece of equipment!



MADE IN USA

34-SWEEPER

The Walk Behind is self-propelled, has a 10" diameter self-adjusting main broom (26" x 10") and large powerful 17" side broom with a cleaning width of 33". Front drive wheels are 10" x 3", rear caster wheels are 5" x 2". No need for costly maintenance because there's no oil to change, brooms to reverse, fuel to spill, or tanks to exchange – just put the machine on charge after every shift! The Walk Behind runs on a 12 DVC rechargeable battery with 1HP drive power. Sweeper can be purchased with an optional keyed lockout switch and optional heavy duty front bumper. Speed control is 0 to 3 mph. Continuous sweeping runtime rated at 3 to 5 hours. Hopper capacity is 2.0 cubic feet (56 liters). Actual dims: 58" (L) x 31" (W) x 38" (H), Net wt: **Without batteries:** 320 lbs, weight with standard batteries 450 lbs.

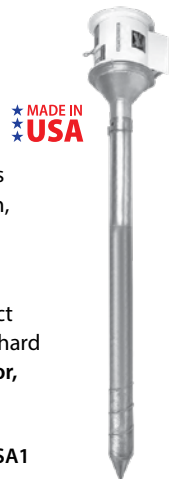
Factory Cat Walk Behind Sweeper, 110V, 50/60Hz Charger.....	<b>No. 34-SWEEPER</b>	Heavy Duty Bumper (installed).....	<b>No. 34-SWEEPER-B</b>
Factory Cat Walk Behind Sweeper, 220V, 50/60Hz Charger....	<b>No. 34-SWEEPER/A</b>	Key Switch Lockout.....	<b>No. 34-SWEEPER-LOCK</b>

**Seedburo Spot-Aerator**

This is the only Spot-Aerator that offers such a high pressure 12" diameter tubeaxial fan. Fan delivers 650 CFM against 1½" static pressure (water gauge) or 1300CFM against ½" static pressure.

Spot-Aerator incorporates a 10' x 10' polyethylene apron which prevents "short-circuiting" or channeling of air right next to the duct. This short circuiting happens on other spot aerators because high performance fans used with small ducts create high velocities. In addition, the apron will greatly increase the drawing capacities of the Spot-Aerator. The Seedburo Spot-Aerator includes a 5" angle ring, 2' of 5" diameter, non-perforated tubing, 4' of 5" diameter perforated tubing and a 6" long closed point.

The Spot-Aerator is easy to insert and remove from any grain mass. The rugged spiral duct allows the operator to turn the complete duct length into the grain in a matter of minutes. The "Natural" spiral of the duct makes this possible. Other units with auger-type spirals are hard to insert because they go into grain as a screw goes into hard wood. **Fan:** Ship wt: 65 lbs, Ship dims: 20" (L) x 15" (W) x 15" (H), **Connector, Ducts and Apron:** Ship wt: 20 lbs, Ship dims: 21" (L) x 21" (W) x 16" (H). **Tube:** Ship wt: 21 lbs, Ship dims: 80" (L) x 4" (W) x 6" (H).



MADE IN USA

Spot-Aerator, ¾HP, 115V, 1PH, TEAO High Pressure Tubeaxial Type Motor, 3450 RPM.....	<b>No. SA1</b>
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WDC3V46C

### Watchdog "Elite" Hazard Monitor System

The Watchdog™ Elite will monitor belt alignment, belt speed, continuous bearing temperature, pulley alignment and plugged condition for bucket elevators and conveyors. The system incorporates microprocessor control that provides an LCD display of elevator status messages (available in 4 different languages) and super bright LED display shows belt speed. Calibration and set-up parameters are accessed via a password and front panel touch buttons. Approvals: US – Class II Div. 2, Groups F & G. Canada – Class II Div. 1, Groups E, F & G. Europe – CE, ATEX, IECEx (available). Input voltage: 120–240 VAC or 24 VDC. Actual dims: 11.75" (H) x 9.5" (W) x 5.25" (D).

Features: Monitors elevators and conveyors, user friendly menu set-up, LED belt speed indication, LCD message status, fully programmable to optimize elevator/conveyor operations, LED alarm indications and power status, relay contacts and RS485 outputs, PLC interface and optional software, alarm and shutdown features and wireless (RS485) connectivity options.

Watchdog™ Elite Control Unit 110/240V/24VDC ..... No. **WDC3NV46C**    PLC Interface Board Class II Div. 1/2 ..... No. **WDPLCB2V4C**



P8002V10FC

### P800 Proxswitch

The P800 Proxswitch is an inductive sensor designed to detect shaft speed, shaft position, gate position or object presence. The P800 is a CSA approved Class II, Div. 1, Group E, F, G. limit switch style proximity sensor, which works on the damped oscillator principle. No contact is made between the sensor and the object being monitored. The P800 will detect a ferrous object at a maximum distance of 1/2" and a non-ferrous object at 5/16".

The Whirligig® is a bolt on three-in-one universal shaft sensor mount. The P800 sensor mounts to the Whirligig® and the complete assembly bolts to the machine's shaft. The whole assembly moves with the shaft and eliminates issues with shaft vibration. Requires no engineering or fabrication.

P800 (Contact Closure Version), 12–240 VDC/24–240 VAC , Used for Shaft Position, Gate Position or Object Presence ..... No. **P8002V10FC**  
 Whirligig® Combined Target/Bracket/Guard ..... No. **WG1-4B-4**  
 Mag-Con Magnetic Connector 2" Diameter ..... No. **MAG2000**



### Touchswitch Belt and Pulley Alignment Sensor

The Touchswitch is an electro-mechanical limit switch with no moving parts that detects belt tracking and alignment problems on bucket elevators and conveyors. The sensors are usually mounted in pairs on opposite sides of the machine. The sensors can be connected directly to the Watchdog Elite.

Touchswitch, 24 VDC Standard Sensor ..... No. **TS2V4C**



ADB20V3C/D2

### ADB Series Adjustable Depth Bearing Temperature Sensors

The ADB sensor is used on any application where bearing temperature monitoring is desired or required. The ADB series sensors have been designed to allow the depth of the sensor to be adjustable depending on application. The sensors screw directly into a bearing housing through the existing grease zerk thread. Each sensor is fitted with a grease zerk to allow lubrication of the bearing without the need to remove the sensor.

NTC Standard Thermistor Sensor: 2 Inch Probe ..... No. **ADB20V3C/D2**  
 NTC Standard Thermistor Sensor: 4 Inch Probe ..... No. **ADB20V3C**  
 ADB Probe Wrench ..... No. **ADBW**



BSE1V10C

### Binswitch Elite Capacitance Point Level Switch

The Binswitch Elite Sensor detects level or plug situations for bulk granular solids or liquids in tanks, bins, or silos and can be used as a plug or choke detector in chutes, conveyors and elevator legs. The programmable sensor options operate on 12–240 VDC or 24–240 VAC. The 30mm nylon housing is corrosion and abrasion resistant, dust-tight, and waterproof. Features applications for level or plug sensing, adjustable sensitivity, magnetic calibration, IP65 Protection, CSA Class II Div. 1 Groups E, F & G approved, IP67 protection.

Binswitch Elite 5 Wire (24–240 VAC or 12–240 VDC) ..... No. **BSE1V10C**    NPT Conduit Adapter, 3/4" ..... No. **A34NPT**  
 Binswitch Elite 2 Wire (24–240 VAC/VDC – Universal Supply) ..... No. **BSE2V10C**    NPT Mount, 1 1/4" ..... No. **BMPA**  
 Mounting Plate ..... No. **SMP**    Abrasion Shield, 1 1/4" NPT Mount ..... No. **BAS**

### Bin-Master Rotary Automatic Level Indicator

The Seedburo Rotary Level Indicator operation is based on a low torque, slow speed synchronous motor. The motor rotates a paddle which senses the presence of material at the level of the unit. As a high level indicator, the paddle will rotate constantly until interrupted by material stalling its motion. As a low level indicator, the paddle will begin to rotate as soon as material has dropped below the desired level. This actuates a micro switch that controls an audible or visual signal. BinMaster's specially designed synchronous motor features "de-energized" operation which shuts the motor down when material is present, rather than remaining in a 'stalled' condition. The enclosure features a twist-off cover with no-bolt access to the internal components of the rotary, making the unit easy to open for wiring or service. Net wt: 4 lbs, Ship wt: 5 lbs, Ship dims: 8" (L) x 6" (W) x 8" (H).



Power Pak, Expl. Proof-Class II, Group G, (CSA), 110V.....	<b>No. BMRX</b>	Side Mounting Plate, Mild Carbon Steel.....	<b>No. GRSMP</b>
Power Pak, Expl. Proof-Class II, Group G, (CSA), 220V.....	<b>No. BMRX/A</b>	Top Mounting Plate, Mild Carbon Steel.....	<b>No. GRTMP</b>
Solid Shaft Coupler, Stainless Steel.....	<b>No. GRSS</b>	1½" Nylon Paddle.....	<b>No. GRNP</b>
Flexible Shaft Coupler, Stainless Steel.....	<b>No. GRFC</b>	1½" Stainless Steel Paddle.....	<b>No. GRSP</b>

### Bin-Master Diaphragm Switch

Bin-Master indicators can be used in single or multiple units to provide automatic on-off switching, activate relays, actuate audible or visual signals and many other control tasks. Ideal in supply bins, storage silos, conveyors and elevators. Easily installed, these indicators consist of a sensitive micro-switch inside of a heavy cast housing. The switch is activated when material presses against a flexible neoprene diaphragm. Operates on 125V, 250V or 460V A.C. Operating temperatures -30°F to 220°F, bulk density 15–60 lbs per bushel. **BM45 series:** Net wt: 3 lbs, Actual dims: 6⅝" (W) x 7" (H) x 2⅝" (D), Ship wt: 4 lbs, Ship dims: 12" (L) x 10" (W) x 5" (H). **BM65 series:** Net wt: 3 lbs, Actual dims: 8" (W) x 6¾" (H) x 5" (D), Ship wt: 4 lbs, Ship dims: 12" (L) x 10" (W) x 5" (H).



General Purpose Switch, Heavy Duty, Mounts Inside Bin, 15–60.....	<b>No. BM45RH</b>
General Purpose Switch, Heavy Duty, Mounts Externally 15–60.....	<b>No. BM45FH</b>
Expl. Proof (Class II, Group G) Switch, Std., Back Mount (Mounts Inside Bin).....	<b>No. BM65R</b>
Expl. Proof (Class II, Group G) Switch, Std., Front Mount (Mounts Externally).....	<b>No. BM65F</b>

### Bin-Master Capacitance Probe

The PROCAP series capacitance probes use advanced integrated circuit technology operating at low frequency to achieve both high sensitivity and stable calibration. The probe uses a simple timing technique that compares the discharge time of the probe capacitance to that of a reference capacitance. Calibration stability, along with static discharge survival, and RF immunity due to low, 6 KHz operation below FCC regulations, are the three main reasons why these sensors perform so well. Features an LED status light, triple-threaded screw off cover, dual conduit entries, DPDT relay controls, selectable fail-safe protection, FDA recognized powder coat finish, shielded bare stainless steel, 24" probe, ¾" SS and 1¼" aluminum fittings standard. Hazardous location approved, CAN/US listed for Class II, Groups E, F, G.



Calibrating PROCAP series sensors is simple and precise with a Quick-Set design for two single turn potentiometers, one for setting the empty vessel and the second to set the desired sensitivity for the vessel material. Sensors are available with Universal power supply for voltages between 24V–240V AC/DC or in a selectable AC voltage of 115V or 230V. Ship wt: 8 lbs, Ship dims: 25" (L) x 11" (W) x 11" (H).

Customized Capacitance Sensors available with selection of Power Pac, Fitting and Probe options.

**Probe Sleeve Options:** Delrin, Teflon, Food Grade.

**Power Pac Options:** Intrinsically Safe, Remote sensing.

**Fitting Options:** Flush Mount, Flexible Extension, Stubby Shielded or Extended Shielded.

PROCAP Capacitance Sensor, Std 24" SST Probe, 24–240V AC/DC.....	<b>No. PROCAPI-24</b>
PROCAP Capacitance Sensor, Std 24" SST Probe, 115/230V AC.....	<b>No. PROCAPII-24</b>
PROCAP Capacitance Sensor, Delrin Sleeved 10.63" Probe, 24–240V AC/DC.....	<b>No. PROCAPI</b>
PROCAP Capacitance Sensor, Delrin Sleeved 10.63" Probe, 115/230V AC.....	<b>No. PROCAPII</b>



**Seedburo Tape Measures, Plumb Bobs and Measuring Wheel**

Seedburo Fiberglass Bin Tapes are designed to resist extreme weather conditions. Great to measure depth levels in storage bins and silos. Tape line is constructed of fiberglass and encapsulated in flexible "wipe-clean" plastic. Tape case and reel are made of high-impact polymer and double screws hold the housing together in the event of a drop. The crank handle is reinforced with metal to provide years of rugged use. The shovel handle is ideal for rapid reeling. Tape will not stretch, shrink or deteriorate. Printed in inches by 8ths or 10ths. Ship wt: 4 lbs, Ship dims: 15" (L) x 15" (W) x 5" (H).

Graduated in Inches by 1/8ths		1/10ths of a Foot by 1/100ths	
Model No.	Length	Model No.	Length
No. 508	50' Tape	No. 5010	50' Tape
No. 508R	50' Refill	No. 5010R	50' Refill
No. 1008	100' Tape	No. 10010	100' Tape
No. 1008R	100' Refill	No. 10010R	100' Refill
No. 2008	200' Tape	No. 20010	200' Tape
No. 2008R	200' Refill	No. 20010R	200' Refill
No. OTR50M	50m x 2mm	No. OTR100M	100m x 2mm
No. RF50M	50m Refill	No. RF100M	100m Refill

- 8 oz Spark-proof Brass Plumb Bob ..... **No. 939**
- Weighted, Spark-proof Sample Collecting Bob ..... **No. 940**

**Measuring Wheel**

Seedburo's Measuring Wheel is built for durability and accuracy under tough field conditions. Ideal for fencing, nursery plot work and laying out irrigation systems. Each wheel is supplied with a 3-piece pistol grip handle and with quick-snap cam locks, the handle telescopes down to a compact 23". Easy-read magnified 5-digit counter measures 9,999 ft., 11 in. The metric unit measures a total of 9,999.9m. TM3 features 12 1/2" wheel diameter and 3 ft. wheel circumference. The TM3-M has a .318m wheel diameter with a 1m wheel circumference. The TM4 series features a 15 1/2" wheel diameter with a 4 ft. wheel circumference. The TM6.5 has a 25 1/4" wheel diameter with a 6 ft. wheel circumference. Ship wt: 6 lbs, Ship dims: 14" (L) x 8" (W) x 31" (H).



- Measuring Wheel with 5-Digit Reset Counter, in Feet and Inches ..... **No. TM3**
- Measuring Wheel with 5-Digit Reset Counter, in Meters ..... **No. TM3-M**
- Measuring Wheel with 5-Digit Reset Counter, in Feet and Inches ..... **No. TM4**
- Measuring Wheel with 5-Digit Reset Counter, in Feet and Inches ..... **No. TM6.5**

**Seedburo Tubular Steel Hook Ladders**

Seedburo's versatile "Hook Ladders" combine the strength of 3/4" x 18 Ga. tubular steel with 13 3/4" wide rungs welded-in, reinforced double side-rails and heavy duty hooks. These ladders have a 12" rise between rungs, feature a weatherproof, polyester powdercoat finish and non-slip rung design. Ladder is 14 3/4" wide, and the depth is 3" from the wall to the edge of the step. Each ladder has a 300 lb load capacity. Optional Rocker Type Safety Feet allow the Seedburo Steel Ladders to be used wherever straight ladders are used.

Available in lengths to 15 ft. This ladder provides easy access to permanently installed safety ladders when hooked onto the bottom rung. Model C Ladders are also good for truck, barge and bin applications. **All ladders ship via motor freight due to size and shape restrictions.**

Model No.	Length	Weight
No. C7	7 ft.	20 lbs
No. C10	10 ft.	30 lbs
No. C12	12 ft.	35 lbs
No. C15	15 ft.	44 lbs
Safety Feet - No. SF		





## Dustop Dust Suppression System

### The Dust Control System That Will Save You Money!

- **Accurate Control:** Dustop units have the basic components for accurately controlling and monitoring the application of oil for the suppression of dust.
- **Reduces Airborne Dust:** Accurate metering of the application of oil suppresses dust. Employee safety and morale are greatly enhanced.
- **Low Cost:** Very few parts to assemble and install. The Dustop is designed and neatly packaged for ease of installation and to ensure efficiency of oil application.
- **Savings On Shrink:** Airborne dust is reduced and not lost into the system as shrink
- **Labor Savings:** Labor required to keep your facility clean is kept to a minimum.

The Dustop is an extremely efficient dust control system. It draws food grade oil from a supply tank, furnished by the user or by the factory as an option, to an internal pump, which in turn, supplies oil to the system pressure controls and then directly to the spray assemblies. A typical system will supply oil to a combined maximum of 50,000 BPH, based on a commodity weight of 56 lbs per bushel or 48 lbs per cubic foot at a maximum of 0.02% oil application by weight. This calculates to a maximum of 2.072 gallons per minute or 1½ gallons per 1000 bushels at a maximum pressure of 80 pounds per square inch. Base units are available for single or dual spray points.

The oil supply tank should be located as near the Dustop unit as possible. Output may be limited if the pump is required to draw oil over a long distance. The Dustop pump is capable of developing suction of 10" of mercury, or a horizontal pipe run of 100' or a straight lift of 15'. The supply tank should be located within 50' of the Dustop unit, or a booster pump may need to be supplied. The maximum distance from the base unit (pump) to the spray application points should be less than 500'.

**Basic Unit Includes:** Painted, lockable heavy-gauge steel enclosure, ½HP motor, 110V, 6A, TEFC, 2.8 GPM gear pump, system pressure relief valve, system pressure gauge, nozzle pressure regulator, nozzle pressure gauge, one spray lance assembly, suction (inlet) strainer (40 mesh), two illuminated manual/off/auto 3-position selector switches and two SP/DT relays for control of (2) single spray points (second spray point assembly optional). Also includes electrical connection box, internal tank with provision for optional immersion heater and provision for remote start control of one or two spray point arrangements. The spray lance assembly holds the spray nozzle and fits into the top of a spout or conveyor to be sprayed. The internal heater fits in the base unit and heats the oil before it enters the pump. The mechanical flow meter shows the gallons or liters per minute flow through each spray point. The solenoid is installed near the spray points to ensure proper spray pattern in cold weather (50°F or below).

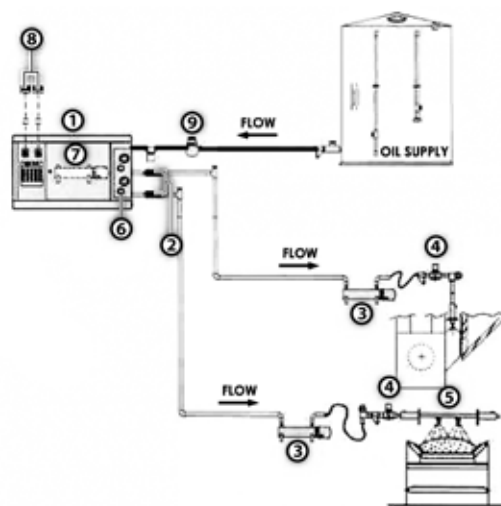
Dustop System, Single Spray Point, 115V/230V, 60Hz.....No. DSS/B  
 Dustop System, Single Spray Point, 115V/230V, 50Hz.....No. DSS/C  
 Dustop System, Double Spray Point, 115V/230V, 60Hz..... No. DSS2/B  
 Dustop System, Double Spray Point, 115V/230V, 50Hz..... No. DSS2/C  
 Internal Heater .....No. DSS1  
 Mechanical Flow Meter .....No. DSS2  
 Spray Point Heater .....No. DSS3



Ammeter controls monitor the amperage draw on an elevator leg or conveyor to be oiled. An adjustable amp preset is field programmed into the ammeter to stop and start the oil flow when the conveyor goes under load and the amp draw increases. Hose is not included in the purchase of the Dustop Dust Suppression System. **Main unit:** Ship wt: 175 lbs, Ship dims: 36" (L) x 20" (W) x 24" (H). **Accessories:** Ship wt: 25 lbs, Ship dims: 12" (L) x 15" (W) x 12" (H). **MADE IN USA.**

### Dustop System Features (2-8: Optional Accessories)

- |                          |  |
|--------------------------|--|
| 1. Dustop Basic System   | 6. Second Point (Nozzle Pressure, Regulator): Nozzle Pressure Gauge, Spray Nozzle Assembly, Factory Mounting |
| 2. Mechanical Flow Meter | 7. Internal Tank Heaters   |
| 3. In-Line Heater        | 8. Auto Control Switches   |
| 4. Solenoids             |  |
| 5. Spray Assemblies      |  |



Solenoid - Class II G.....No. DSS4  
 Spray Lance Assembly .....No. DSS5  
 Ammeter Control.....No. DSS8  
 Accumulating Meter.....No. DSS9  
 Booster Pump with ½HP TEFC Motor, 60Hz, 110V/220V ..... No. DSS10  
 Booster Pump with ½HP TEFC Motor, 50Hz, 110V/220V ....No. DSS10/C  
 Export Crating ..... No. DSS/EX

**BADGER RAIL CAR MOVERS**

**Badger Power-King**



The Badger Power-King car mover is ideal for heavy car spotting where two or more heavily loaded cars must be moved at one time. Casting is made of malleable iron. The handle is select hickory and the pivotal connections are oversized to minimize wear. Hardened steel spurs grip the soft corners of the rail to prevent slipping. Ship wt: 23 lbs, Ship dims: 70" (L) x 5" (W) x 4" (H).

Badger Power-King Car Mover ..... **No. 221B**

**Badger Car Mover**



The Badger Car Mover is used to move one car at a time and is recommended for use in yards where standard conditions prevail. The Badger Car Mover is based on the Compound-Leverage Principle and has a pinch-bar action for better control. Elongating toggle or cam provides the leverage and power to move loaded cars with ease. Ship wt: 22 lbs, Ship dims: 70" (L) x 5" (W) x 4" (H).

Badger Car Mover ..... **No. 249**

**Parts and Accessories for Car Movers**



422

Badger Double Spurs, Per Pair, Ship wt: 1 lb, Ship dims: 9" (L) x 9" (W) x 7" (H) ..... **No. 422**  
 Safety Handguard, Fits on Part No. 420 Handle, Ship wt: 1 lb, Ship dims: 9" (L) x 7" (W) x 7" (H) ..... **No. 421**  
 Replacement Handle, Select Hickory, Ship wt: 8 lbs, Ship dims: 60" (L) x 5" (W) x 4" (H) ..... **No. 420**



**Seedburo "Super Chock"**

An extra durable rail clamp designed to effectively block rail cars during loading and unloading operations. Made to fit rails from 60 lbs to 175 lbs. Attachment is easy; the Super Chock locks itself to rail when wedge is driven home. Removal is just as easy. Unit is made of cast ductile iron. One rail clamp on each rail is recommended. Ship wt: 50 lbs, Please specify rail size when ordering. Net wt: 50 lbs, Actual dims: 17" (L) x 4" (W) x 12" (H), Ship wt: 53 lbs, Ship dims: 19" (L) x 13" (W) x 14" (H).

Super Wheel Chock for 60–104 lbs Rail ..... **No. 4016-01**

Super Wheel Chock for 105–175 lbs Rail ..... **No. 4016-02**

*CAUTION: Rail wheel chocks are not to be used to stop a moving car. For land use only. Do not use to block cars on car ferries or barges.*



**Aldon Single Wheel Chock (28" Handles)**

Net wt: 12 lbs, Actual dims: 31" (L) x 7½" (W) x 14" (H), Ship wt: 15 lbs, Ship dims: 35" (L) x 19" (W) x 9" (H).

Single Wheel Chock with Flag (Exposed Rail), Ship wt: 13 lbs ..... **No. 4011-01**

Single Wheel Chock with Flag (Flush Rail), Ship wt: 13 lbs ..... **No. 4011-02**



**Aldon Double Wheel Chock (28" Handles)**

Net wt: 20 lbs, Actual dims: 31" (L) x 9" (W) x 19" (H), Ship wt: 23 lbs, Ship dims: 35" (L) x 19" (W) x 9" (H).

Double Wheel Chock with Flag (Exposed Rail), Ship wt: 16 lbs ..... **No. 4011-06**

Double Wheel Chock with Flag (Flush Rail), Ship wt: 16 lbs ..... **No. 4011-07**



**Safety Lights for Wheel Chocks**

The lights have a 7" diameter lexan lens uses two 6V batteries. On-off switch and photo-electric cell flashes 60 times a minute, Battery case bolts to any sign holder or chock light bracket. **Safety Lights:** Net wt: 3 lbs, Actual dims: 15" (L) x 8" (W) x 4" (H), Ship wt: 5 lbs, Ship dims: 16" (L) x 9" (W) x 9" (H). **Carrying Bracket:** Net wt: 2 lbs, Actual dims: 8½" (L) x 4" (W) x 2¾" (H), Ship wt: 3 lbs, Ship dims: 9" (L) x 9" (W) x 7" (H). (Bracket bolts to any 1" diameter chock handle. Drill ¼" hole at bottom of handle. Chock safety Light bolts to bracket).

Flashing Red Light (Battery Operated), Ship wt: 5 lbs ..... **No. 4115-17**

Flashing Blue LED Light (Battery Operated), Ship wt: 5 lbs ..... **No. 4115-01**

Carrying Bracket for Light on Wheel Chock, Ship wt: 3 lbs ..... **No. 4011-21**

**Aldon Sabertooth™ Portable Derails**

For temporary derailing capability use these Portable Derails on exposed rail track and wooden ties. All Sabertooth™ portable derails feature tool-free installation, are lightweight, and feature a patented safety hook to keep derail from sliding down the rail. Derail blue flag and holder (manually-operated) are included.



4014-09-S Two-Way



4014-06-S Left Throw



4014-07-S Right Throw

The one-way portable derails are used for freight cars and all size locomotives (rails 90–141 lbs, wooden ties, tie spacing: 18–24"). The two-way portable derails are for freight cars and 4-axle locomotives only. Do not use two-way with 6-axle locomotives (rails 100–136 lbs wooden ties, tie spacing 19–24").

- Portable Derail, One-Way Left Throw, Ship wt: 35 lbs .....No. 4014-06-S
- Portable Derail, One-Way Right Throw, Ship wt: 35 lbs .....No. 4014-07-S
- Portable Derail, Two-Way, Ship wt: 50 lbs.....No. 4014-09-S

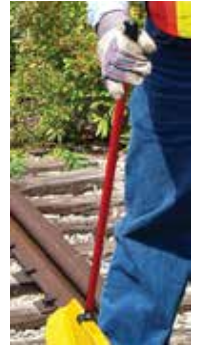
**Derail Accessories**

This hinged derail lifting lever takes all the work out of lifting and swinging derail. Handle reduces physical effort to just 20 lbs.

- Derail Lifting Lever (for Hinged Derails Only), 1" Thick Block (Old Derail Models) .....No. 4014-25
- Derail Lifting Lever (for Hinged Derails Only), 3/4" Thick Block (New Derail Models) .....No. 4014-28
- Derail Padlock (for Portable or Hinged Derails).....No. 4124-97



Left to right: 4124-97, 4014-25



**ALDON SAFETY SIGN HOLDERS AND SIGN PLATES**

These OSHA-Mandated Safety Signs and Holders will assure you have the appropriate signage in your rail yard and spur tracks and can assist in prevention of "fouling the track". OSHA and FRA require blue signs on any track where locomotives of the railroad serving your plant will operate. Red signs may be called for in special situations. Red signs satisfy OSHA Blue Flag Rule. (Sign plates are not included with sign holders and must be purchased separately).

**Sign Holders**



**Portable Sign Holder**  
This clamp-on, non-locking style steel holder clamps to rail head and allows for easy on, easy off versatility. Ship wt: 7 lbs.

Sign Holder, Portable Clamping, Exposed Rail...No. 4015-01



**Spiked-Down Hinged Sign Holder**  
The hinged sign holder can fold down in either direction while the base plate is spiked to the tie. Ship wt: 16 lbs.

Sign Holder, Hinged Spiked-Down, Exposed Rail...No. 4015-06



**Permanent Hinged Sign Holder**  
Like the Spiked-Down model above, this holder folds down flat in either direction but, is bolted to base of rail. Ship wt: 15 lbs.

Sign Holder, Permanent Hinged, Exposed Rail...No. 4015-05



**Magnet Base Sign Holder**  
Just plunk it down on the rail. Withstands winds up to 60 MPH. For flush or exposed rail. Aluminum construction. Ship wt: 7 lbs.

Sign Holder, Magnetic Base.....No. 4015-54

**Sign Plates**

These aluminum 12" (L) x 15" (W) x .080" sign plates are available in Blue (-B) and Red (-R) and can be ordered in English (no marking), Spanish (/S) and French (/F). Example: 6STOP-B/S this sign is for "STOP" in blue color and in Spanish.



6STOP-B 6SCC-B



6SCAW-B 6SMAW-B 6DERAIL-B

- Safety Sign, 12" (L) x 15" (W), "STOP" .....No. 6STOP
- Safety Sign, 12" (L) x 15" (W), "STOP – CAR CONNECTED".....No. 6SCC
- Safety Sign, 12" (L) x 15" (W), "STOP – CREW AT WORK" .....No. 6SCAW
- Safety Sign, 12" (L) x 15" (W), "STOP – MEN AT WORK".....No. 6SMAW
- Safety Sign, 12" (L) x 15" (W), "DERAIL".....No. 6DERAIL

Add: -B for Blue, -R for Red, /S for Spanish, /F for French.  
6STOP-B/S = Sign for STOP in blue and Spanish)





**Anemometer-Thermometer**

Seedbuero’s digital display Anemometer-Thermometer is ideal for measuring fan speed and temperature of hot air produced by fans and blowers. The unit will display air speed in feet per minute, meters per second, kilometers per hour, miles per hour and knots. The thermometer measures ambient temperature from 32°–122°F (0–50°C). Operating temperature 32°–140°F (0°–60°C) includes the replaceable P80M metal vane air speed-temperature probe. There is a 4-digit LCD backlit readout that measures 2" x 1.3". The DAF80 has a min/max memory; data hold feature and RS232 output. Purchase the optional PC interface/data logging kit, **No. DAF80-KIT**, to view results on your computer, or store the information for your preventative maintenance programs! NIST Calibration is available too! Powered by a 9V battery (not included) and supplied with a custom hard plastic carrying case. Actual dims: 7.9" (L) x 2.7" (W) x 1.2" (H), Net wt: 7.8 oz, Ship dims: 12" (L) x 9" (W) x 5" (H), Ship wt: 3 lbs.

Digital Anemometer-Thermometer.....	<b>No. DAF80</b>
Optional PC Interface/Data Logging Kit .....	<b>No. DAF80-KIT</b>
Replacement Air Speed-Temp Probe .....	<b>No. DAF80-PROBE</b>



**Digital Sound Meter**

This hand-held meter provides a bright LCD display of high-performance sound measurements. Whether in the factory setting, near the grain driers or while operating machinery, the measurement of the ambient sound will aid you in prescribing the appropriate hearing protection for your staff. Range: 32–130 db in 3 ranges with accuracy ± 1.5 dB. Includes an Over and Under range indicator. The meter is CE and RoHS approved. Meets IEC651, ANSI S1.4 type 2 standards. Powered by 1 each “9V” alkaline battery (included). Actual dims: 9.1" (L) x 2.2" (W) x 1.3" (H), Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H).

Digital Sound Meter .....	<b>No. DSM325</b>
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**Contact / Non-Contact Tachometer**

The hand-held tachometer can be used in a wide range of applications, for calibration of test equipment, preventive maintenance tool or output performance tool. Measurement types include Rotation Speed (RPM), Total revolutions (REV) and Surface Speed (I/M, M/M, Y/M, F/M) and Length (M, YD, FT). Provides a non-contact measurement up to 100cm from the target. Includes a 40 point memory of 10 selectable points each of MAX, MIN, AVG and DATA measurements. Includes the contact cone, funnel and contact adapter along with Master wheel (10cm), reflective tape and a molded hard case. Powered by 1 each 9V alkaline battery (Not included). Actual wt: with adapter: 5.1 oz, Actual dims: 5.79" (L) x 1.93" (W) x 1.14" (H), Ship wt: 2 lbs, Ship dims: 12" (L) x 10" (W) x 3" (H).

Contact / Non-Contact Tachometer .....	<b>No. PCT900</b>
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**Seedbuero Infrared Thermometer**

Ideal for most applications, this IR thermometer includes the NIST Traceability Certificate and is easy to use for determining surface temperatures on machinery, power supplies, belt pulleys, and many other applications. The unit features a rugged and ergonomic design, extended long time measuring reliability, a backlit LCD display, switchable on/off laser sighting, and selectable °F or °C display.

Distance to spot ratio: 8:1, range -4° to 604°F (0° to 320°C), resolution: 0.5°F/0.5°C, operating temperature: 32°–122°F, 10–90% RH. One 9 volt Alkaline battery included. Net wt: 1 lb, Ship wt: 2 lbs, Ship dims: 12" (L) x 8" (W) x 5" (H).

Infrared Thermometer .....	<b>No. IRT207</b>
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## SEEDBURO HAND SCOOPS

### Plastic Scoop

Our Plastic Scoop is made of specially formulated material to prevent brittleness at low temperatures. Net wt: 1 lb, Actual dims: 15" (L) x 3½" (W) x 6½" (H). Ship wt: 2 lbs, Ship dims: 13" (L) x 13" (W) x 7" (H).



Seedburo Plastic Scoop.....No. 830

### Steel Scoop

This scoop is made of heavy gauge galvanized steel and has a 4 qt. capacity. The handle is centered to evenly distribute weight and make material handling easier and faster. Net wt: 2 lbs, Actual dims: 11¼" (L) x 6¾" (D), Ship wt: 3 lbs, Ship dims: 13" (L) x 13" (W) x 13" (H).



4 Qt. Handled Scoop .....No. 1732

### Cast Aluminum Scoops

Made of strong cast aluminum, Seedburo's Aluminum Scoops will not bend or dent under the most severe conditions. They are easy to clean and will not corrode.



8" (L) Overall x 3" (W) x 2" (H), 3" Handle .....No. 05  
 10" (L) Overall x 4" (W) x 3" (H), 3" Handle .....No. 15  
 12½" (L) Overall x 5" (W) x 3½" (H), 3½" Handle .....No. 25  
 14½" (L) Overall x 5½" (W) x 4½" (H), 4" Handle .....No. 35

### Flat Bottom Scoops

The Flat Bottom Scoops are made of high quality, stain resistant aluminum alloy with one-piece casting. The outer surface is buffed and polished. Inside finish is a smooth, permanent mold.



8¾" (L) Overall x 3½" (W) x 2½" (H), 2¾" Handle..... No. 1225  
 9¾" (L) Overall x 4¼" (W) x 1¾" (H), 3" Handle..... No. 1235

## Smart Digital Scoops

### Scale Features

- 3 weighing modes: grams, pounds and ounces.
- Low battery indicator
- Integral security ring
- Rugged construction
- Convenient ergonomic design
- Power up test: When scale is turned on, all display segments will appear before resetting to zero.
- Auto-off function: To extend the battery life, smart scoop will automatically shut off after 2 minutes of inactivity.



SS750

- Overload: If the applied load exceeds the rated capacity of the scale, "Err" will appear. Remove load and scale will return to normal operation.
- Lo: This will appear on display when battery needs to be replaced. A 9V alkaline battery is included.

### Dimensions and Capacities for Model SS750

**Capacity:** 750 grams/26 oz/1.6 lbs  
**Accuracy:** 1%  
**Graduation:** 2 grams/.1 oz/1/8 oz  
**Display:** .6" LCD display with four (4) active digits  
**Operating Temperature:** 50°F–104°F (10°C–40°C)  
**Actual Dimensions:** 13" (L) Overall x 3" (W), Handle 2½"  
**Net Weight:** 1 lb  
**Ship Weight:** 3 lbs  
**Ship Dimensions:** 18" (L) x 12" (W) x 6" (H)

### Dimensions and Capacities for Model SS1350

**Capacity:** 1350 grams/48 oz/3 lbs  
**Accuracy:** 1%  
**Graduation:** 2 grams/.1 oz/1/8 oz  
**Display:** .6" LCD display with four (4) active digits  
**Operating Temperature:** 50°F–104°F (10°C–40°C)  
**Actual Dimensions:** 14" (L) Overall x 4" (W), Handle 2½"  
**Net Weight:** 1 lb  
**Ship Weight:** 3 lbs  
**Ship Dimensions:** 18" (L) x 12" (W) x 6" (H)

750 Grams Smart Scoop .....No. SS750  
 1350 Grams Smart Scoop .....No. SS1350

## Mega Dipper Scoop

Made of polypropylene and stainless steel and with a capacity of 128 oz, the Mega Dipper Scoop is ideal for those larger jobs and with a variety of handle lengths; you can easily further your reach to take samples from a product stream or even sample liquids. We offer three different handles – a 57" aluminum handle, 67" Ultra-Hygiene Green handle and a 62" to 113" telescoping handle. The scoop measures 11" (L) x 8.7" (W) x 7.3" (H) and weighs 1.5 lbs.



65522

Green Plastic Scoop, 128 oz.....No. 65522  
 Aluminum Handle, 57" .....No. 29592  
 Ultra-Hygiene Green Handle, 67" .....No. 29642  
 Telescoping Handle, 62"–113" .....No. 29752

**Hytrol Model BA Portable Folding "Booster" Belt Conveyor**



★ MADE IN  
★ USA

**Conveyor Includes:**

- Black Trackmate 447 Roughtop with PVC Cover (14" Wide)
- 4" Deep x 20" Wide x 12 Ga. Slider Bed
- Welded Steel Base
- 4" Diameter Steel Swivel Casters (10' to 16' Lengths)
- 6" Diameter Steel Swivel Casters (20' and 22' Lengths)
- Powered Screw Raising Device
- 115/230V, 60Hz, 1PH - Enclosed Motor (specify requirements)

Size to Order	H.P.	Weight in lbs	Model No.
10'	3/4	560	No. HBA10/B
12'	3/4	600	No. HBA12/B
14'	3/4	650	No. HBA14/B

Size to Order	H.P.	Weight in lbs	Model No.
16'	1	700	No. HBA16/B
20'	1	940	No. HBA20/B
22'	1	990	No. HBA22/B

**Optional Equipment for Model BA**

- 4–6" Diameter Rubber Swivel Casters.....No. HBRSC      Guard Rails Both Sides Per Foot.....No. HBGR  
 2-Floor Locks.....No. HBFL      Remote Switch Control Rod.....No. HRRSC



★ MADE IN  
★ USA

**Gravity Roller Conveyor (1 3/8" Diameter x Ga. Rollers)**

Gravity Roller Conveyor is used to carry lightweight packages, or when operation requires lightweight sections. Useful in setting up permanent or temporary conveyor lines in warehousing activities, shipping departments, assembly areas, etc. Majority of products will convey with minimum amount of pitch.

**Steel Frames**

12" Overall Width				15" Overall Width				18" Overall Width				24" Overall Width			
Model No.	Roller Centers	Wt. in lbs		Model No.	Roller Centers	Wt. in lbs		Model No.	Roller Centers	Wt. in lbs		Model No.	Roller Centers	Wt. in lbs	
		5'	10'			5'	10'			5'	10'			5'	10'
No. SSR-12-11/2	1 1/2"	55	101	No. SSR-15-11/2	1 1/2"	62	112	No. SSR-18-11/2	1 1/2"	72	135	No. SSR-24-11/2	1 1/2"	91	168
No. SSR-12-3	3"	37	68	No. SSR-15-3	3"	42	78	No. SSR-18-3	3"	47	97	No. SSR-24-3	3"	58	108
No. SSR-12-41/2	4 1/2"	32	58	No. SSR-15-41/2	4 1/2"	33	61	No. SSR-18-41/2	4 1/2"	40	73	No. SSR-24-41/2	4 1/2"	47	88
No. SSR-12-6	6"	29	52	No. SSR-15-6	6"	30	55	No. SSR-18-6	6"	32	63	No. SSR-24-6	6"	42	78
No. SSR-12-9	9"	26	47	No. SSR-15-9	9"	27	50	No. SSR-18-9	9"	29	57	No. SSR-24-9	9"	37	69
No. SSR-12-12	12"	24	44	No. SSR-15-12	12"	26	46	No. SSR-18-12	12"	27	52	No. SSR-24-12	12"	34	63



★ MADE IN  
★ USA

3" Axle Centers

**Gravity Roller Curve Conveyor**

Gravity Roller Curves add to the versatility of straight conveyors. Curves provide smooth product flow through 90° and 45° turns. Curves will convey product with minimum amount of pitch based on weight and size. Guard rails (optional item) may be added for product protection.

**Steel Frames**

12" Overall Width (36" Outside Radius)			15" Overall Width (39" Outside Radius)			18" Overall Width (42" Outside Radius)		
Model No.	Degree	Wt. in lbs	Model No.	Degree	Wt. in lbs	Model No.	Degree	Wt. in lbs
No. SSRC-12-90	90°	70	No. SSRC-15-90	90°	75	No. SSRC-18-90	90°	80
No. SSRC-12-45	45°	35	No. SSRC-15-45	45°	40	No. SSRC-18-45	45°	44

### KC Grain Engulfment Rescue Wall

The KC Grain Engulfment Rescue Walls are designed to assist rescuers when a worker needs to be removed from an engulfment in a storage bin, vessel or other confined space. A minimum purchase of six (6) panels is recommended.

Each panel section acts as a shield so the grain (which is pressing against the victim) can be removed. Once the grain level is reduced, the victim can be extricated. These lightweight, yet durable aluminum walls can withstand rugged and repeated usage. Great for frequent training as it is easily maneuvered and can be aligned to form a wall, a tube, or other irregular shapes depending on the rescue situation.

Made of lightweight 6005 T5 aluminum, rescuers can easily lift a panel up and join with another piece. The Ball-and-socket joint allows each panel to pivot for any desirable shape. Every panel has bolted on internal and external steps, so there is no need to look for stepping areas for the First Responders. The insertion step allows a rescuer to use his own body weight to push the Engulfment Rescue Wall into grain, as opposed to hammering. Each panel is 16" wide and 60" long and weights 25 lbs. Six Panels: Ship wt: 190 lbs, Ship dims: 40" (L) x 48" (W) x 64" (H).



RWALL-PANEL

We provide accessories to aid in rescue: to speed the removal of grain from inside the walls the Rescue Auger can be purchased. This 3" Rescue Auger is compatible with any grain rescue tube and is powered by any 1/2" cordless drill, corded drill, or air drill. The flow rate is 1.5 bushels per minute. Ship wt: 27 lbs, Ship dims: 69" (L) x 10" (W) x 15" (H).

The 18" x 18" poly platform provides a stable footing for rescuers on the loose grain. A minimum of four (4) is recommended. Ship wt: 4 lbs, Ship dims: 18" (L) x 18" (W) x 2" (H).

The waterproof carrying bag comes with handles on the sides and ends for easy carrying and interior straps to bind all accessories. This bag can store up to eight (8) panels. **MADE IN USA.**

Engulfment Rescue Wall, 6005-T5 Aluminum, 6-panels.....	No. RWALL-PANEL
Engulfment Rescue Wall, 6005-T5 Aluminum, 1-panel.....	No. RWALL1
Red Rescue Auger .....	No. RESCUE-AUGER
Rescue Wall Platform, 18" x 18" .....	No. RWALLP
Waterproof Carrying Bag for Panels .....	No. RWALLCB

### Seedburo Fieldscout Direct Soil EC Meter

The FieldScout Direct Soil EC Meter provides the information crucial to managing soil EC levels with the accuracy of standard SME readings. Soil electrical conductivity (EC) is a measure of the amount of salts in soil (salinity of soil). It is an important indicator of soil health. This unit is designed with state of the art sensor technology featuring an exclusive paired sensor tip that provides maximum soil – sensor contact and higher accuracy. Tedious soil sampling and soil preparation is eliminated. With direct measurement technology, you are able to identify problems on the spot by taking several depth and position readings to provide an accurate indication of your plants growth environment.



Resolution 0.01mS/cm; Accuracy ±2% Automatic Temperature compensation. Includes case, 9V alkaline battery and calibration standard. Ship wt: 3 lbs, Shipping dims: 12" (L) x 10" (W) x 5" (H) for unit with 8" probe.

FieldScout Direct Soil EC Meter w/ 8" probe .....	No. 2266FS
FieldScout Direct Soil EC Meter w/ 24" T-Handle Probe and Replacement Tip.....	No. 2266FSTP
Replacement 8" Probe .....	No. 2266PROBE
T-Handle EC 24" Probe w/ Replacement tip .....	No. 2266FST24P
Replacement Tip (only) for T-Handle EC Probe.....	No. 2266
Conductivity Standard 2.76 mS/cm for FieldScout Direct EC Meter.....	No. 2254



444

### Humidity and Temperature Guides

Seedbuero offers two durable, wall mount guides for determining relative humidity and temperature. The **No. 444** reads relative humidity only from 0 to 100% on a 3¾" diameter dial with black numerals in a silver chromium case. Our **No. 444T** reads relative humidity from 0 to 100% and temperature from 0 to 200°F and -20 to 100°C in 1° increments on a 4½" diameter dial with black numerals in a gold chromium case. Units are accurate to ±3% from 35 to 95%RH and can be easily recalibrated. Net wt: 12 oz, Ship wt: 2 lbs, Ship dims: 12" (L) x 3" (W) x 10" (H).

Humidity Guide.....	<b>No. 444</b>
Humidity and Temperature Guide .....	<b>No. 444T</b>

### INSECTICIDE SPRAYERS



#### Dyna-Fog® Trailblazer Sprayer

The Trailblazer provides big machine performance in a compact; easy to handle package. This battery operated unit is designed to handle oil-based products. The high output of non-residual, thermal fog is great for both indoor and outdoor applications. The unit produces a "dry fog" and is ideally used to eliminate the flying insect, such as the Indian Meal Moth, found in a warehouse or barn. The unit uses six (6) "D" size batteries and has an electric start (batteries included). The removable, easy-to-clean tank has 1 gallon (3.8 liters) capacity. Output: 0-5 gallons/hour (0-19 liters/hour). Ship wt: 38 lbs, Ship dims: 32" (L) x 14" (W) x 21" (H).

Trailblazer Sprayer.....	<b>No. TRLB</b>
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#### Dyna-Fog® DC-3 Sprayer

The DC-3 Sprayer is an electric, portable aerosol applicator. A meter valve allows the operator to adjust the output. Three (3) precision nozzles combine to give a greater capacity. The durable body is constructed from a high-density polyethylene, chemical-resistant material. Designed to handle both water and petroleum based products, the DC-3 is capable of dispersing germicides and insecticides. Most commonly used with Malathion where a residue or "top dressing" on the grain or bin walls is desired. This application eliminates the crawling or nesting insect. Motor: 6.5 amps, 50/60Hz cycle, 20,000 RPM. Tank Capacity: 1 gal. (3.8 liters). Net wt: 6.6 lbs, Actual dims: 13" (L) x 8" (W) x 14" (H), Ship wt: 8 lbs, Ship dims: 15" (L) x 10" (W) x 18" (H).

DC-3 Sprayer, 110V .....	<b>No. DF</b>
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#### Seedbuero Insect Trap

Our insect trap early warning system lets you monitor insect activity in stored grain. This trap is made of tough, long-lasting perforated plastic and is 17" long. The tip is the reservoir for insect collection. The Seedbuero trap can be used with or without pheromones or food attractants. For best results in 20 ft. diameter bins, place one probe in the center and one trap in each quadrant of the bin. Check traps within 24 hours of placement to detect crawling insects. If two or more of any insect species are caught in the first two hours, there is the potential of a treatable population. Traps sold in cartons of 3. Actual dims: 17" x 1¼" dia., Net wt: 8 oz, Ship wt: 1 lb, Ship dims: 20" (L) x 8" (W) x 8" (H).

Insect Trap Kit with Three (3) Probes .....	<b>No. TRAP1</b>
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#### Bird-X Bird Proof Repellent

Keep bird pests off their normal roosting areas with an application of Bird-Proof Bird Repellent, a non-toxic, sticky chemical that makes a surface tacky and uncomfortable to birds. It's non-toxic, and harmless to metal structures, sealed masonry and ornamental metals and lasts up to six months. Simply apply with a household type 10" caulking gun and you are done! It can be used in any type of weather, indoors, outdoors, virtually anywhere. Sold in cartons of 12, one carton treats 120 linear feet. EPA registered. Ship wt: 10 lbs, Ship dims: 12" (L) x 7" (W) x 5" (H).

Bird Proof Cartridges 12 Tube/Case.....	<b>No. BIRDVIS-07</b>
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**Seed Conditioning Books**

*A Practical Advanced-Level Guide*

*Authors:*

*Bill R Gregg: Seed Industry Development and Conditioning Specialist*

*Gary L. Billups: Seed Conditioning Specialist and President Crippen International, Inc.*



*Left to right: SEEDBOOK-I, SEEDBOOK-II (Parts A and B), SEEDBOOK-III, SEEDBOOK-IV*

Seed conditioning turns raw harvested seed into pure seed that is free of undesirable materials, safe from pests and diseases, and that which can be planted for a good stand of healthy plants of the desired crop.

The cost of conditioning is a major component of the capital investment. Conditioning is the most significant process in the seed industry. It involves machines, engineering, operations, biology, physics, plant physiology and pathology, science, and business. It must be accurate, economical and practical.

To make seed conditioners more efficient, this Seed Conditioning compendium was prepared. Based on real-life experiences, trials and errors of many conditioners were compiled and distilled into a brief, easy-to-understand form.

Seed Conditioning is in four volumes: (1) Management, essential aspects of organizing and managing a seed conditioning operation; (2) Technology, the equipment and processes used in seed conditioning; (3) Crop Seed Conditioning, available information on experiences on conditioning different crop seed; (4) Improving Seed Conditioning, focuses on teaching the conditioning plant operator details of each machine and how to get maximum performance from it in terms of operating efficiency, maximum removal of undesirable particles, and minimum loss of good seed.

Basic topics are covered, plus some “secrets of the trade” are revealed. Important information is provided for all seed industry participants to know and learn how their own work fits into the entire seed supply program.

Set of books, Volumes I-IV Ship wt: 11 lbs, Ship dims: 15" x (L) x 15" x (W) x 6" (H).

Seed Conditioning, Volume I: Management.....	No. SEEDBOOK-I
Seed Conditioning, Volume II: Technology - Parts A and B.....	No. SEEDBOOK-II
Seed Conditioning, Volume III: Crop Seed Conditioning.....	No. SEEDBOOK-III
Improving Seed Conditioning, Volume IV.....	No. SEEDBOOK-IV
Seed Conditioning Kit, Volumes I-IV.....	No. SEEDBOOK-KIT

**Seedbuero TDR Soil Moisture Meter**

Perfect for researchers and when precision irrigation decisions count, the FieldScout TDR Series offer a tool to eliminate the guesswork. Based on proven time-domain measurement technology, these portable units accurately measure soil moisture across the full range of moisture conditions. Select from the 4.8" (12cm) or 8" (20cm) probe rods (order separately) to suit your depth requirements. Install PVC access tubes and take readings deeper in the soil profile. The LCD display provides two modes of operation: volumetric water content and irrigation management mode. An internal data logger and RS-232 port allow for use with DGPS for georeferenced soil measurements. Meter length without rods is approximately 38". Powered by (2) AA alkaline batteries, approximately 12-month life (included). Includes software and PC cable. Net wt: 4 lbs, Ship wt: 8 lbs, Ship dim: 25" (L) x 17" (W) x 7" (H).



6435FS

FieldScout TDR 300 Soil Moisture Probe with Case.....	No. 6435FS
Probe rods, 2 each 4.8" (12cm).....	No. 6431FS
Probe rods, 2 each 8" (20cm).....	No. 6432FS

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