

**PRICES FOR ALL ITEMS CAN BE FOUND ON OUR WEBSITE: [www.seedburo.com](http://www.seedburo.com)**

## ORDERING INFORMATION:

### PRICES SHOWN ON OUR WEBSITE ARE SUBJECT TO CHANGE WITHOUT NOTICE.

We reserve the right to ship orders received from unrated firms on a C.O.D. basis. Firms with established credit are sold on terms of Net cash, 30 days from date of invoice. Past due invoices are subject to 1-1/2% carrying charge per month on unpaid balance (18% per annum). Payment Terms for customers that place an order from outside the U.S. will be either Payment in Advance by wire transfer in U.S. dollars to the Seedburo designated bank or by Irrevocable Letter of Credit.

We accept Visa®, Mastercard®, Discover® or American Express® on orders placed for shipment within the U.S. or Canada against credit cards issued within the U.S. or Canada.

**Orders:** Place orders via email to our general mailbox: [sales@seedburo.com](mailto:sales@seedburo.com) or by phone to: 800-284-5779 in the U.S. 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.

**Mail Order:** Please designate item number, quantity, description and price. When motors are involved, 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 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. 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.

**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 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 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.

**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.

QR codes (quick response codes) like this are used throughout our catalog. Snap a photo of the codes with your smart phone using any one of a number of QR code reader apps available for free. Search your favorite app store today and gain instant access to relevant product information online with the press of a button.



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Toll Free: **1-800-284-5779**

**Fax: 312-738-5329**

**International: 312-738-3700**

## DICKEY-JOHN MODEL GAC2500UGMA GRAIN MOISTURE ANALYZER

Seedburo offers the Dickey-john Model GAC2500UGMA grain moisture analyzer, the latest in moisture testing technology. Dickey-john has been 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 the 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 allow for a reduced number of grain calibrations needed to deliver precise moisture results and expand the ranges of moisture, temperature and density (test weight) variations in crops being tested. This allows for not only more accurate results but, more consistent (repeatable) results from your moisture analyzer.

Moisture measurement remains one of the most important official and commercial grain inspection activities because of moisture contents impact on the 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 utilized by the GAC2500UGMA provides moisture results that align more closely with results achieved through the (USA) official reference method, the air oven, better than any tester on the market today.

Calibrations for the GAC2500UGMA are developed and validated in coordination with the USDA-GIPSA / 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 almond, coffee and edible beans. Calibrations are loaded and updated thru the USB ports via either a direct connection to a PC or via a memory stick providing for quick and accurate updates when required.

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.



GAC2500UGMA



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.

**GAC2500UGMA:** Net wt. 28 lbs. Ship wt. 33 lbs. Actual dims 10-1/2" L x 14-3/4" W x 17" H

Ship dims 20" L x 20" W x 24" H

**GAC Series Printer w/ cable:** Net wt. 6 lbs. Ship wt. 10 lbs.

Actual dims 8-1/2" L x 6-1/4" W x 6-3/4" H

Ship dims 12" L x 11" W x 12" H

### Specifications

- Moisture Range: Determined by each grain calibration and harvest conditions, normally 5 – 40%
- Ambient (Environment) Temperature Range: 35°F - 113°F (2°C - 45°C)
- Sample Temperature Range: -0.4°F - 113°F (-18°C - 45°C)
- Difference (Ambient to Grain Sample) 72°F (40°C) below ambient and 36°F (20°C) above ambient
- NTEP Certificate: # 12-070

Automatic Moisture Analyzer,

110/220V, 50/60 Hz ..... **No. GAC2500UGMA**

Printer with Interface Cable,

110/220V, 50/60 Hz ..... **No. GAC-P25**

Printer Paper for GAC-P Printer ..... **No. GAC-PP**

Replacement Printer Ribbon for GAC-P Printer ..... **No. GAC-PR**

Replacement Interface Cable ..... **No. GAC2500-CABLE**

Replacement Standard Drawer ..... **No. GAC-25DRAWER**

Optional Flow Thru Drawer ..... **No. GAC-25FT**



## Dickey-john NTEP Moisture Tester GAC2100B

The GAC2100B, distinguished by the blue color, is an NTEP approved model for use in all commercial and Legal for Trade applications within the U.S. This model meets all of the requirements of NTEP moisture testers. It features fully automatic operations, self-test before each moisture reading, bright and clear display, easy operator functions, automatic temperature correction with range limits and calibration verification. Measurement cycle time of less than 16 seconds keeps even the busy terminals moving. Error messages warn the operator if any measured value is outside of allowable limits of calibration.

The automatic sample size verification sensors are built into the hopper to eliminate pre-weighing the sample and to sense when enough grain is present for testing. The operator can 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. The GAC2100B has a built-in memory for 64 standard grain calibrations with "user defined" quick keys for automatic selection of most used grains.

Drawer detection eliminates the error of spilled grain between tests. For those that want the sample to flow through the unit upon completing a measurement, the bottom of the drawer may be removed. This provides a drawer without a bottom that acts like a funnel.



GAC2100B

Calibrations can be updated without the need for a service person. Periodic coefficient changes can be entered directly on the display screen by the user.

Printer and Communication interface thru a pair of DB25M , RS-232C connections. A harsh environment serial dot matrix printer and cable is available for direct connection to the tester thru Com1 or computer connection thru alternate Com2 interface.



GAC Series Printer

Actual dimensions 16"L x 15.25"W x 14.75"H. Ship dims 21"L x 21"W x 19"H. Net wt 26 lbs., Ship wt 32 lbs. **MADE IN USA**

Dickey-john Fully Automatic Grain Moisture Tester, .....	<b>No. GAC2100B</b>
Printer with Cable, 110 / 220 volt.....	<b>No. GAC-P</b>
Paper for GAC-P Printer.....	<b>No. GAC-PP</b>
Printer Ribbon for GAC-P Printer .....	<b>No. GAC-PR</b>

**Language Options:** English, French, German, Spanish, Italian, Portuguese, Flemish and more.

**Grain Calibrations Preloaded on Instrument:** Corn, Soybeans, Barley, Popcorn, Rapeseed, Rye, Edible Beans, Canola, Flax, Lentils, Mustard, Oats, Peas, Rice, Sunflower, Wheat, Durum, Sorghum, Safflower, Triticale.

*A catalog of more than 450 additional grains or seed types is available for user direct change/addition or update.*

## DICKEY-john GAC2100 Series Moisture Testers

The GAC2100 series grain moisture testers, offered by Seedburo, are economical non-NTEP devices, but with the precision, versatility and accuracy of the official moisture testers used by licensed grain inspection agencies. The user can choose from over 450 grain calibrations and can be displayed in 8 different languages\*. See our web site for calibration lists for all of these models.

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 to 45%, depending upon the grain type, and a grain temperature range of 32 to 122°F (0-50°C). Actual dimensions on all models are 16" L x 15.25" W x 14.75" H. Net wt. 28 lbs. Ship dims 21" L x 19" W x 19" H. Ship wt. 32 lbs.

**The GAC2100BSA**, blue in color, combines all the features of the standard NTEP model. Simply fill the hopper, press the load button and the test is performed automatically within 16 seconds. It has a built-in memory for 64 standard grain calibrations. This unit can also be set-up to integrate with your automatic grain sampling system for smooth flow-through operation. Multiple language option available on this model. **MADE IN USA**

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



GAC2100BSA



GAC2100GI

**The GAC2100GI**, gray in color, has the same precision as the GAC2100BSA, but at a more economical price for you. This is also a non-NTEP moisture tester. The unit is calibrated for 16 grain calibrations: Corn, Corn High Moisture, Soybeans, Sorghum, Wheat HRW, Wheat HRS, Wheat SRW, Oats, Barley 6-rowed, Barley 2-rowed, Durum, Sunflower Oil, Millet, Rapeseed, Rye, and Safflower. The readings are automatically displayed within 16 seconds. Multiple language option available on this model. **MADE IN USA**

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

**The GAC2100AGRI**, orange in color, is a 'farm use' moisture tester, non-NTEP, and is calibrated for 8 commodities: Corn, Corn High Moisture, Soybeans, Sorghum, Wheat HRW, Wheat HRS, Wheat SRW, and Oats. The readings are automatically displayed within 30 seconds. It is ideal for the larger farmer who stores his own grain and is economically priced. **MADE IN USA**

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



GAC2100AGRI



GAC-P

### ACCESSORIES AND REPLACEMENT PARTS

Optional Printer, 110/220V 50/60Hz .....	<b>No. GAC-P</b>
Paper for Printer .....	<b>No. GAC-PP</b>
Ribbon for Printer .....	<b>No. GAC-PR</b>
Grain Drawer for GAC2100 .....	<b>No. GAC-DRAWER</b>

\*English, Spanish, French, Italian, German, Portuguese, Turkish, and other European languages.

## STEINLITE SL95 MOISTURE METER

The Steinlite SL95 NTEP Moisture Meter, distributed by Seedburo, is one of the most advanced, 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 10 seconds. The tester has two communication ports and can be connected to both the SLPrinter and your desktop computer at the same time.

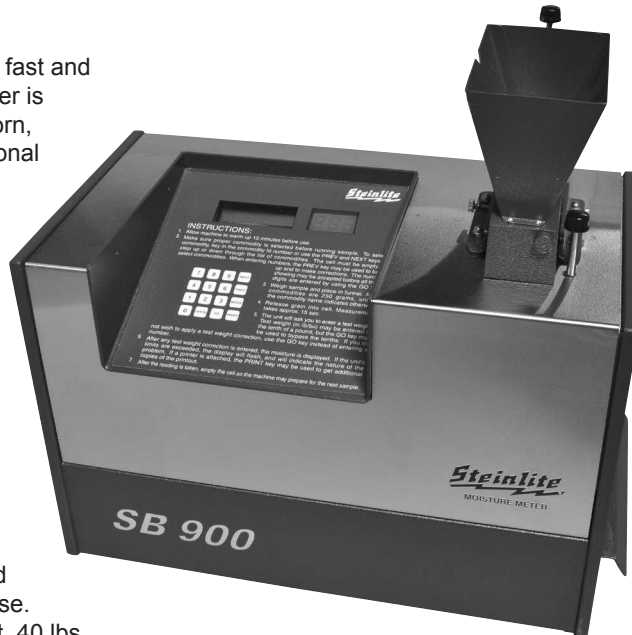


The Steinlite SL95 is factory calibrated for standard grains such as barley, corn, oats, soybean, sunflower and wheat. Up to 63 different calibrations of your choice (please contact us or visit our web site for a list of these commodities) can be added to the tester at the time of order. Simply turn the tester on, select the calibration or grain to be tested, pour in your sample (about 450 grams), hit the LOAD key and the moisture will be displayed from the LCD display within 10 seconds. The moisture range will read between 1-30% depending upon the product and grain temperature range is 35 to 110°F. The SL95 operates from 90-264 Volts, 43-66 HZ AC grounded outlet. There is no need to select a voltage in order to operate this tester. SL95: Net wt. 30 lbs., Ship wt. 35 lbs., Actual dims 16" L x 14" W x 18" H, Ship dims 18" L x 16" W x 20" H. SLPrinter: Net wt. 3 lbs., Ship wt. 4 lbs., Actual dims 10" L x 12" W x 5" H. **MADE IN USA**

Steinlite Moisture Meter, 110/220V 50/60Hz .....	<b>No. SL95</b>
SL-Printer, 120V .....	<b>No. SLPRINTER</b>
SL-Printer 230V .....	<b>No. SLPRINTER/C</b>
Ribbon for SL-Printer .....	<b>No. SLRIBBON</b>

## 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 preprogrammed 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 to 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 110-220V and 220-240V, 50/60Hz. Net wt. 35 lbs., Ship wt. 40 lbs., Actual dims 17" H x 9.5" W x 17" D, Ship dims 26" H x 14" W x 17" D. **MADE IN USA**

Steinlite Moisture Tester, 110/220V 50/60Hz .....	<b>No. SB900</b>
Additional Grain Calibration Module .....	<b>No. SB-MODULE</b>
Nut Funnel (Required with some calibrations) .....	<b>No. SB-NFUNNEL</b>
Compressor Block & Funnel (Required with some calibrations) .....	<b>No. SB-BLOCK</b>
Optional Printer, 110 /220 V 50/60Hz .....	<b>No. SB-PRINTER</b>
Ribbon for SL-Printer .....	<b>No. SLRIBBON</b>

## SEEDBURO MODEL 1200D DIGITAL MOISTURE TESTER

### FEATURES:

- Full-featured backlit graphic LCD display
- Built-in temperature probe
- Single button operation
- Connects to optional printer or PC



The Seedbuuro 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 programmed into the 1200D include the common grains of corn (maize), soybean, wheat, barley, oats, milo (sorghum) and rice. Additional grains

- Universal power supply and optional 12V battery adaptor
- Internal calibrations available for over 100 commodities
- Single or average measurements for improved accuracy
- English or Spanish display
- Available with Canadian grain charts

and commodities can be loaded by the user from a website Chartloader program file. Charts available for over 150 commodities.

**Specifications:** Net wt. 11 lbs. Ship wt. 16 lbs.  
Actual dims 10" L x 9.9" W x 11" H Ship dims 19" L x 15" W x 14" H



Digital Moisture Tester with U.S. Calibrations, 110/220V, 50/60Hz, 1PH .....	<b>No.1200D</b>
Digital Moisture Tester with Canadian Calibrations, 110/220V, 50/60Hz, 1PH .....	<b>No.1200D-CAN</b>
Digital Moisture Tester in Spanish, 110/220V, 50/60Hz, 1PH .....	<b>No.1200DS</b>
Optional Adaptor for 12V battery operation .....	<b>No. TWCB0010</b>

## BURROWS MODEL DMC500 PORTABLE MOISTURE TESTER

The Burrows Model DMC500 Digital Moisture Tester is versatile, compact and rugged for all types of field use. Simply select the type of grain to be tested, weigh sample in the cup provided, then just dump the sample in the hopper. The Model DMC500 automatically corrects for temperature and displays the moisture percentage and the temperature. Moisture range is from 5% to 40% depending upon the commodity. Standard grains that can be tested are barley, beans, cocoa, coffee, corn, flax, millet, oats, peanuts, popcorn, rapeseed, paddy and white rice, rye, safflower, sorghum, soybean, sunflower and wheat. Operating temperature is 45° F to 104° F.

The Model DMC500 operates with a 9V battery (not included) or AC/DC converter that is supplied with the tester and operates from

100V to 240V, 50/60Hz. The Model DMC500 includes a zippered carrying case with strap handle. The unit can display results in English, French, Spanish or Portuguese at the user's discretion. Net wt. 10 lbs., Ship wt. 13 lbs. Actual dims 10" L x 7" W x 13" H, Ship dims 14" L x 11" W x 18" H.



Shown with carrying case

Burrows Model DMC500 Portable Moisture Tester .....	<b>No. DMC500</b>
Replacement AC/DC Converter .....	<b>No. DMC500ACDC</b>
Replacement Carrying Case .....	<b>No. DMC500-CASE</b>

## BURROWS MODEL DMC770 DIGITAL MOISTURE METER

The Burrows Model DMC770 Moisture Meter has been designed to provide direct and accurate moisture readings on a variety of common commodities such as barley, corn, coffee, canola, beans, lentils, rice, soybean, almonds and wheat just to name a few products. There is no need to pre-weigh the samples or manually measure temperature.



The DMC770 is easy to use. Select the grain to be tested, slowly pour the sample in the hopper until the display reads 100% and the tester makes an audible beep to indicate the hopper is full. The grain will drop automatically into the test cell and within 10 seconds; moisture percentage is displayed along with the temperature. The DMC770 can be user programmed to display results in English,

French, Spanish or Portuguese. The built-in thermometer is accurate from  $\pm 0.5^\circ$ . Operating temperature is from 41° F to 120° F. The original DMC750 can be connected to an external printer with RS232C Bi-directional capabilities or the model DMC770 with the internal printer option. The Burrows operates under a full range of power, from 100 to 240V, 50/60Hz, 1Ph supplied with AC adapter. Net wt. 13 lbs., Ship wt. 16 lbs. Actual dims 8" L x 12-1/2" W x 13" H, Ship dims 17" L x 13" W x 20" H.

Burrows Digital Moisture Meter 110/240V, 50/60Hz .....	<b>No. DMC750</b>
Burrows Digital Moisture Meter 110/240V, 50/60Hz (with internal printer option) .....	<b>No. DMC770</b>
External Printer for use with DMC750 w/cable 110/220V, 50/60Hz .....	<b>No. DMC750P</b>
External Printer Additional Paper .....	<b>No. DMC750PAPER</b>
Replacement Printer Ribbon on External Printer .....	<b>No. DMC750RIBBON</b>
AC Adapter for DMC750, 110/220V, 50/60Hz .....	<b>No. DMC750ACDC</b>
Internal Printer for DMC770 .....	<b>No. DMC770P</b>

**U.S./Canada**  
**Toll Free: 1-800-284-5779**

**Fax: 312-738-5329**

**International: 312-738-3700**

## GAC500XT MANUAL MOISTURE TESTER WITH TEST WEIGHT

Seedburo offers the 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: corn, corn-high moisture, durum, oats, soybeans, sorghum, wheat-hard red winter, wheat-hard red spring, millet, rapeseed, rye, barley -6R, safflower, sunflower – oil type, barley -2R and wheat-soft red winter. 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.

The GAC500XT has a moisture range of approx. 5 to 45%, depending upon the commodity, a grain temperature range of 32 to 122°F (0 to 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. Unit operates on 110V, 220V or 12V, adapters included. Net wt 13lbs., Ship wt 20 lbs. Actual dims 14" L x 11" W x 14" H, Ship dims 18" L x 18" W x 13" H. **MADE IN USA**

GAC500XT Manual Moisture Tester 110/220V 50/60Hz .....	<b>No. GAC500XT</b>
Replacement 12V Adaptor.....	<b>No. GAC500MTA</b>
Optional Printer, 110/220V 50/60Hz .....	<b>No. GAC-P</b>
Paper for Printer .....	<b>No. GAC-PP</b>
Ribbon for Printer .....	<b>No. GAC-PR</b>

*\*English, Spanish, French, Italian, German, Portuguese, Turkish, and other European languages (specify when ordering).*

## MINI GAC AND MINI GAC PLUS HANDHELD 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 to 45%, depending upon the grain type, a grain temperature range of 32 to 122°F (0-50°C). The sample size is approximately 1 pint and can hold 20 twenty-grain calibrations: Corn, Corn Hi, Soybeans, Sorghum, Oats, Barley 6R, Barley 2R, Sunflower Oil, Rapeseed, Rye, Wheat HRW, Wheat HRS, Wheat SRW, Durum, Millet, Safflower, and four (4) empty, but the user can choose from over 450 calibrations.

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. 7 lbs. Actual dims 11-7/8" H x 4-13/16" W x 8-5/16" D. Ship dims 19" H x 13" W x 7" L. **MADE IN USA**

Handheld Moisture Tester-Plus (complete with case) .....	<b>No. GACMINI-P</b>
Replacement Handheld Moisture Tester .....	<b>No. GACMINI-L</b>
Carrying Case.....	<b>No. GACMINI-CASE</b>
Replacement Funnel Assembly .....	<b>No. GACMINI-FUNNEL</b>
USB Cable for GACMINI .....	<b>No. GACMINI-DL</b>

*\*English (US,UK & AU), Spanish, French, Italian, German, Portuguese, Turkish, and other European languages (specify when ordering).*

## 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 MB45 is the standard in high performance moisture content determination. This model has a sample capacity of 45g 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 50° to 200°C in 1° increments.

The MB35 has a sample capacity of 35g, with a readability of 0.002 gram, intuitive software that establishes a simple user interface with simple 3 key navigation; just enter the time, temperature and begin the test. The MB35 operating temperature range is 50° to 160°C in 5° increments.



The Ohaus MB23 and MB25 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 display, standard RS232 port, readabilities from 0.1% to 0.05% and a choice of halogen on the MB25 or infrared heating on the MB23. These models offer flexibility for any budget. (Models are CE, UL listed, CSA and FCC approved.)

Digital Moisture Analyzer, 120V 50/60Hz .....	<b>No. MB45</b>
Digital Moisture Analyzer, 220V 50/60Hz .....	<b>No. MB45/A</b>
Digital Moisture Analyzer, 120V 50/60Hz .....	<b>No. MB35</b>
Digital Moisture Analyzer, 220V 50/60Hz .....	<b>No. MB35/A</b>
Digital Moisture Analyzer, 100 to 240V 50/60Hz .....	<b>No. MB25</b>
Digital Moisture Analyzer, 100 to 240V 50/60Hz .....	<b>No. MB23</b>
Temperature Calibration Kit .....	<b>No. 11113857</b>
Disposable Sample pans, qty. 50 .....	<b>No. 80850086</b>
Reusable sample pans, qty. 3 .....	<b>No. 80850088</b>
Pads, glass fiber, qty. 200 .....	<b>No. 80850087</b>

### Specifications

Model	MB45	MB35	MB25	MB23
Capacity	45g	35g	110g	110g
Repeatability (Std Dev) (g)	0.05% (3g sample) 0.015% (10g sample)	0.18% (3g sample) 0.02% (10g sample)	0.2% (3g sample) 0.05% (10g sample)	0.3% (3g sample) 0.2% (10g sample)
Readability	0.01% / 0.001g	0.02% / 0.002g	0.05% / 0.005g	0.1% / 0.01g
Sample Size	3g to 20g typical, 0.5g min.			
Output	Bidirectional RS-232 w/ GLP/GMP		Bidirectional RS-232	
Heating Technology	Halogen with ramped voltage to save bulb life			Infrared (no glass)
Temperature Range	50°C to 200°C in 1° increments		50°C to 160°C in 5° increments	
Heating Options	4 (Fast, Standard, Ramp, Step)		(1) Standard	
Shutoff / Timing Criteria	Manual, Custom, pre set 1-120 minutes in 10-second increments or Auto	Manual, 1-120 min, 30-sec. Inc. to 60 min 1 min. incr. from 60 - 120 min or Auto	Manual, Timed 1 - 99 minutes, 30-second increments to 60 minutes, or Auto	
Power	120, 240 VAC 50/60 Hz		100 to 240 VAC, 50/60 Hz	
Tare Range	To capacity by subtraction			
Operating Temperature Range	41° to 104°F / 5° to 40°C			
Calibration	Weight and temperature calibration (masses and temperature kit sold separately)			
Display Type	128 x 64 pixel dot matrix backlit LCD display		Custom backlit LCD	
Test Database	50 procedure test library		NA	
Result Displays	% moisture, % solids, % Regain, statistics, time, temperature, weight (g), test ID, drying curve	% moisture, actual weight (g), actual temperature and test time	% moisture or % solids or weight (g), temperature, time	
Display Language	English, Spanish, French, Italian, German	English, Spanish, French	English	
Pan Size (Diameter)	3.5 inch / 90 mm			
Dimensions (W x H x D)	7.5 x 6 x 14.2 inches / 19 x 15.2 x 36 cm		6.5 x 5 x 11 inches / 17 x 13 x 28 cm	
Net Weight	10.1 lb / 4.6 kg		5 lb / 2.3 kg	
Shipping Weight	14.1 lb / 6.4 kg		8.5 lb / 3.9 kg	

## MECHANICAL CONVECTION OVENS

Seedburo microprocessor-controlled ovens store up to 50 programs with 15 program steps, which can fully automate your routine drying procedures. They have high-quality insulation and an airtight design with an insulated silicone door seal that prevents the escape of harmful vapors and prevents heat loss. Both ovens feature a heat ring and adjustable-speed fan to ensure excellent heat uniformity.

Oven temperature shutoff sounds an audible alarm to ensure samples will never overheat. Rounded interior corners and removable door seal make cleanup simple. Both models have door mounted components for compact construction. Door easily detaches for easy removal and cleanup with soap and water.

Microprocessor controller features a digital display, easy to operate keypad, menu prompts in five selectable languages, intelligent fan speed control, real-time clock, timer, RS232 output, stainless steel interior and powder-coated steel exterior. Temperature range 20 – 220°C, resolution 0.1°C, temperature control accuracy ±0.1°C, run time: 1 min. to 999 hr. 59 min. Rise time 25 min. for TC40 and 47 min. for TC100. Ovens are **supplied with one (1) shelf**. Available in 115V/60Hz with 6 ft. cord and US plug, or 240V 50/60Hz with 6 ft. cord and European plug. CE approved. **MADE IN USA**



Model	Chamber Dims (WxDxH)	Overall Dims (WxDxH)	Volume	Net Wt.	Ship Wt.
TC40	13.375"x14.6"x15"	18.25"x19.25"x20.75"	1 cu. ft.	75 lbs.	80 lbs.
TC100	17.75"x19.75"x20.125"	22.375"x24.75"x25.75"	3.5 cu. ft.	115 lbs.	122 lbs.

- Convection Oven, 9.1 amp, 1 cu. ft. 28 liters, 115V, 60Hz ..... **No. TC40**
- Convection Oven, 9.1 amp, 1 cu. ft., 28 liters, 240V, 50/60Hz ..... **No. TC40/A**
- Additional shelf for 1.4 cu. ft. oven ..... **No. TC40S**
- Convection Oven, 9.1 amp, 3.5 cu. ft., 99 liters, 115V, 60Hz ..... **No. TC100**
- Convection Oven, 9.1 amp, 3.5 cu. ft., 99 liters, 240V, 50/60Hz ..... **No. TC100/A**
- Additional shelf for 3.5 cu. ft. oven ..... **No. TC100S**

## ALL PURPOSE LABORATORY OVENS

These low cost, fully equipped All Purpose Laboratory Ovens are great for sample drying, conditioning, sterilizing, dehydrating and moisture testing. A gravity convection oven, the standard features include: welded steel construction, two nickel plated wire shelves adjustable at 1/2" increments, full-length continuous hinge, 1" industrial rockwool insulation, hermostatically controlled, over-temperature protection, damper controlled induced air circulation, baked enamel exterior finish, corrosion resistant interior. A bimetal control thermostat sets desired oven temperature. Thermal cut-off limits maximum oven temperature. Maximum temperature 200°C (392°F). Red pilot light indicates heater operation. Top mounted bi-metallic, dual range, dial thermometer. Operates on 120V or 240V, 50/60Hz. **MADE IN USA**



Model	Chamber Dims (WxDxH)	Overall Dims (WxDxH)	Volume	Shelves	Ship Wt.
LO201C	12" x 10" x 10"	14" x 12" x 19"	0.7 cu. ft.	2	39 lbs.
LW201C	18" x 12" x 16"	20" x 14" x 25"	2.0 cu. ft.	2	66 lbs.

- Laboratory Oven, 800 watt, 120V, 50/60Hz ..... **No. LO201C**
- Laboratory Oven, 800 watt, 240V, 50/60Hz ..... **No. LO201C/A**
- Laboratory Oven, 1600 watt, 120V, 50/60Hz ..... **No. LW201C**
- Laboratory Oven, 1600 watt, 240V, 50/60Hz ..... **No. LW201C/A**
- Replacement Thermometer for LW and LO Series Ovens ..... **No. L201CT**
- Additional Shelf for LO201C Oven ..... **No. LO201CS**
- Additional Shelf for LW201C Oven ..... **No. LW201CS**

### SEEDBURO DESICCATORS

Seedburo 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 ground surfaces should be cleaned thoroughly and greased with a silicone-based vacuum grease, offered below. Each desiccator is supplied with a porcelain plate. No. SD200 Ship. wt., less plate, 17 lbs. Ship. dims 15”L x 15”W x 19”H. No. SD200 plate only, Ship. wt. 3 lbs. Ship. dims 15”L x 15”W x 5”H. No. SD250 Ship. wt., less plate, 20 lbs., Ship. dims 15”L x 15”W x 19”H, No. SD200 plate only, Ship. wt. 3 lbs., Ship. dims 15”L x 15”W x 5”H.



Inside Diam.	Approx. Height	Approx. Depth	Plate Diameter	Catalog No.
200mm	315mm	125mm	190mm	<b>No. SD200</b>
250mm	325mm	130mm	230mm	<b>No. SD250</b>
Plate only	--	--	190mm	<b>No. SD200P</b>
Plate only	--	--	230mm	<b>No. SD250P</b>
Silicone Grease	--	--	5.3oz. 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 light purple 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”x11”x7”. No. SD5 Ship. wt. 6 lbs., Ship. dims 12”x12”x12”

- Seedburo Drierite Indicating Desiccant, 1 lb. jar, 8 mesh ..... **No. SD1**
- Seedburo Drierite Indicating Desiccant, 5 lb jar, 8 mesh ..... **No. SD5**

### SEEDBURO 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” Diam. x 1-3/4” H. SSC6 is 6 oz. capacity, 2.9” diam. X 1.9” H, Ship. wt. 3 lbs., Ship. dims 13”L x 13”W x 5”H

- Gill Style Container, 4 oz. (pkg/12) (60mm x 40mm) ..... **No. SSC4**
- Gill Style Container, 6 oz. (pkg/12) (73mm x 48mm) ..... **No. SSC6**

### SEEDBURO TONGS



Crucible and Flask Tongs - All-purpose laboratory tongs for holding, manipulating and pouring, as well as for picking up hot objects, such as Gill Containers.

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

### HAY, GRAIN AND SILAGE MOISTURE TESTERS

- \* Measures moisture and dry matter content of silage, forage, hay and more.
- \* Ideal for large and small growers of beans, alfalfa, corn, grain, soybeans, rice, nuts, or seeds.
- \* Accurate to 0.1% moisture; operates by removing moisture from original sample and weighing the product to determine moisture loss. Thermometer reads in both F° and C°
- \* Includes tester, sample canister, scale, sample bowl and instructions

The BHT6071, offered by Seedburo, has a built-in auto shut-off timer, and will test moisture in all crops and feedstuffs across all moisture ranges.

The BHT6200 Deluxe Tester, has a built-in shut-off timer and selectable temperature range from 80F to 300F, includes exclusive temperature gauge.



*BHT6200 Shown with scale and bowl*

Both testers can be used to tell you when to swath and when to combine and store your crops. Forage tests are normally taken in under 30 minutes and vary for other crops. Both units are available with scale and sample container or you can supply your own (models followed by 'L'). Net wt. 9 lbs, Ship. wt. 11 lbs. Ship. dims 24”Lx10”Wx8”H **MADE IN USA**

- Silage Tester, 110V/60Hz w/Built-in Timer ..... **No. BHT6071**
- Silage Tester, 110V/60Hz w/Built-in Timer, without Scale and Bowl ..... **No. BHT6071-L**
- Deluxe Silage Tester, 110V/60Hz w/Selectable Temp Range ..... **No. BHT6200**
- Deluxe Silage Tester, 110V/60Hz w/Selectable Temp Rand w/o Scale and Bowl ..... **No. BHT6200-L**
- Step-down Transformer for 220V operation ..... **No. K22**

## HAY AND STRAW MOISTURE TESTERS

The digital F-2000 and the analog F-6 Moisture Testers are great for checking the moisture content of hay before baling and to ensure safe storage of bales. The F-2000 has a moisture range of 6-40%. It can store up to 100 readings and display the average and highest of the accumulated readings. It also features an adjustable, audible set-point to alert you when a pre-selected % of moisture has been reached. The F-6 has a 13-40% moisture range. Also available: our F6-L with low moisture range of 6-30%. Each unit comes with built-in calibration check to verify the accuracy of your readings, as well as a #1235 10" prod (attaches directly to meter). Operates with 9V battery, included. Other prods are available for testing moisture in hay stacks, windrows, small & large bales or chopped hay (see bottom of page.) . Meter dimensions 8" L x 3" W x 1 5/8" H. All units: Ship wt. 2 lbs., Ship. dims 14" L x 10" W x 4" H **MADE IN USA**



Digital Hay Moisture Meter With 1235 10" Prod .....	<b>No. F2000</b>
Analog Hay Moisture Meter With 1235 10" Prod .....	<b>No. F6</b>
Analog Hay Moisture Meter, Low Range, With 1235 10" Prod .....	<b>No. F6-LOW</b>
Carrying Case for F2000, F2000-T and F6 Models .....	<b>No. 324CAS-0065</b>
Replacement Prod, 10" (direct attachment to meter) .....	<b>No. 1235</b>

## TOBACCO MOISTURE TESTER

Modified specifically for tobacco growers, the F2000T shares many of its features with the F-2000 hay meter. Calibrated for Burley tobacco, the F2000T is used to produce a high-quality crop every year and features a bright, clear, digital display. It will average up to 100 accumulated readings and will display average and highest of accumulated readings. Moisture range is 8% to 37% on Burley tobacco and it has a built-in calibration check. An audible, adjustable alarm alerts you to when a pre-selected moisture content has been reached. See bottom of page for available prods. Operates on 9 volt battery (included). Actual dimensions 8"L x 3"W x 1-5/8"H, weight 10 oz. Ship wt. 2 lbs., Ship dims 13"L x 10"W x 6"H. **MADE IN USA**



Tobacco Moisture Tester .....	<b>No. F2000T</b>
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## HOPS MOISTURE TESTER

The G34 lets you easily check moisture levels in baled hops to assure a high-quality harvest and safe storage. The large analog display and built-in battery check make this a favorite among hop growers and the easy to read analog display reads 7% to 15% moisture. An optional 9-1/2" insulated pin prod for use on hops bales, with 8-1/4" penetration, eliminates the effect of surface moisture (No. 30-E/C). Tester has an auto-shutoff timer to save battery life and is supplied with a 9V battery. Actual dimensions 7-3/8"L x 3-7/8"W x 2-3/4"H and weighs 1 lbs. Ship dims 12" L x 9" W x 5" H, Ship wt. 2 lbs. **MADE IN USA**



Hops Moisture Tester .....	<b>No. G34</b>
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### Optional Prods For All Meters:

Electrode Handle Must Be Used With The Following Prods .....	<b>No. H4</b>
10" Prod - Not Attachable Directly To Meter (for Baled Hay) .....	<b>No. 830-2</b>
18" Prod (for Hay in Stacks or Large Bales) .....	<b>No. 830-3</b>
36" Prod (for Hay in Stacks or Large Bales) .....	<b>No. 830-4</b>
12" Prod (for Hops) .....	<b>No. 830-5</b>
9-1/2" Insulated Pin Prod (for hops) .....	<b>No. 30EC</b>
Short Pin Prod (for Chopped Hay, Windrows) .....	<b>No. 831</b>
Long Pin Prod (for Seed and Grain in Bags) .....	<b>No. 832</b>
Standard for Calibrating G34 Tester (optional) .....	<b>No. MCS-44</b>

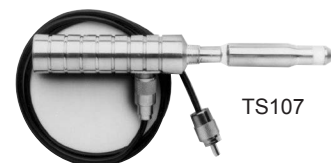


## DELMHORST TEMPERATURE AND MOISTURE TESTERS

### DIGITAL ELECTRONIC THERMOMETER



This dual range digital thermometer measures temperature from -40° to 300°F or -40° to 150°C. The TM100 is ideal for penetrating samples in bins, trucks or any receiving vessel. Response time is fast, needing only 2 minutes for 63% excursion and 4-5 minutes for full excursion. Unit features 3-1/2" 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. Meter dims 2-3/4" L x 1-3/4" W x 4-3/4" H. Ship wt 6 lbs. Ship dims 45" L x 7" W x 7" H. **MADE IN USA**



Digital Thermometer Complete .....	<b>No. TM100</b>
Extra 3-ft. Extension .....	<b>No. PE22</b>
Extra Handle .....	<b>No. SH44</b>
Extra Sensor, 31/2" aluminum w/stainless steel tip (for solids) .....	<b>No. TS107</b>
Optional Sensor, 5" stainless steel tip (for liquids) .....	<b>No. TS102</b>
Carrying case for TM100 .....	<b>No. 324CAS-0085</b>



### GRAIN AND HAY MOISTURE TESTER

The G7, distributed by Seedburo, 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, sorghum, soybeans, wheat and rye. 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 - 160°F (0-70°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 reading 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. Actual dims 7-1/4" L x 6" W x 5-1/2" H, Ship dims 15" L x 15" W x 9" H, Ship wt. 7 lbs. **MADE IN USA**

Moisture Meter with Sample Cup for Grain .....	<b>No. G7</b>
Optional Case .....	<b>No. G7/CASE</b>
Optional Smooth Disc Upper Electrode Assembly for Testing Flour .....	<b>No. 315ELE-0024</b>
Optional Sample Cup for Flour .....	<b>No. 313CUP-006</b>
Brush for Cup Cleanout .....	<b>No. 303BRU-0002</b>



### 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. The C2000 is also available with Viscose Rayon (6% - 22.4%) and Wool (12.3% - 25.2%) model C2000V. Finally, the meter has an audible, adjustable alarm and stores up to 150 readings in memory. Tester operates on one 9V battery (included). Actual dims (meter) 8" L x 3" W x 1-5/8", Ship wt. with all 3 electrodes 6 lbs. lbs., Ship dims 15"L x 15"W x 6"H. **MADE IN USA**

Cottonseed Tester (less Electrodes) w/Carrying Case .....	<b>No. C2000</b>
Cottonseed Tester for Viscose Rayon and Wool (less Electrodes) w/Carrying Case .....	<b>No. C2000V</b>
Cup Electrode for Lint or Seeds .....	<b>No. 52EC</b>
Long Pin Electrode for Baled Fibers .....	<b>No. 30EC</b>
Short Pin Electrode for Cones/Skeins .....	<b>No. 37EC</b>
Electrode, 36" Long with T-handle .....	<b>No. 830TC</b>

## 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. Operates on a single 9 Volt 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 lb., Ship dims 13"L x 11"W x 7"L. **MADE IN USA**



- 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**



## 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. 4 lbs., Ship. dims 19"L x 3"W x 3"H.

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



## SEEDBURO SOIL SAMPLERS

The Seedburo Soil Samplers draw a soil core approximately 1" 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 1.5 lbs. Ship Dims 21" L x 8" W x 2" H. Model 529 & 530 – Ship wt 3 lbs. Ship Dims 37" L x 10" W x 2" H.



### MADE IN USA

#### 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 of Hay ..... **No. S-5**

## SOIL COMPACTION TESTER

Severely compacted soil is difficult to work 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. **MADE IN USA**



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 & 18 inches. Measures in pounds per square inch. Net wt.3 lbs. Ship wt 4 lbs. Ship dims 41"L x 13"W x 4"H.

- Soil Compaction Tester ..... **No. SSCT1**



### 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. 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, antistatic 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. Ship wt. 37 lbs. Actual dims 10-1/3" L x 10-1/3" W x 17-1/3" H. Ship dims 15" L x 15" W x 20" H.

**MADE IN USA**

- Udy Mill, 3/4HP, 110V, 50/60Hz, Joined Belt Drive ..... **No. 3010SM/B**
- Udy Mill, 3/4HP, 220V, 50/60Hz, Joined Belt Drive ..... **No. 3010SM/C**



### SAMPLE MILL FEED CONTROLLER

The Feed Controller introduces coarse sample material into the Cyclone Sample Mill. A 30 to 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**

### ACCESSORIES AND REPLACEMENT PARTS

Screens are available in steel and stainless steel with a range of sizes from .25mm up to 3.0mm.

- |  |                    |   |                    |
|--|--------------------|---|--------------------|
| Screen Steel 1.00mm.....   | <b>No. 30-0302</b> | Air Outlet Filter Assembly.....         | <b>No. 30-0307</b> |
| Screen Steel 2.00mm.....   | <b>No. 30-0318</b> | Air Outlet Filter Media.....            | <b>No. 30-0308</b> |
| Screen Stainless Steel 0.5mm.....                                    | <b>No. 30-0499</b> | Joined Belts (set of 2).....            | <b>No. 35-0433</b> |
| Plastic collection bottle 150ml.....                                 | <b>No. 35-0463</b> | Impeller Aluminum Finished.....         | <b>No.30-0316</b>  |
| Glass collection bottle 120ml (36 per case).....                     | <b>No.35-0390</b>  | Copper Grinding Ring.....               | <b>No.30-0335</b>  |
| Collection bottle kit<br>(2ea Glass 120ml & 1ea Plastic 150ml) ..... | <b>No.30-0387</b>  | Forage Cover with Gasket & O-Ring ..... | <b>No. 30-0367</b> |



### STEIN MILL

The Stein Mill is a powerful, high speed grinder extractor for lab use. The mill features a direct top drive 1/2HP motor with a speed of approximately 1500 RPM, no load. The cutter blade is machined cast aluminum. 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. Also includes a digital timer with auto cut-off safety feature. Usable Cup Capacity - grinding solids: 20cc to 500cc. Blending solids and liquids: 40cc to 400cc. Cup Size: 3-1/2" x 3-5/8" Height: 19" Net wt. Ship wt. 26 lbs. Ship Dims 15" Lx 15" W x 22" H.

- Stein Mill, 1/2HP, 110V, 60Hz ..... **No. M2/B**
- Stein Mill, 1/2HP, 220V, 50Hz ..... **No. M2/C**
- Replacment cup ..... **No. 196**
- Replacment blade ..... **No. 197S**



## 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. Standard sieve (0.8mm) is used for Falling Number, Glutomatic/Gluten Index and NIR analyses. 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, 16,800rpm. Capacity is 300g in 30-50 seconds depending on moisture content. Net wt. 115 lbs. (51Kg), Ship wt. 147 lbs. Actual dims. 22" L x 21" W x 25" H (560 x 510 x 630mm), Ship dims. 25" L x 19" W x 27" H.

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



## PERTEN LABORATORY MILL 3310

The Lab Mill 3310 is a disc type mill for grinding grains, peas, corn, soybeans and other products with low fat content. Typical sample size 5-50g. This mill is approved for sample preparation for oven and NIR moisture tests. Adopted by AACC, standard No. 55-30 to determine wheat hardness by PSI (Particle Size Index). The particle size is dependent on the disc type and the discs' distance. The distance is adjustable and three different types of discs are available.

- **TYPE 1 - MEDIUM** is used for determination of moisture content
- **TYPE 2 - FINE** is used for PSI or when a fine particle size is required
- **TYPE 3 - COARSE** is used for oats and other grains with high moisture content

Sample cup size is 250ml. Extra cups with lids available for handling and storage. Operation is direct drive. Disc dia. 75mm. Capacity 50g in 10-15 seconds. Net wt. 73 lbs. (33Kg), Ship wt. 145 lbs. Actual dims 11" L x 6" W x 19" H (280 x 150 x 480mm), Ship dims. 17" L x 11" W x 22" H.

Perten Lab Mill 3310 115V, 60Hz, 1PH .....	No. PLM3310/B
Perten Lab Mill 3310 230V, 50Hz, 1PH .....	No. PLM3310/C
Type 1 Medium Disc .....	No. PLM3310MGD
Type 2 Fine Disc .....	No. PLM3310FGD
Type 3 Coarse Disc .....	No. PLM3310CGD
Extra cup w/lid .....	No. PLM3310EC



## 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 dia. 100mm. Net wt. 75 lbs. (34Kg), Ship wt. 90 lbs. Actual dims. 18" L x 8" W x 23" H (445 x 220 x 560 mm), Ship dims. 20" L x 16" W x 21" H.

Perten Lab Mill 3600 115V, 60Hz, 1PH .....	No. PLM3600/B
Perten Lab Mill 3600 230V, 50Hz, 1PH .....	No. PLM3600/C
Extra cup w/lid .....	No. PLM3600EC
Type 1 Standard Disc .....	No. PLM3600T1
Type 4 Coarse disc .....	No. PLM3600T4
Type 5 Fine disc .....	No. PLM3600T5





### SEEDBURO HAND GRINDER

The Seedburo Hand Grinder features an adjusting screw to set the grinder to a wide range of fineness. Unit is made of high grade cast iron with an approx. 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 nut meats, etc. Seedburo Hand Grinders are used by government experiment stations, research laboratories and many grain elevators, feed mills and flour mills. Net wt. 12-1/2 lbs. Ship wt. 15 lbs. Actual dims. 14" L x 7" W x 15" H. Ship dims. 14-1/2" L x 8" W x 15" H.

Hand Grinder with Both Feeds .....	<b>No. 438HB</b>
Hand Grinder with Tooth Feeds .....	<b>No. 438HT</b>
Hand Grinder with Worm Feed .....	<b>No. 438HW</b>
Tooth Feed only .....	<b>No. 438TF</b>
Worm Feed only .....	<b>No. 438WF</b>

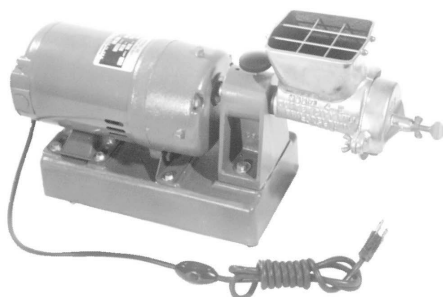
### SEEDBURO ELECTRIC GRINDING MILL

Seedburo's Electric Grinding Mill offers a fast means for grinding your product. The unit is powered by a 1/3 HP 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 Seedburo hand grinder mounted on a high speed motor for faster and more consistent results. Output capacity of 40lbs/hr. Max. fineness: 100 mesh. Hopper size: 4 1/2" W x 5" D. Counter top to discharge: 6". Net wt. 55 lbs. Ship wt. (2 ctns) 50 lbs & 15 lbs. Actual Dims. 25" L x 8" W x 12" H. Ship dims (2 ctns) 18" L x 10" W x 12" H & 10" L x 10" W x 8" H.

#### MADE IN USA

Grinding Mill w/Both Feeds, 115V, 60Hz .....	<b>No. 438B/B</b>
Grinding Mill w/Both Feeds, 230V, 50Hz .....	<b>No. 438B/C</b>
Grinding Mill w/Tooth Feeds, 115V, 60Hz .....	<b>No. 438T/B</b>
Grinding Mill w/Tooth Feeds, 230V, 50Hz .....	<b>No. 438T/C</b>
Grinding Mill w/Worm Feeds, 115V, 60Hz .....	<b>No. 438W/B</b>
Grinding Mill w/Worm Feeds, 230V, 50Hz .....	<b>No. 438W/C</b>

Also Available in Stainless Steel



### POWER GRIST MILL

The Power Grist Mill is perfect for large or small operations. This mill cracks, crumbles, meals and flours a wide range of products. Good for dry, oily or damp seeds such as coffee, roots, soybeans, spices and also for hulling confectionary sunflower seeds (not for oil type sunflower). Approximate capacity of 300 lb/hr. on corn meal or wheat flour, coarse animal feed up to 700 lb/hr. The unit is made of a heavy duty cast iron with red enamel finish and special alloy grinding burrs available in three (3) textures: coarse, fine and extra fine. Adjustable for grinding coarse to fine texture. Each unit includes a half bushel galvanized feed hopper with a regulator slide, one pair each 5-1/2" coarse and fine alloy burrs, 12" diameter mill pulley, discharge spout, base frame with adjustable motor mount, and 25 ft. power cord. Ship wt. 230 lbs. Ship dims. 38" L x 18" W x 36" H.

Optional: Mobile Base Frames constructed of carbon steel with red enamel finish, 6" diameter casters and brake kit. Available discharge heights of 18", 24" and 38".

Power Grist Mill 115V, 60Hz/1Ph.....	<b>No. PGM</b>
Power Grist Mill 230V, 60Hz/1Ph .....	<b>No. PGM/A</b>
Power Grist Mill 220V, 50Hz/1Ph (less plug).....	<b>No. PGM/B</b>
Power Grist Mill 220/380/440V, 50Hz/3Ph (less plug).....	<b>No. PGM/C</b>
Burrs-Coarse .....	<b>No. PGMB</b>
Burrs-Fine.....	<b>No. PGMBF</b>
Burrs-Extra Fine .....	<b>No. PGMEF</b>
Mobile Base Frame with legs for 18" discharge height, 6" diam. casters & brake kit.....	<b>No. PGMF18</b>
Mobile Base Frame for 24" discharge height, as above .....	<b>No. PGMF24</b>
Mobile Base Frame for 38" discharge height, as above .....	<b>No. PGMF38</b>



## BLACK LIGHT TEST FOR AFLATOXIN

The Black Light test is extremely convenient as a screening procedure for the detection of Aflatoxin in corn. The detection of bright greenish-yellow fluorescence indicates there may be mold present that can produce the toxic Aflatoxin. It is necessary to grind (or crack) the corn before the sample is scanned with the Black Light (see pages 14-16 for grinders and mills). Care should be taken to ensure that the samples are fresh because the fluorescence is not stable and will eventually disappear although the toxin itself remains. Because there are other molds and fungi which can produce fluorescence, further tests should be conducted to determine the presence of Aflatoxin and the levels at which it exists (see page 18 for Aflatoxin Test Kits). As little as 20 parts per billion of Aflatoxin is sufficient to render corn unfit for human consumption.

### SEEDBURO BLACK LIGHT CABINET

The Seedburo Black Light Cabinet is designed to reduce the amount of natural light on your samples and is equipped with a special aluminum reflector and two 15 watt ultraviolet bulbs with an intensity of 365 nanometers. The cabinet has an open bottom to allow easy access to samples. Net wt. 14 lbs. Ship wt. 17 lbs. Actual dims 19" L x 12" W x 9.5" H. Ship dims 22" L x 13" W x 13" H. **MADE IN USA**



- Black Light Cabinet, 110V, 60Hz ..... **No. 229**
- Transformer for 220 volt operation ..... **No. K22**
- Replacement Bulb, 15 watt ..... **No. 229B**

### SUPER HIGH INTENSITY ULTRAVIOLET LAMP

The Seedburo SB100P "Super" High Intensity Black Light is ideal for detecting low-level fluorescence or for use in brightly lit areas. The unit features a spot bulb (flood bulb available) that provides a concentrated beam with a steady-state 365 nanometer intensity. Unique engineering polymer housing makes this lamp extremely impact resistant and dentproof. A flexible, silicone rubber filter holder is easily removed (without tools) for bulb or filter replacement. The unit is supplied with UV-absorbing glasses for your protection. Net wt. 13 lbs. Ship wt. 14 lbs. Ship dims 15" L x 12" W x 10" H.



- Super High Intensity Ultraviolet Lamp, 120V, 60Hz ..... **No. SB100P/B**
- Super High Intensity Ultraviolet Lamp, 230V, 50Hz ..... **No. SB100P/C**
- Replacement Bulb ..... **No. SB100P/BULB**
- Replacement Filter ..... **No. SB100F**
- Heat Guard Stand ..... **No. SB100H**
- UV Face Shield ..... **No. SB100FS**
- Replacement UV Glasses ..... **No. SB100S**



### BATTERY OPERATED ULTRAVIOLET LAMP

This portable, battery operated lamp has a number of built-in features which allow you to use it anywhere. Includes a 6-volt rechargeable battery, a built-in AC charger and a charging cord. It's built to take tough use with durable, high impact plastic housing and stainless steel tube guard that protects against breakage. Battery life is approximately 7 hours with a 24 hour recharge (can not be used when recharging). Net wt. 3 lbs. Ship wt. 4 lbs. Actual dims 5-3/4" L x 3-1/4" W x 10-3/4" H. Ship dims 10"L x 6"W x 12"H.



- MADE IN USA**
- Battery Operated 6 Volt UV Lamp with 115V, 60Hz Recharger ..... **No. B260/B**
- Battery Operated 6 Volt UV Lamp with 230V, 50Hz Recharger ..... **No. B260/C**
- Replacement Bulb, 6 Watt ..... **No. B16B**

### 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 1.5-volt (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. Net wt. 11oz Ship wt. 2 lbs. Actual dims 2-1/4" L x 1" W x 9" H. Ship dims 10" L x 4" W x 12" H. **MADE IN USA**



- Handheld UV Lamp with AC adapter ..... **No. B200**
- Replacement Bulb, 5 Watt ..... **No. B200B**

## AFLATOXIN, VOMITOXIN AND FUMONISIN TEST KITS



Seedburo offers Reveal and Reveal Q® mycotoxin testing kits from Neogen®. The lateral flow format mycotoxin tests are extremely simple strip tests. Available in two options: Reveal will allow the user to test a sample of grain qualitatively (pass/fail) or Reveal Q provides quantitative results (ppb or ppm reading)

Reveal and Reveal Q tests follow a simple process: an extraction is taken from the grain sample and mixed with a diluent solution in a sample cup, dip a test strip into an extracted sample and wait 3 minutes. Reveal Pass Fail results screened at 20 ppb are read right from the strip. Quantitative results (where you need an exact ppb) are available from the Reveal Q strips read by the AccuScan™ III Reader (NEO9590). This reader provides a fast and easy method to read, store, and analyze results from the RevealQ strips.

**AFLATOXIN 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. The maximum allowable limit set by the USDA is 20 ppb for most livestock.

### Qualitative Kit recommendation (screening for Pass/Fail):

Reveal® for Aflatoxin - screens at 20ppb, 25 samples.....	No. NEO8015
Universal Extraction Kit (12 samples) Includes extraction bottles, collection tubes, filter syringes.....	No. NEO8052
Reveal Starter Kit – contains Agri-Grind, timer, cup rack, 100 ul pipettor, tip rack (Components available separately as shown below) .....	No. NEO9285
Methanol, 70% dilution, 1 gallon, required for all aflatoxin and fumosin test kits .....	No. NEO8055

### Quantitative Kit recommendation (Actual ppb reading):

RevealQ for Aflatoxin Test Kit – range 2-150 ppb , up to 25 tests /kit .....	No. NEO8085
Reveal® AccuScan™ Lateral Flow Test Reader .....	No. NEO9590
Universal Extraction Kit (12 samples) Includes extraction bottles, collection tubes, filter syringes.....	No. NEO8052
Ethanol, 65%, 1 gallon, required for all aflatoxin and fumosin test kits .....	No. NEO8071
Reveal Q+ Starter Kit – contains Agri-Grind, timer, Reveal sample cup rack, 100 uL pipettor, 20-200uL tip rack, 500 uL pipettor and 200-1000 uL tip rack (Components available separately shown below) .....	No. NEO9286

**Reveal Q Green:** Neogen offers the water based extraction method for the Reveal Q Green lateral flow technology Aflatoxin kits for quantitative analysis at a 2 – 150 ppb range.

RevealQ Green for Aflatoxin Test Kit – range 2-150 ppb , up to 25 tests /kit .....	No. NEO8086
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### RECOMMENDED ACCESSORIES FOR AFLATOXIN, VOMITOXIN & FUMONISIN KITS:



AccuScan Printer w/ # 9584 cable, 110 v 60 hz .....	No. NEO9566
Digital scale, Capacity 400 g x 0.1 g. AC power supply included .....	No. SP401
Lab Station for storage and organizing kits and materials.....	No. NEO9481
Sample collection tubes 100.....	No. NEO9421
Filter syringes .....	No. NEO9420
Cups and Lids .....	No. NEO9428
Reagent Boats.....	No. NEO9435
Digital Timer.....	No. NEO9426
Reveal Sample cup rack .....	No. NEO9475
Graduate cylinder, 50 ml.....	No. NEO9447

**Agri-Screen and Veratox test kit systems are available on request for traditional users. Request price quotes for complete systems or replacement accessories or supplies.**



## DON (vomitoxin) TEST KITS

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.

Reveal Q DON test kit, 0.3 – 6ppm range, up to 25 samples.....	No. NEO8315
Universal Extraction Kits for 12 samples.....	No. NEO8052
Reveal AccuScan Lateral Flow Test Reader .....	No. NEO9590

## FUMONISIN TEST KITS

Fumonisin (B1, B2, and B3) is a by-product of molds that commonly infect corn. As with the other Neogen test kits, the fumonisin tests are available in the Reveal® simple pass/fail qualitative kit or the Reveal Q® quantitative kit if you need an exact parts per million result.

Reveal Q for Fumonisin, range 0.3 to 6 ppm, up to 25 samples .....	No. NEO8885
Universal Extraction kit for 12 samples .....	No. NEO8052
Reveal AccuScan Lateral Flow Test Reader .....	No. NEO9590

## GMO TRAITCHECK KITS

- Field analysis for GMO corn, soybean and other commodities
- Facilitates segregation of GMO products at elevators and terminals
- Simple lateral flow strips provides results in 5-10 minutes
- Yes/No results at threshold screening levels can be varied based on customer needs
- Integrates into existing sampling and grading programs at elevators

Identifying genetic traits in seed and grains used with feed in today's marketplace. TraitChek™ tests can help you quickly meet regulatory and customer needs for genetic information. With TraitChek™ test strips, you can get on-site yes/no results at grain elevators in 5 to 10 minutes or less. The simple, foolproof lateral flow design means easy testing of seed, leaf or grain.

Tests performed on grain are completed using a representative sample of the whole lot. The sample is put through a blender using small Mason type jars with a grinding time of 10-15 seconds. The sample is then mixed with tap water and a concentrated buffer solution (included). A sample cup is filled with this mixture and the TraitChek™ strip is placed in to the cups for 5-8 minutes, until the control line is clearly visible. If the sample is positive, two red lines will appear if negative, only the control line is visible.



AgraVision Reader w/ test kit

Enough supplies for 100 tests are included; buffer solution, spatulas, sample cups and test strips. The blender and jars are sold separately. Ship dims 11" L x 7" W x 4" H, Ship Wt 4 lbs, Net wt 3 lbs.

Roundup® for soybean, 100 test grain kit.....	No. TR-RRSG1*	Blender for grinding representative samples (less jars) 110V/60Hz only.....	No. BLEND/B
Roundup® for soybean, leaf & seed, 100 test kit .....	No. TR-RRSL1	Protective cover for blender.....	No. BLEND-PC
Roundup® for corn, NK603, 100 test kit .....	No. TR-RRC1*	Small blender jars, 4 oz.....	No. BLEND-J4
Bt1 corn, for grain, 100 test kit.....	No. TR-BT1G1	Medium blender jars, 8 oz.....	No. BLEND-J8
Bt1 corn, for leaf & seed, 100 test kit.....	No. TR-BT1L1	Large blender jars, 16 oz.....	No. BLEND-J16
Liberty Link® corn, for grain, 100 test kit .....	No. TR-LLG1	Tube Rack .....	No. 8003
Liberty Link® corn, for leaf & seed, 100 test kit .....	No. TR-LLL1	Graduated Cylinder for buffer solution measurement.....	No. 8004
Bt1 & Liberty Link® combo kit, for corn 200 test kit.....	No. TR-BTLL	Paddle for 60 count soybean.....	No. SP60
Bt1F Herculux® corn, for grain, 100 test kit.....	No. TR-BT1F*	Digital scale, Capacity 400 g x 0.1 g.	
Cry3Bb, detects YieldGard® rootworm, for corn, 100 test kit .....	No. TR-CRY3YG	AC power supply included.....	No. SP401

\*USDA/GIPSA Validated Kits





16-OHT 20-OH 22P

### 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.

Seedburo probes are made to conform to U.S.D.A. 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. **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 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" x 4" x 4" ..... **No. 22P**
- 72" Government Approved Brass Probe, 12 openings, smooth bronze point,  
Ship wt. 11 lbs, Ship dims 75" x 4" x 4" ..... **No. 281-GB**
- 8' Brass Probe, 16 openings, Ship wt. 20 lbs, Ship dims 98" x 3" x 3" ..... **No. 815**
- 10' Government Approved Barge Probe, Brass, 20 openings, Ship wt. 22 lbs,  
Ship dims 124" x 4" x 4" ..... **No. 230**
- 12' Brass Barge Probe, 20 openings, Ship wt. 24 lbs, Ship dims 148" x 4" x 4" ..... **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 upright and sample is dumped from the open handle.

- 40" Brass Probe, 6 openings, Ship wt. 7 lbs, Ship dims 43" x 4" x 4" ..... **No. 20-OH**
- 51" Brass Probe, 8 openings, Ship wt. 8 lbs, Ship dims 54" x 4" x 4" ..... **No. 21-OH**
- 63" Brass Probe, 10 openings, Ship wt. 9 lbs, Ship dims 65" x 4" x 4" ..... **No. 22-OH**
- 72" Aluminum Probe, 12 openings, smooth point,  
Ship wt. 5 lbs, Ship dims 75" x 4" x 4" ..... **No. 18-OH**
- 72" Brass Probe, 12 openings, Ship wt. 12 lbs, Ship dims 75" x 4" x 4" ..... **No. 16-OH**
- 72" Brass Probe with T-Handle, Ship wt. 12 lbs, Ship dims 75" x 4" x 4" ..... **No. 16-OHT**
- 8' Brass Probe, 16 openings, Ship wt. 24 lbs, Ship dims 98" x 3" x 3" ..... **No. 815-OH**
- 8' Brass Probe with T-Handle, Ship wt. 24 lbs, Ship dims 99" x 5" x 4" ..... **No. 815-OHT**
- 10' Brass Barge Probe, 20 openings, Ship wt. 22 lbs, Ship dims 124" x 4" x 4" ..... **No. 230-OH**
- 12' Brass Barge Probe, 20 openings, Ship wt. 24 lbs, Ship dims 147" x 3" x 3" ..... **No. 230A-OH**
- Sample Probe Carrying Case with Handle (Please specify size of your probe) ..... **No. SP-CASE**

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

### OPEN-HANDLED SPIRAL PROBE

The openings on the inside tube rotate around so that 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 bronze 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" x 4" x 4" ..... **No. 39-OH**
- 51" Spiral Probe, 8 openings, Net wt. 7 lbs, Ship wt. 8 lbs, Ship dims 54" x 4" x 4" ..... **No. 39A-OH**
- 62" Spiral Probe, 10 openings, Net wt. 8 lbs, Ship wt. 9 lbs, Ship dims 65" x 4" x 4" ..... **No. 39B-OH**
- 72" Spiral Probe, 12 openings, Net wt. 9 lbs, Ship wt. 10 lbs, Ship dims 73" x 4" x 4" ..... **No. 39C-OH**



(39C-OH Shown)

### 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" x 63" ..... **No. 320-63G**
- Sampling Canvas, 30" x 73" ..... **No. 320-73G**
- Sampling Canvas, 30" x 10' ..... **No. 320AG**
- Sampling Canvas, 30" x 12' ..... **No. 320BG**

## SEEDBURO PLATED PROBES AND TRIERS

**18" Nickel Plated Trier:** Double-tube construction with 1/2" outside dia. and 5 openings 5/16" W x 1-3/4" L. Open-handled.



Net wt. 7 oz., Ship wt. 2 lb. Ship dims 20" x 4" x 4".  
18" Nickel Plated Trier ..... **No. 235**

**30" Nickel Plated Trier:** Double-tube construction with 1/2" outside dia. and 9 openings. 5/16"W x 1-3/4"L. Open-handled.



Net wt. 11 oz., Ship wt. 2 lbs. Ship dims 32" x 4" x 4".  
30" Nickel Plated Trier ..... **No. 236**

**39" Chrome Plated Trier:** Double-tube construction, 7/8" outside dia., 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" x 4" x 4".  
39" Chrome Plated Trier ..... **No. 79A-OH**

**39" Chrome Plated Trier:** Double-tube construction with a 7/8" outside dia. 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" x 4" x 4".  
39" Chrome Plated Trier ..... **No. 78-OH**

## STAINLESS STEEL SAMPLE PROBES

**39" Stainless Steel Probe:** Has 6 openings with the same structural design as the No. 78-OH (pictured). Probe is designed for use with chemicals, corrosives, pharmaceuticals and fertilizers. Open-Handled Probe: Net wt. 2 lbs, 8oz. Ship wt. 4 lbs., Ship dims 45" x 4" x 4" Partitioned Probe: Net wt. 3 lbs, Ship wt. 4 lbs. Ship dims 45" x 4" x 4".

Stainless Steel Open Handled Probe ..... **No. 6S-OH**  
Stainless Steel Partioned Probe ..... **No. 6S-P**

## AUGER-TIP PARTITIONED PROBE

This brass partitioned probe has a wooden handle with a 12" steel 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" x 4" x 4".  
Auger Tip-Partitioned Probe ..... **No. 552**

These probes and triers **MADE IN USA**

## ELLIS SAMPLER

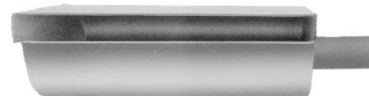
This is used to obtain a sample from a moving belt conveyor or a falling stream of grain. Mouth dims 6" W x 1" D. Overall dims 15" L x 8-1/2" W. Net. wt. 2 lbs., Ship wt. 4 lbs. Ship dims 18" x 12" x 4" **MADE IN USA**



Ellis Sampler ..... **No. 23**

## 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 12" L x 4-1/2" Dia. 2-qt sample capacity. Complete with 36" wooden handle. Ship wt. 6 lbs. Ship dims 45" x 7" x 7" **MADE IN USA**

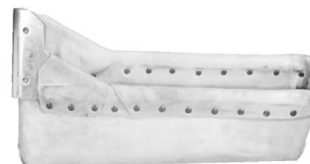


Seedburo Special Truck Sampler ..... **No. 525**

## 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 U.S.D.A. specs. Net wt. 3 lbs. Ship wt. 5 lbs. Ship dims 19" x 13" x 6".

**MADE IN USA**



Pelican Grain Sampler (w/o Handle) ..... **No. 24**



## SEEDBURO LEVER 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" x 15" x 11". **MADE IN USA**

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

## SEEDBURO BIN PROBES & 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" x 8" x 8" **MADE IN USA**



- Thermo Sampler (200 gram capacity for corn) 30-120°F ... **No. 372**
- Thermo Sampler -10-110°C/20-220°F ..... **No. 372D**
- Refill Thermometer 30-120°F ..... **No. 212R**
- Dual Range Refill Thermometer -0 -110°C/20-220°F ..... **No. 212DR**
- Carrying Case (Holds up to 15 extensions with 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. Cup remains closed as long as the probe is being pushed down. Opens when probe is being pulled out. Available in two sizes, 12" and 15". Both sizes have an outside dia. of 1-1/2". Extension rods and T-handle required. Net wt. 1 lb., Ship wt. 2 lbs., Ship dims 12" x 9" x 5" **MADE IN USA**



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

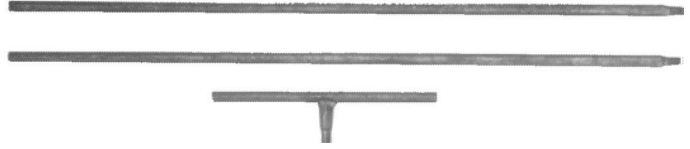
### SPECIAL BIN THERMOMETERS

An 8-1/4" solid brass cover encases a 5-3/8" glass spirit filled thermometer protected by a plastic cover. Unit takes grain temperatures in bins. Three temp. ranges available. Attaches to standard 3 ft. extensions and T-handle. Net wt. 1lb., Ship wt. 2lbs., Ship dims 12" L x 9" W x 5" H. **MADE IN USA**



- Special Bin Thermometer 30-120°F, 1° divisions ..... **No. 213**
- Special Bin Thermometer 0-220°F, 2° divisions ..... **No. 213H**
- Dual Range Bin Thermometer -10 -110°C/20-220°F, 2° divisions ..... **No. 213D**
- Refill Thermometer 30-120°F ..... **No. 212R**
- Refill Thermometer 0-220°F ..... **No. 212HR**
- Refill Thermometer -10 -110°C/30-120°F ..... **No. 212DR**

### EXTENSION AND T-HANDLE



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

### SEEDBURO GRIP HANDLED BAG TRIERS

Grip Handled Bag Triers from Seedburo 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.



- Peanut bag trier SS w/sheath 18-1/2" x 1-3/8" ..... **No. TRIER-1**
- Sunflower seed bag triers w/sheath 18-1/8" x 1-1/4" ..... **No. TRIER-2**
- Corn bag trier SS w/sheath 7-1/2" x 1-1/8" ..... **No. TRIER-3**

### SEEDBURO NOBBE TRIER

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 container and the sample pours out of the open end. Seedburo's Nobbe trier available in a 1/2" or 3/4" diameter version; 20" overall length, one opening starts 2-3/8" from the lip and is 2-1/2" long. Available in Brass or Stainless Steel. Ship wt. 1 lb., Ship dims, 21"x4"x4" **MADE IN USA**



- Brass Nobbe trier 3/4"OD x 20" single tube with 1 opening ..... **No. 223**
- Stainless Steel Nobbe Tier 3/4" OD x 20" ..... **No. 223S**
- Single Tube with 1 opening ..... **No. 223S**
- Brass Nobbe trier 1/2" OD x 20" ..... **No. 222**
- Single tube with 1 opening ..... **No. 222**
- Stainless Steel Nobbe trier 1/2" OD x 20" ..... **No. 222S**
- Single tube with 1 opening ..... **No. 222S**

### KEYSTONE CARBON SAMPLING PROBE

This probe features double tube construction, with a 1" outside diameter and a total length of 42-1/2". There are 13 openings along the side of the probe with partitions separating each compartment. An auger vane with an outside diameter of 2-5/8" is brazed on to the outer tube and extends 1/4 the length of the probe. A "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. 7 lbs. Ship wt. 10 lbs. dims 45" x 12" x 4"

**MADE IN USA**



Keystone Carbon Sampling Probe ..... **No. 118S**

### STAINLESS STEEL FERTILIZER PROBE

36-1/2" Fertilizer Probe, stainless steel, single tube construction. This probe is open handed and has a slot of 32" L x 5/8" W. To help take accurate, consistent samples, probe is scored at 28" and 31" from the tip end. Net wt. 1-1/2" lbs. Ship wt. 3 lbs. dims 43" x 4" x 4" **MADE IN USA**



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

### 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!** Custom bag patches also available with your name & logo. Net wt. 3 lbs. Ship wt. 4 lbs. dims 12" x 9" x 5".

**MADE IN USA**



Bag Patch (roll of 1000) ..... **No. SBP**  
 Custom Bag Patch ..... **No. SBPC**

### FLOUR TRIER

34" Flour Trier, 20 gauge stainless steel construction; tapers from 1" to 11/16" outside diameter, wooden handle. Net wt. 1 lb. Ship wt. 2 lbs. Ship dims 36" x 4" x 4" **MADE IN USA**



Flour Trier ..... **No. 240A**

### 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 ozs. Net dims 7 3/4" L x 3" W. Ship wt. 2 lbs, Ship dims 13" x 10" x 3"

**MADE IN USA**



Seedburo Flour Stick ..... **No. 471**

### SPECIAL PURPOSE TRIERS

**13" Peanut and Rice Trier:** Nickel-plated steel; 1-1/2" outside diameter at large end. The slot is 7-3/8" long, with a top slot width of 1-1/4" tapering down to 1/4". Includes protective sheath. Net wt. 1 lb. Ship wt. 2 lbs. Ship dims 12" x 9" x 5"

Peanut & Rice Trier ..... **No. 76**



**6" Nickel-Plated Bag Trier:** 1/2" outside diameter at large end. Complete with protective sheath. Net wt. 8 ozs. Ship wt. 1 lb. Ship dims 12" x 9" x 5".

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



**11 5/8" Rice Trier:** Nickel-plated steel; 3/4" outside diameter at large end. Complete with protective sheath. Net wt. 1 lb. Ship wt. 2 lbs. Ship dims 12" x 9" x 5".

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 12" x 9" x 5".

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





**WEIGHTED BEAKER**

For beaker sampling from 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 32 oz. Net wt. 4 lbs, Ship wt. 6 lbs. Ship dims 21"L x 9"W x 9"H **MADE IN USA**

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



**LIQUID ZONE SAMPLER**

The basic plan of 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 800 milliliters. Net wt. 3 lbs. Ship wt. 4 lbs. Actual dims 15" H x 3" dia. Ship dims 21"L x 9"W x 9"H **MADE IN USA**

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

**TANK CAR OIL SAMPLER**

Used to obtain representative samples of cottonseed or other 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. 20 lbs. Ship dims 127" x 8" x 8" **MADE IN USA**



- 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. Ship. Wt. 8 lbs, Ship dims 21" x 9" x 9"

- 4 oz. capacity 9-1/4" L x 1-1/2" dia. .... **No. 572-1**
- 4 oz. capacity, pencil thin, 12-3/4" L x 4-1/2" dia. .... **No. 572-4P**
- 8 oz. capacity, 10" L x 7-1/4" dia. .... **No. 572-8**
- 16 oz. capacity 12" L x 3-3/8" dia. .... **No. 572-3**
- 32 oz. capacity 15" L x 2-3/4" dia. .... **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" diam. Maximum sample capacity 24 ozs. Ship Wt. 6 lbs. Ship dims 42" x 7" x 9" **MADE IN USA**

- Drum Sample Thief, stainless steel ..... **No. 573S**
- Drum Sample Thief, plated brass ..... **No. 573B**

## VAC-A-SAMPLE® PNEUMATIC SAMPLING SYSTEMS



**AT LAST...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 feet 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.

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.



Vac-A-Sample with Accessories



### 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.

Vac-A-Sample, Base Unit includes 110V, 50/60Hz, 1 PH Motor, Cyclone & Protective Screen ..... <b>No. Q71P1000</b>	Grain Lever Yoke ..... <b>No. Q71P1800</b>
Vac-A-Sample, Base Unit includes 230V, 50/60Hz, 1PH Motor, Cyclone & Protective Screen ..... <b>No. Q71P1001</b>	Gooseneck Connector ..... <b>No. Q71P1200</b>
10' X 1-1/2" Flexible Vinyl Hose ..... <b>No. Q71P1300</b>	Rubber Spacer (for Inside of Tube) ..... <b>No. Q71P1180</b>
20' X 1-1/2" Flexible Vinyl Hose ..... <b>No. Q71P1310</b>	Tube Connector Pliers ..... <b>No. Q71P1600</b>
30' X 1-1/2" Flexible Vinyl Hose ..... <b>No. Q71P1320</b>	Canvas Tube Carrier (Holds 9 sections) ..... <b>No. Q71P1700</b>
40' x 1- 1/2" Flexible Vinyl Hose ..... <b>No. Q71P1330</b>	4 Foot Grain Probe Section ..... <b>No. Q71P1100</b>
50' x 1-1/2" Flexible Vinyl Hose ..... <b>No. Q71P1340</b>	Burr Tip Section (Hard Packed Materials) ..... <b>No. Q71P1400</b>
	Fine Tip Section (Rice,Wheat,Milo,Barley) ..... <b>No. Q71P1410</b>
	Coarse Tip Section (Corn, Soybeans) ..... <b>No. Q71P1420</b>

# Apollo

## 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. All Gamet truck probe samplers (Apollo & JaHam) are hydraulically driven; this ensures the most powerful and longest lasting drive mechanisms available. All 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 MANUFACTURING: A TRADITION OF QUALITY

Apollo 610A	Apollo 17	JaHam JT03	JaHam JT10	JaHam JT20
<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	<b>Electric Options:</b> 5HP, TEFC 1/60/220 5HP, TEFC 1/50/220 5HP, TEFC 3/60/230-460 5HP, TEFC 3/50/190-380	<b>Electric Options:</b> 1HP, TEFC, 1/60/220 1HP, TEFC 1/50/220	<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	<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
<b>Hydraulic Pump Data:</b> Gear Pump, 850 PSI 3.6 GPM 5 Gallon Reservoir	<b>Hydraulic Pump Data:</b> Gear Pump, 950 PSI 4.0 GPM 10 Gallon Reservoir	<b>Hydraulic Pump Data:</b> Gear Pump, 750 PSI 3.0 GPM 1.5 Gallon Reservoir	<b>Hydraulic Pump Data:</b> Gear Pump, 850 PSI 3.6 GPM 5 Gallon Reservoir	<b>Hydraulic Pump Data:</b> Gear Pump, 850 PSI 3.6 GPM 5 Gallon Reservoir
<b>Control Circuits:</b> 1/50-60/110 1/50-60/220	<b>Control Circuits:</b> 1/50-60/110 1/50-60/220	<b>Control Circuits:</b> 1/50-60/110 1/50-60/220	<b>Control Circuits:</b> 1/50-60/110 1/50-60/220	<b>Control Circuits:</b> 1/50-60/110 1/50-60/220
<b>Vacuum:</b> Two Stage Bypass 7/8 HP, 1/50-60/110-220 104 CFM 110" Waterlift	<b>Vacuum:</b> Two Stage Bypass 7/8 HP, 1/50-60/110-220 104 CFM 110" Waterlift	<b>Vacuum:</b> Two Stage Bypass 7/8 HP, 1/50-60/110-220 104 CFM 110" Waterlift	<b>Vacuum:</b> Two Stage Bypass 7/8 HP, 1/50-60/110-220 104 CFM 110" Waterlift	<b>Vacuum:</b> Two Stage Bypass 7/8 HP, 1/50-60/110-220 104 CFM 110" Waterlift
<b>Concrete Base:</b> 36" Square X 60" Deep	<b>Concrete Base:</b> 44" Square X 60" Deep	<b>Concrete Base:</b> 36" Square X 60" Deep	<b>Concrete Base:</b> 36" Square X 60" Deep	<b>Concrete Base:</b> 42" Square X 60" Deep



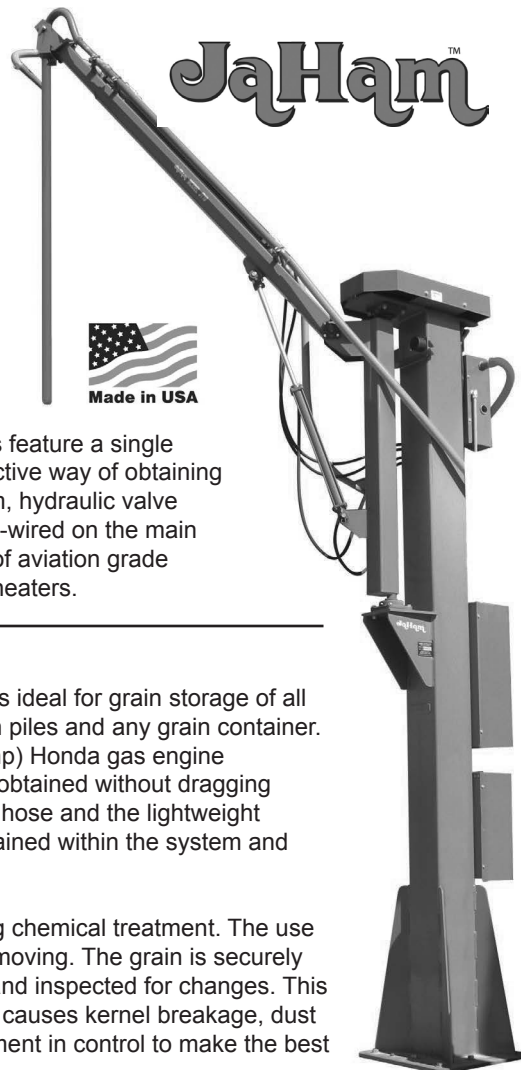
Gamet truck probe samplers can be supplied as stand-alone systems or as part of a complete sampling system solution. Standard units are supplied with vacuum systems capable of transporting product up to 100 feet from the sampling probe to the sample collection point. Samples requiring longer conveying 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, most dependable available. At Seedburo, it is our goal to maintain the commitment to you, our customer, developed over these many years.



## THE JaHam TRUCK PROBE LINE

The JaHam line had its beginning in the 1960's and was based in Warrensburg, IL. This line of truck probe samplers developed into an industry leader. Today JaHam products are manufactured by Gamet. The JaHam line features three models (see page 26). The Model JT03 is ideal for use in country elevator and large farm applications. The Model JT10 is suited for small to mid-sized elevator applications while the Model JT20 is suitable for mid to large sized elevators and processing plant applications. All feature rugged and durable construction with an easy to use handheld joystick control station. These truck probe samplers are hydraulically driven, which ensures the most powerful and longest lasting drive mechanisms available. All models are equipped with counter balance valves ensuring smooth operation of the up/down movement of the sample probe.



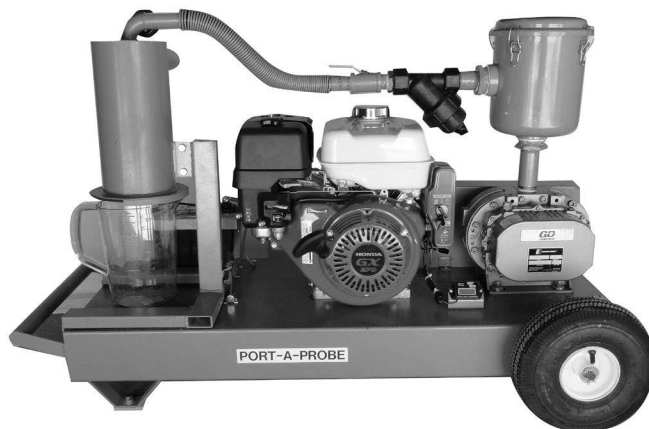
The JaHam line is available with core style sample probes only. Core style probes feature a single opening for sampling in the tip of the probe. This is the fastest and most cost effective way of obtaining a representative sample. All JaHam probes are supplied with the hydraulic system, hydraulic valve assembly, electric control enclosure, and vacuum motors all pre-mounted and pre-wired on the main upright mast assembly. They feature a vacuum motor shutoff switch and the use of aviation grade hydraulic oil allowing for use in cold weather applications without the use of tank heaters.

## PORT-A-PROBE SAMPLER

The Port-a-Probe offered by Seedburo is a unique portable sampling system that's 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 270 cc (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 can reach depths of 120 ft. (36.6 m). Temperature cables can be inserted in grain bins with this system. The high strength, thick wall aluminum probe section are attached by machine threads designed for heavy duty use. The Port-a-Probe base unit features a movable cyclone receiver with a clear plastic sample collection pitcher, a positive displacement vacuum pump and the 270 cc (9hp) Honda gas engine, hose reel, vacuum gauge, hour meter, tachometer, key start and one 4" intake tip. Dimensions: Domestic 52" L x 28" W x 34"H, Ship wt. 500 lbs. Export dims. 98"L x 38"W x 42"H Ship. wt. 575 lbs.



- Port-A-Probe Base Unit ..... No. PAP
- Hose, 50 ft. section with connectors, 1-1/4" ID ..... No. PAP-H
- Lever Yoke ..... No. PAP-LT
- Aluminum Threaded Probe Sections,  
4 ft. w/protective cap (1.315" outside diam.)..... No. PAP-P4T
- Additional Aluminum Threaded Tip, 4" w/protective cap..... No. PAP-TT
- Probe Section Bag for Porta-Probe (holds 13 sections)..... No. PAB-CB
- Export Crate ..... No. PAP/EX

*(Probe sections available in other materials - Call for Quote)*





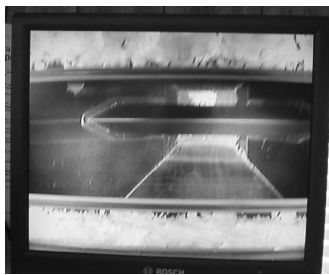
Stowage Exam Camera

**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 helping grain inspectors to provide Stowage Exams for railcar loading facilities. A high definition video camera will help keep inspectors off rail cars, may reduce some of your workmen's compensation issues, and can reduce the overall time for loading a railcar through your facility. This provides the means of potential reduced costs for railcar inspections.

USDA-GIPSA/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 - GIPSA/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!



Close up view of Monitor Display



Typical mounting arrangement

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

**The SEC-1 Package** 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 W/connectors

**The SEC-2 Package** 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 W/connectors

**The SEC-1Z Package** 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 W/connectors, H) SEC-ZOOM LENS, I) SEC-CONTROLLER controller for zoom lens J) SEC-ZCABLE cable for zoom lens operation

**The SEC-2Z Package** 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 W/connectors, H) Two SEC-ZOOM LENS, I) Two SEC-CONTROLLER controller for zoom lens J) SEC-ZCABLE cable for zoom lens operation

Stowage Exam Package w/one camera.....	<b>No. SEC-1</b>
Stowage Exam Package w/two cameras .....	<b>No. SEC-2</b>
Stowage Exam Package w/one camera w/zoom lens.....	<b>No. SEC-1Z</b>
Stowage Exam Package w/two cameras w/zoom lens .....	<b>No. SEC-2Z</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 75 watt bulb w/12,500 hour average life.....	<b>No. SEC-BULB</b>
500' Coaxial cable w/connectors .....	<b>No. SEC-CABLE</b>
Zoom lens.....	<b>No. SEC-ZOOM</b>
Controller for zoom lens .....	<b>No. SEC-CONTROLLER</b>
Cable for zoom controller .....	<b>No. SEC-ZCABLE</b>

## 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 for detecting tannin (or brown sorghum). Tannin sorghum is a variety that is bad in taste and undesirable to feeding animals.

The bleaching method follows the Official procedure used by USDA-FGIS (GIPSA). 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). Combined sample is then mixed for 3 minutes, removed from the jar and placed in a strainer where it is rinsed under tap water. The sample is allowed to dry by natural air or an external dryer or blower. Process removes the seed coat from the germ area for visual inspection. Net wt.6 lbs, dims 7" L x 5-1/2" W x 9" H, Ship wt, 10 lbs, Ship dims 11" L x 11" W x 11" H. (\*Potassium hydroxide is a hazardous and toxic chemical, handle accordingly) **MADE IN USA**



SJ Mixer

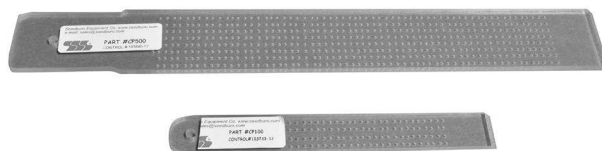
Bleach Test Mixer with One Mixing Jar, 115V, 60Hz ..... **No. SJ MIXER**  
 Replacement Mixing Jar & Paddle Assembly ..... **No. SJ JAR**

## SEEDBURO CANOLA COUNTING PADDLE

The Seedburo Canola/Rapeseed Counting Paddles do "quick counts" of canola seeds and are an aid for detection of damaged seed ("Distinctly Green Seeds") or "Heat Damaged Seeds". Paddles are used with masking tape and roller to crush seeds. The paddles are made of acrylic and are pre-drilled with 100 or 500 depressions. The 100 count version is 9" L x 1-1/4" W and the 500 count is 2-1/4" W x 18" L **MADE IN USA**

When used for damage detection, a 10g portion is hand picked to determine content of visibly damaged seeds. Remaining portion is analyzed with the aid of the Canola Paddle. Sample is poured over paddle until each depression fills with seed. A piece of masking tape is placed evenly over the top of the paddle (enclosing the seeds). Remove tape, with seeds stuck to it, and lay face up on counter. Small roller crushes the seed. Make one pass of the roller, under firm pressure. Sample is then ready for visual inspection of damage seed "distinctly green" in color. Minimum of 5 samples should be crushed. If indication of "heat damage" is present, 5 more crushes should be made. The 500 count increases the speed to crush the 5 sets of samples within one test.

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



## PORT-A-PIC GRAIN INSPECTION TABLE

Seedburo's Port-A-Pic Grain Inspection Table features two 40 watt fluorescent bulbs mounted in a fixture suspended 30" above the picking surface. The light produced meets USDA-FGIS (GIPSA) requirements (150 to 200 footcandle using GE Croma 75 fluorescent lamps or equivalent). Picking surface is 18" D x 48" W and covered with laminate that meets USDA-FGIS (GIPSA) requirements Operates on 115V, 60Hz. Two cartons. Carton one: Net wt. 45 lbs. Ship wt. 48 lbs. Ship dims. 52" L x 19" W x 7" H. Carton two: Net wt. 4 lbs. Ship wt. 5 lbs. Ship dims. 15" L x 15" W x 6" H. **MADE IN USA**

Port-A-Pic Grain Inspection Table ..... **No. IT100**  
 Colour Master 75, Fluorescent Light Tube, 48" Long ..... **No. FGIS-BULB**



## SEEDBURO DUAL RANGE LIGHT METER

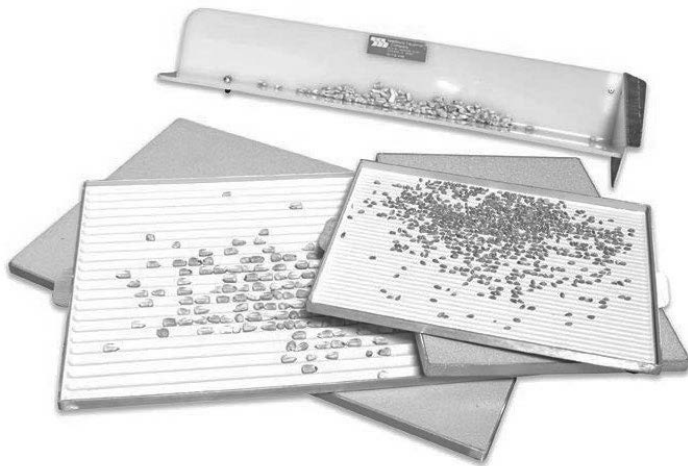
The Huygen Digital Light Meter features dual range, hold function for each range, automatic zeroing, plus improved resolution and accuracy. The electronics are mounted in an anodized aluminum case. To ensure accuracy, every Huygen light meter is calibrated at multiple points to NIST traceable secondary 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. 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.

The meter is designed for interior illumination with a range of 0-50.0/250 foot-candle. Actual dims: 3.1" W x 6.01" L x 1.28" D and weighs 13.7 oz. including 9V battery (not included). Approved by the USDA-GIPSA-FGIS for use by licensed grain inspectors. Check testing certificate available for Official Agencies (only) on request from USDA-TSD, KC, Mo.



Huygen Dual Range Digital Light Meter ..... **No. 703D-250VC**

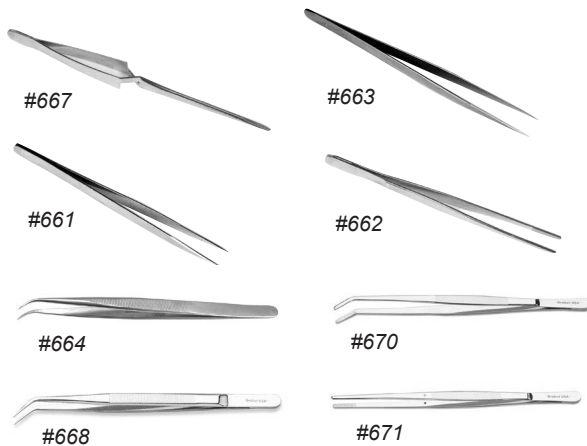


**S/J PICKING TRAY**

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., Dims 24"L x 19"W x 4"H. SIB-S Ship wt. 3 lbs., Dims 17"L x 12"W x 3"H. SGT Ship wt. 4 lbs., Dims 24"L x 7"W x 7"H.

**MADE IN USA**

Seedburo Inspection Board - Large (corn, soybean, sunflower) .....	<b>No. SIB-L</b>
Seedburo Inspection Board - Small (barley, wheat, lentils) .....	<b>No. SIB-S</b>
Seedburo grain trough .....	<b>No. SGT</b>



**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, 5-1/4" medium sharp point .....	<b>No. 661</b>
Nickel Plated, 6" blunt point .....	<b>No. 662</b>
Stainless Steel, 4-3/4" sharp point .....	<b>No. 663</b>
Stainless Steel, 5-1/2" sharp point with curved tip .....	<b>No. 664</b>
Nickel Plated, 8" blunt point .....	<b>No. 665</b>
Nickel Plated, 6-1/2" sharp serrated point, cross locking .....	<b>No. 667</b>
Nickel Plated, 6" sharp serrated point with curved tip .....	<b>No. 668</b>
Chromium Plated, 6-3/8" serrated medium sharp point .....	<b>No. 669</b>
Nickel Plated, 10" blunt point with curved tip .....	<b>No. 670</b>
Nickel Plated, 10" blunt point .....	<b>No. 671</b>

**FIVE PIECE ALL-PURPOSE TWEEZERS KIT**

A complete, basic tweezers set. An ideal way to sample and select the proper type tweezer for most applications. Multiple tips available for the task at hand. Includes deluxe vinyl pouch for handy storage.



Five Piece All-Purpose Tweezers Kit .....	<b>No. 672</b>
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**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: .009" (.220mm). Sold in box of 100 blades. Wt. 1 lb.

Single Edge, PTFE Coated Stainless Steel Blades, 100/box....	<b>No. 121-3</b>
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**MEDIUM & HEAVY DUTY BENCH KNIVES**

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.



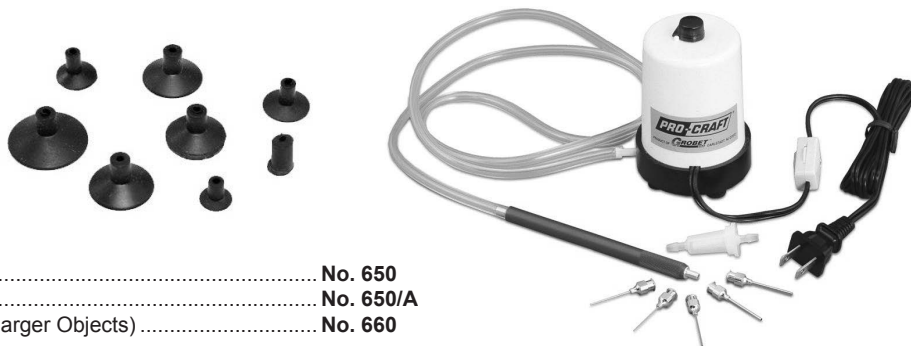
#39110

Medium Duty Bench Knife, 1-3/4" slim blade, 5" overall .....	<b>No. 39180</b>
Heavy Duty Bench Knife, 1-3/4" blade, 5-3/4" overall .....	<b>No. 39105</b>
Heavy Duty Bench Knife, 2-5/8" blade, 6-5/8" overall .....	<b>No. 39110</b>

## SEEDBURO VACUUM PICK-UP

The Seedburo Vacuum Pick-Up handles delicate seed without scratching, breaking or pinching and eliminates contamination of the seed. The vacuum is created by placing finger over hole on the pencil handle. Remove finger to break vacuum. The vacuum pump is 4 1/2" high and 2 3/4" in dia. featuring adjustable pressure control and an air flow of 125 cubic inches per minute. The vacuum generator comes with an anodized aluminum pencil probe, 4-foot length of tubing with inline filter and 5 stainless steel probe tips. An accessory set of 8 neoprene vacuum cups (sizes: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8") is also available. Ship wt 5 lbs. Ship dims 12"L x 10"W x 6"H.

Tip No.	Gauge	O.D.	I.D.
654	15	.071"	.052"
655	16	.065"	.045"
656	21	.032"	.020"
657	22	.028"	.016"
658	23	.025"	.013"



- Vacuum Pick-Up, 115V, 50/60 Hz..... **No. 650**
- Vacuum Pick-Up, 220V, 50/60 Hz..... **No. 650/A**
- Accessory Set (8 Neoprene Vacuum Cups for Larger Objects) ..... **No. 660**

## SEEDBURO LIGHTED TWEEZERS

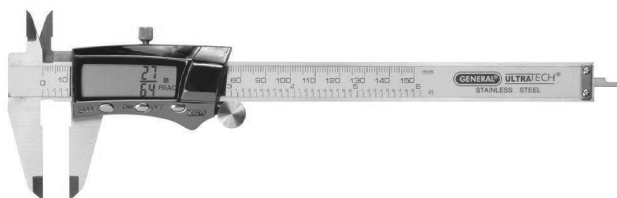
Shed some light on your seeds with these Lighted Tweezers. The tweezers feature a push-button on/off powerful LED light, non-slip comfort grips, heat treated steel tooling and corrosive resistant non-glare black finish.

- Lighted Tweezers, 6.25" (159mm) Smooth Sharp Point..... **No. 70401**
- Lighted Tweezers, 6.25" (159mm) Serrated Blunt Point..... **No. 70403**
- Lighted Tweezers, 6.5" (165mm)  
Serrated Medium Point with Curved Tip..... **No. 70408**
- Lighted Tweezers, Three Piece Set with Case..... **No. 70400**



## SEEDBURO DIGITAL FRACTIONAL CALIPER

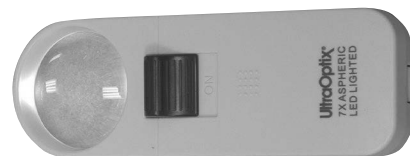
These rugged stainless steel calipers have a tri-mode digital display that measures in decimal inches, millimeters, and fractional inches and are ideal for accurate seed measurement or quick screen perforation verification. The units feature a free-wheeling friction roller that advances and retracts the slide, bar scale is graduated in inches and millimeters, auto on/off, and includes an 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).



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

## 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 7X lens, 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.

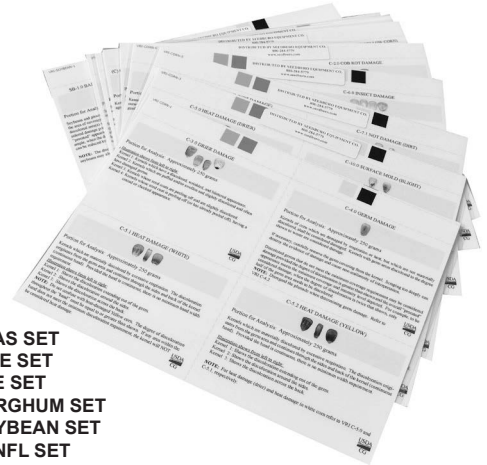


- Pocket Lighted 7X Magnifier ..... **No. PLM7X**

## GRAIN INSPECTION VISUAL REFERENCE IMAGES

Visual reference images (VRI) are a visual aid in grading grain, rice, dry beans, dry lentils and other commodities and are used by all official grain inspectors. Each image is produced digitally on the official "wheat" colored background, rice is on a blue or white background. Dated and approved by GIPSA. Often used by house graders. No grain elevator or inspector should work without these official tools.

Generally, there are 4 images per sheet and each sheet can be purchased either individually or in complete sets by commodity. Produced on an 8-1/2" x 11" laminated sheet for insertion into a binder. The image includes instructions for portion size and a description of the damage the image represents. **MADE IN USA**



### COMPLETE SETS

Barley .....	No. VRI-BARLEY SET	Peas .....	No. VRI-PEAS SET
Canola .....	No. VRI-CANOLA SET	Rice .....	No. VRI-RICE SET
Corn .....	No. VRI-CORN SET	Rye .....	No. VRI-RYE SET
Edible Beans .....	No. VRI-BEAN SET	Sorghum .....	No. VRI-SORGHUM SET
Flax Seed .....	No. VRI-FLAX SET	Soybean .....	No. VRI-SOYBEAN SET
Lentils .....	No. VRI-LENTIL SET	Sunflower .....	No. VRI-SUNFL SET
Oats .....	No. VRI-OATS SET	Wheat .....	No. VRI-WHEAT SET

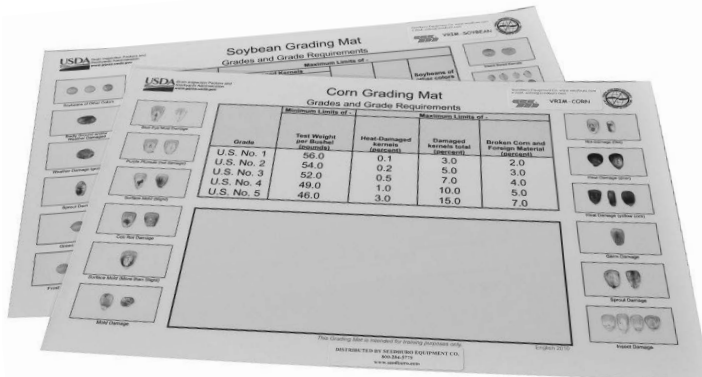
### INDIVIDUAL SHEETS

<b>VRI - BARLEY1</b>	B-1.0 ..... Blight Damage	<b>VRI-CORN6</b>	C-4.2 ..... Not Germ Damage	<b>VRI - RYE1</b>	RY-1.0 ..... Germ Damage (Sick and/or Mold)
B-1.1 ..... Mold Damage	C-6.0 ..... Insect Damage	C-9.0 ..... Sprout Damage	RY-3.0 ..... Exposed Germ in Sound Rye (Not Sprout)	RY-3.1 ..... A. Insect Chewed and B. Sprout Sockets	
B-3.0 ..... Injured By Frost	OF-7.9 & OF-7.91 ..... Waxy & Non Waxy	VRI-FLAXSEED (1 Sheet Only)	F-1.0 ..... Damaged (Bee's Wings)	VRI - RYE2	RY-4.0 ..... Weevil or Insect-bored
B-3.1 ..... Frost Damage	F-2.0 ..... Damaged by Heat	F-3.0 ..... Heat Damaged	F-3.0 ..... Heat Damaged	RY-5.0 ..... Other Damage	
<b>VRI - BARLEY2</b>	B-4.0 ..... Germ Damage (discolored and/or mold)	<b>VRI-LEN1</b>	LEN-1.0 ..... Insect Stung Damage	<b>VRI - SORGHUM1</b>	S-1.1 ..... Germ Damage (Bleach Method)
B-5.0 ..... Injured by Heat	LEN-1.1 ..... Blight (Ascochyta) Damage	LEN-1.2 ..... Frost Damage	LEN-1.3 ..... Heat Damage	S-5.1 ..... Mold Damage (Internal Mold)	
B-5.1 ..... Heat Damaged	<b>VRI-LEN2</b>	LEN-1.4 ..... Damaged by Heat	LEN-1.5 ..... Mold Damage	S-3.0 ..... Heat Damage	
B-6.0 ..... Weevil or Insect Bored	LEN-1.6 ..... Sprout Damage	LEN-1.7 ..... Skinned	LEN-1.8 ..... Dirt/Grime	S-5.0 ..... Mold Damage	
<b>VRI - BARLEY3</b>	B-7.0 ..... Injured by Mold	<b>VRI-OATS1</b>	O-1.0 ..... Badly ground and/or weather damage	<b>VRI - SORGHUM2</b>	S-2.0 ..... Ground and/or Weather Damage
B-8.0 ..... Sprout Damage	O-1.1 ..... Weather damaged (stained)	O-2.0 ..... Germ damage (sick and/or mold)	O-2.1 ..... Mold Damage	S-9.0 ..... Tannin Sorghum (Bleached)	
OF-2.1 ..... Skinned & Broken	<b>VRI-OATS2</b>	O-3.0 ..... Heat Damage	O-4.0 ..... Insect Damage	S-8.0 ..... Purple Pigment Damage	
OF-2.3 ..... A. Two-Rowed and B. Six-Rowed	O-5.0 ..... Sprout Damage	<b>VRI-PEAS1</b>	PEAS-1.0 ..... Damage (Chalky)	OF-33.0 ..... White Sorghum	
<b>VRI - BEAN1</b>	BEAN-1.0 ..... Badly Damaged	PEAS-1.1 ..... Damage (A. dirt B. Grime)	PEAS-1.2 ..... Heat Damage	<b>VRI - SORGHUM3</b>	S-4.0 ..... Insect Bored Damage
BEAN-2.0 ..... Clean-Cut Weevil-Bored	PEAS-1.3 ..... Damaged by Heat	<b>VRI-PEAS2</b>	PEAS-1.4 ..... Mold/Mildew Damage	S-6.0 ..... Sprout Damage	
BEAN-2.1 ..... Visible Window Damage (Weevil)	<b>VRI-PEAS3</b>	PEAS-1.5 ..... Sprout Damage	PEAS-1.6 ..... Weevil Damage (Cavity)	OF-16.0 ..... Non-grain Sorghum	
BEAN-3.0 ..... Dirt & Grime Pea Beans (Not Damage)	PEAS-1.7 ..... Weevil Damage (Sting)	PEAS-1.8 ..... Frost Damage	PEAS-1.9 ..... Bleached (Green Peas)	S-7.0 ..... Split Germs (Sound Kernels)	
<b>VRI - BEAN2</b>	PEAS-2.0 ..... Bleached (Yellow Peas)	<b>VRI-PEAS4</b>	PEAS-3.0 ..... Cracked Seed Coats	<b>VRI - SOYBEAN1</b>	SB-1.0 ..... Badly Ground and/or Weather Damage
BEAN-3.1 ..... Dirt & Grime Damage (other than pea beans)	<b>VRI-PEAS5</b>	PEAS-4.0 ..... Stained (Green)	PEAS-4.1 ..... Stained (Yellow)	SB-3.0 ..... Green Damage	
BEAN-4.0 ..... Frost Damaged	PEAS-5.0 ..... Shriveled (Smooth)	PEAS-5.1 ..... Shriveled (Wrinkled)	PEAS-5.2 ..... Bacterium/Fungal Stain	SB-2.0 ..... Damaged by Heat	
BEAN-5.0 ..... Green Chickpea	<b>VRI-RICE1</b>	R-1.0 ..... Objectionable Seeds	R-1.2 ..... Non-objectionable Seeds	SB-5.0 ..... Damage Heat (Materially Damaged/Heating)	
BEAN-6.0 ..... Insect Stung Damage (Blackeye)	R-2.0 ..... Heat Damage	R-2.1 ..... Damage by Heat (Stain)	<b>VRI - RICE2</b>	<b>VRI - SOYBEAN2</b>	SB-1.1 ..... Weather Damage (Gray/Black)
<b>VRI - BEAN3</b>	R-2.2 ..... Lightly Stained (Not Damage)	R-2.7 ..... Pecky Kernels Damage	R-2.71 ..... Water, Stain and Peck Damaged (Glutinous Rice)	SB-12.0 ..... Soybeans of Other Colors	
BEAN-6.1 ..... Insect Stung Damage (Other Beans)	R-7.0 ..... Smut Damage	<b>VRI-CANOLA (one sheet only)</b>	CANOLA-1.0 ..... Distinctly Green	SB-8.1 ..... Mold Damage (Pink)	
BEAN-6.2 ..... Insect Stung Damage (White Beans)	CANOLA-2.0 ..... Heat Damage	CANOLA-3.0 ..... Other Damage (A. rimed B. Frost & C. Mold)	CANOLA-4.0 ..... Sprout Damage (A. Damage & B. not damaged)	SB-3.2 ..... Frost Damage (Waxy)	
BEAN-7.0 ..... Insect Webbing or Filth	<b>VRI-CORN1</b>	C-3.0 ..... Drier Damage	C-4.0 ..... Germ Damage	<b>VRI - SOYBEAN3</b>	SB-7.0 ..... Insect Bored Kernels
BEAN-8.0 ..... Worm Eaten Damage	C-5.1 ..... Heat Damage (White)	C-5.2 ..... Heat Damage (Yellow)	OF-7.1 ..... Mixed Corn (More than Slight Tinge-Straw)	SB-8.0 ..... Mold Damage	
<b>VRI - BEAN4</b>	OF-7.2 ..... Mixed Corn (White Capped Yellow Corn)	OF-7.5 ..... Corn of Other Colors	OF-7.8 ..... Slightly Yellow (White Waxy) Corn	SB-9.0 ..... Sprout Damage	
BEAN-9.0 ..... Mold Damage	<b>VRI-CORN2</b>	C-5.0 ..... Heat Damage (Drier)	C-10.0 ..... Surface Mold (Blight)	SB-10.0 ..... Stinkbug or insect Stung Kernels	
BEAN-9.1 ..... Mold Damage (pink/brown)	OF-7.7 ..... Mixed Corn (More than slight tinge pink)	OF-7.71 ..... Mixed Corn (Purple Pigmented)	<b>VRI-CORN3</b>	<b>VRI - SOYBEAN4</b>	SB-6.0 ..... Immature (Wafer)
BEAN-10.0 ..... Nightshade Damage	<b>VRI-CORN4</b>	C-1.0 ..... Blue-eye Mold Damage	C-2.0 ..... Cob Rot Damage	SB-13.0 ..... Shriveled and Wrinkled	
BEAN-11.0 ..... Sprout Damaged	C-7.0 ..... Mold Damage	C-11.0 ..... Surface Mold-(More than slight)	<b>VRI-CORN5</b>	OF-36.0 ..... White Hilum	
<b>VRI-BEANS</b>	C-1.1 ..... Purple Plumule (Not Damage)	C-7.1 ..... Not Damage (Dirt)	C-7.2 ..... Mold Damage (Pink Epicoccum)	<b>VRI-SUNFL (one sheet only)</b>	SS-1.0 ..... Damaged by Heat
BEAN-12.0 ..... Water Blistered Damage	C-8.0 ..... Silk Cut			SS-2.0 ..... Heat Damage	
BEAN-12.1 ..... Tiger Stripe				SS-3.0 ..... Surface Mold	
BEAN-12.2 ..... Water Blistered Damage (Pink Beans)				<b>VRI-WHEAT1</b>	W-4.0 ..... Germ Damage
BEAN-13.0 ..... Damaged (Pieces)				W-4.2 ..... Germ Damage (Bleach Method)	
<b>VRI-BEAN6</b>				W-6.0 ..... Heat Damage (Durum)	
BEAN-14.0 ..... Internal (Respiration) Damage				W-6.1 ..... Heat Damage (Other Than Durum)	
BEAN-15.0 ..... Machine Damage				<b>VRI-WHEAT2</b>	W-1.0 ..... Black Tip Damage (Fungus)
<b>VRI-CANOLA</b>				W-2.0 ..... Scab Damage	
CANOLA-1.0 ..... Distinctly Green				W-4.1 ..... Mold Damage	
CANOLA-2.0 ..... Heat Damage				W-7.0 ..... Other Damage (Mold)	
CANOLA-3.0 ..... Other Damage (A. rimed B. Frost & C. Mold)				<b>VRI-WHEAT3</b>	W-3.0 ..... Frost Damage (Blistered)
CANOLA-4.0 ..... Sprout Damage (A. Damage & B. not damaged)				W-3.1 ..... Frost Damage (Candied)	
<b>VRI-CORN1</b>				W-3.2 ..... Frost Damage (Discolored Black or Brown)	
C-3.0 ..... Drier Damage				W-3.3 ..... Frost (Flaked)	
C-4.0 ..... Germ Damage				<b>VRI-WHEAT4</b>	W-9.1 ..... Insect Chewed Wheat (But Not Damaged)
C-5.1 ..... Heat Damage (White)				W-8.0 ..... Sprout Damage	
C-5.2 ..... Heat Damage (Yellow)				W-9.0 ..... Green Damage (Immature)	
<b>VRI-CORN2</b>				W-9.0 ..... Weevil or Insect Bored	

GRAIN GRADING MATS

Seedburo offers Grain Grading Mats, produced by USDA/GIPSA, which are used in training sessions for grain industry inspectors. The mats include the grade requirements chart, official "wheat" colored picking surface and many of the principal damage images. The mats measure 16.5" x 11.7" and are laminated 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 grading grain. In addition, many of the VRI Mats are available in the following languages: Arabic, Chinese, French, Japanese, Korean and Spanish. Please contact us for part numbers and prices as new mats are added on a regular basis. **MADE IN USA**



- VRIM-BARLEY ..... English Grading Mat
VRIMA-BARLEY ..... Arabic Grading Mat
VRIMC-BARLEY ..... Chinese Grading Mat
VRIMJ-BARLEY ..... Japanese Grading Mat
VRIMK-BARLEY ..... Korean Grading Mat
VRIMS-BARLEY ..... Spanish Grading Mat
VRIMF-BARLEY ..... French Grading Mat
VRIM-CORN ..... English Grading Mat
VRIMA-CORN ..... Arabic Grading Mat
VRIMC-CORN ..... Chinese Grading Mat
VRIMJ-CORN ..... Japanese Grading Mat
VRIMK-CORN ..... Korean Grading Mat
VRIMS-CORN ..... Spanish Grading Mat
VRIMF-CORN ..... French Grading Mat
VRIM-CSF ..... Canola, Sunflower & Flaxseed English Grading Mat

- VRIM-OATS ..... English Grading Mat
VRIM-SORGHUM ..... English Grading Mat
VRIMA-SORGHUM ..... Arabic Grading Mat
VRIMC-SORGHUM ..... Chinese Grading Mat
VRIMJ-SORGHUM ..... Japanese Grading Mat
VRIMK-SORGHUM ..... Korean Grading Mat
VRIMS-SORGHUM ..... Spanish Grading Mat
VRIMF-SORGHUM ..... French Grading Mat
VRIM-SOYBEAN ..... English Grading Mat
VRIMC-SOYBEAN ..... Chinese Grading Mat
VRIM-RICE ..... English Grading Mat
VRIM-RYE ..... English Grading Mat
VRIM-WHEAT ..... English Grading Mat
VRIMS-WHEAT ..... Spanish Grading Mat

GRADING WORK SURFACE

This laminate work surface is the approved color and style by 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' x 8' with a thickness of .030". Ship wt. 10 lbs. Ship dims. 25" L x 25" W x 53" H.

Laminate Sheet 4' x 8' ..... FGIS-LAMINATE

GRAIN QUALITY POSTERS

These Grain Quality Posters will help you to explain grain damage to your customers, along with the FGIS Visual Reference Images (VRI), and Visual Reference Mats (VRIM). The full-color poster measures 23" x 29" and can be hung on your office wall to aid in comparing quality grain from damaged grain. All images are provided by FGIS, but since they have been enlarged, are not approved for official inspection like the Visual Reference Images (VRI).

GQP 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 insects found in stored grain. **MADE IN USA**

- Grain Quality Poster (Corn, Soybean, Wheat & Sorghum)..... No. GQP
Grain Quality Poster (Barley, Oats, Rye, Canola, Sunflower & Flaxseed) ..... No. GQP-MINOR
Insects Poster..... No. GQP-INSECTS



Principal Grain Damages poster showing images and descriptions for Corn, Soybean, Wheat, and Sorghum damage types such as Green Damage, Heat Damage, Insect Bored Damage, and Spoiled Damage.



No. 34 Divider

### HEAVY DUTY BOERNER DIVIDER

Our Boerner Divider is the standard divider for all federal, state, and local grain inspection offices. It is **built to meet USDA-FGIS (GIPSA) specifications for official inspections and is referenced in the equipment handbook.**

The 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 gr.

The Seedburo Boerner divider is made from brass and copper, which makes it rust resistant. The legs and supports are powder coated mild steel. A divider is supplied complete with two brass pans (34P) with handles for easy transport of divided samples. The 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. **MADE IN USA**

Boerner Divider.....	<b>No. 34</b>
Extra Pans.....	<b>No. 34P</b>
Divider less Pans.....	<b>No. 34L</b>

### 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 gr. Increases divider height to 42". Ship wt. 12 lbs., Ship dims. 18" L x 18" W x 12" H. **MADE IN USA**

Boerner Divider Extension Accessory .....	<b>No.34E</b>
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No. 34E



### 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-FGIS (GIPSA) specifications for official inspection. Ship wt. 8 6 lbs, Ship dims. 15" L x 15" W x 6" H. **MADE IN USA**

Boerner Sound Abatement Kit.....	<b>No.34S</b>
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### BOERNER DUST FILTER UNIT

The 34D, 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. Filter unit, 34D, Ship dims. 25"L x 25"W x 11"H, Ship. wt. 27 lbs. 34DT Dust Table Ship. dims. 17"L x 17"W x 28"H, Ship. wt. 50 lbs. **MADE IN USA**

Boerner Dust Filter Unit.....	<b>No.34D</b>
Boerner Dust Filter Unit with Free Standing Table .....	<b>No.34DT</b>
Dust Filter Replacements, box of 6 .....	<b>No.34RF</b>



No.34DT



### CARGO TYPE DIVIDER

The Cargo Type Divider is a high capacity splitter made to meet USDA-FGIS (GIPSA) 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 14-1/2" 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**

Cargo Type Divider .....	<b>No. 292</b>
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### 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.

The dividing and mixing are accomplished by the centrifugal action of a motor driven revolving neoprene disc positioned under the hopper. A smooth inside chrome plated 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. Actual dims. 13" L x 13" W x 19-1/4" H, Net wt. 41 lbs. Ships in 2 cartons: Base - Ship. wt. 49 lbs. 21"L x 17"W x 21"H. Hopper - Ship wt. 8 lbs., Ship dims. 16" L x 16" W x 12" H. K22 transformer, Ship. wt. 3 lbs., Ship. dims. 12"L x 10"W x 6"H. **MADE IN USA**



- Precision divider, 1/12HP, 115V, 60Hz, 1PH motor, 500 RMP motor ..... **No. 106**
- Required Packing ..... **No. 106/DOM**
- 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 sizes are 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 for the 4203 unit, **please specify the divisions you require** - most combinations of three numbers adding up to 10, for example a division of 3-4-3 or 4-2-4. The model 4204 again has 10 rotary divisions, but divides the sample into 4 portions. Most combinations of 4 numbers adding up to 10, 4-3-2-1 for example, will tell us the divisions you require.

Model 4203 dims. 22" L x 22-1/2" W x 33" H, Net wt. 75 lbs. Ship. wt. 127 lbs., Ship. dims. 27"L x 27"W x 41"H. Model 4204 dims. 22" L x 22-1/2" W x 33" H. Net wt. 85 lbs., Ship. wt. 145 lbs. 25"L x 25"W x 39"H Export packed: Ship wt. 142 lbs., Ship dims. 27" L x 26" W x 39" H

- 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**
- Export Crating..... **No. R4200/EX**



### RIFFLE DIVIDER

The Riffle Divider is used for halving dry materials. As the product is poured into the hopper, it is divided into two equal portions by a series of chutes which discharge alternately in opposite directions. Prices include stainless steel dividers, cold rolled steel pans, scoop and cleaning brush. The R75 is enclosed and all other models are open style as shown in the photograph. Extra scoops and brushes are available from Seedburo, please contact us for prices. **MADE IN USA**

Number of Chutes	Width of Chutes	Pans Furnished	Hopper Size	Extra Pans	Model Number
14	3/8"	4	8" x 6-3/4"	R62P	R62
14	1 / 2"	4	11" x 6-3/4"	R64P	R64
14	3 / 4"	4	14-3/4" x 6-3/4"	R66P	R66
24	3 / 8"	2	4-1/2" x 11"	R75P	R75
12	1 / 2"	4	11" x 8-1/2"	R80P	R80
12	3 / 4"	4	14" x 8-1/2"	R85P	R85
16	1"	4	20" x 9"	R87P	R87
8	2"	4	19-1/2" x 9-1/2"	R89P	R89
10	1-1/2"	4	20-1/2" x 9"	R90P	R90
8	2-1/2"	4	24" x 9"	R92P*	R92*



\*Pans with this unit are stainless steel.



**OFFICIAL GRAIN DOCKAGE SIEVES**

Seedburo 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 only a commercial grade, with a few in precision grade. All federal grain inspectors use precision sieves, but for most applications the commercial sieves will suffice. Sieves should be replaced when the perforations show wear, 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. Sieves are made on No. 20 gauge B & S aluminum. Decimal equivalents of diameter or width are shown in parentheses. **MADE IN USA**

Actual Dims. .... 13" Diam. x 2-3/8" Deep  
 For sieves A, N & H: ..... 13" Diam. x 2" Deep  
 For pan E: ..... 13" Diam. x 3" Deep

SIEVE SETS	COMMERCIAL	PRECISION
<b>CORN</b>		
Set of 2 sieves (A and Y) & E	No. 1 Set	1P set
<b>WHEAT, RYE AND OATS</b>		
Set of 5 sieves (A, B, C, D, W) & E	No. 2D Set	2DP set
Set of 5 sieves (A, B, C, F, W) & E	No. 2F Set	2FP set
<b>SOYBEAN</b>		
Set of two sieves (H and I) & E	No. 3 Set	3P set
<b>COTTONSEED</b>		
No. A sieve & E pan	No. 4 Set	4P set
<b>BARLEY</b>		
Set of 2 sieves (B and L) & E	No. 5L Set	5LP set
Set of 2 sieves (B and M) & E	No. 5M Set	5MP set
<b>FLAX</b>		
Set of 2 sieves (T and U) & E	No. 6 Set	--
<b>CANOLA</b>		
Set of 5 sieves (R, S, T, V, Y) & E	No. 7 Set	--
<b>RICE</b>		
Set of 3 sieves (X, Y, Z) & E	No. 8 Set	--
<b>SORGHUM</b>		
Set of 2 sieves (K and B) & E	No. 9 Set	9P set
<b>WEEVIL</b>		
No. C sieve & E bottom pan	No. 10 Set	10P set
<b>SUNFLOWER SEED (CONFECTIONERY)</b>		
Set of 3 sieves (A, B, J) & E	No. 11 Set	11P set

SIEVE SETS	COMMERCIAL	PRECISION
12/64" Round (0.1875") scalper	No. A	A-P
5/64" Triangle (0.0781")	No. B	B-P
1/12" Round (0.0833")	No. C	C-P
4.5/64" x 1/2" Oblong (0.0703")	No. D	--
.064" x 3/8" Oblong (0.0703")...	--	F-P
9/64" Double Spaced Triangle (0.1406")	No. G	--
10/64" x 3/4" Oblong (0.1563") scalper	No. H	--
8/64" Round (0.1250")	No. I	I-P
10/64" Round (0.1563")	No. J	--
2.5/64" Round (0.0391")	No. K	--
5/64" x 3/4" Slot (0.0781")	--	L
5.5/64" x 3/4" Slot (0.0859")	--	M
10/64" Round Scalper (0.1563")	No. N	--
6/64" x 3/4" Slot (0.0938")	--	P
6.5/64" x 3/4" Slot (0.1016")	--	Q
.028" x 15/32" Slot	No. R	--
.0395" x 15/32" Slot	No. S	--
3/64" x 3/8" oblong (0.0469")	No. T	--
4.5/64" Round (0.0703")	No. U	--
.035" x 15/32" Slot	No. V	--
5/64" Round (0.0781")	No. W	--
5.5/64" Round (0.0859")	No. X	--
6/64" Round (0.0938")	No. Y	--
6.5/64" Round (0.1016")	No. Z	--
Solid Bottom pan (for use with all sieves)	No. E	--

**SPECIAL PERFORATION SIEVES**

These are sieves with steel perforated discs spun into standard aluminum sides. We have listed a portion of the available popular sizes. Request other sizes not listed. These dockage sieves are recommended for use with the Strand Sizer Shaker.

1/25" Rd	No. 0022	11.5/64" Rd	No. 0041	26/64" Rd	No. 0090	1/22 x 1/2" Oblong	No. 0122	15/64 x 3/4" Oblong	No. 0117
1/24" Rd	No. 0021	13/64" Rd	No. 0043	27/64" Rd	No. 0091	1/20 x 1/2" Oblong	No. 0128	16/64 x 3/4" Oblong	No. 0118
1/22" Rd	No. 0019	14/64" Rd	No. 0045	28/64" Rd	No. 0095	1/18 x 1/4" Oblong	No. 0106	17/64 x 3/4" Oblong	No. 0129
1/21" Rd	No. 0023	14.5/64" Rd	No. 0046	30/64" Rd	No. 0093	7/64" x 3/4" Oblong	No. 0097	18/64 x 3/4" Oblong	No. 0112
1/20" Rd	No. 0020	15/64" Rd	No. 0050	32/64" Rd	No. 0092	3/64 x 5/16" Oblong	No. 0121	19/64 x 3/4" Oblong	No. 0119
1/18" Rd	No. 0018	16/64" Rd	No. 0055	34/64" Rd	No. 0086	8/64" x 3/4" Oblong	No. 0100	22/64 x 3/4" Oblong	No. 0138
1/15" Rd	No. 0015	17/64" Rd	No. 0060	36/64" Rd	No. 0081	7.5/64 x 3/4" Oblong	No. 0098	32/64 x 3/4" Oblong	No. 0139
1/14" Rd	No. 0010	17.5/64" Rd	No. 0062	40/64" Rd	No. 0094	8.5/64 x 3/4" Oblong	No. 0114	10/64" Tri.	
1/13" Rd	No. 0005	18/64" Rd	No. 0065	42/64" Rd	No. 0084	9/64" x 3/4" Oblong	No. 0105	(6/64 inscribed circle) ..	No. 0102
4/64" Rd	No. 0025	18.5/64" Rd	No. 0066	48/64" Rd	No. 0083	9.5/64 x 3/4" Oblong	No. 0107	11/64" Tri.	
7/64" Rd	No. 0035	19/64" Rd	No. 0067	56/64" Rd	No. 0096	10.5/64 x 3/4" Oblong	No. 0108	(6.5/64 inscribed circle) ..	No. 0134
7.5/64" Rd	No. 0037	20/64" Rd	No. 0070	4.5/64 x 3/4" Oblong	No. 0137	11/64" x 3/4" Oblong	No. 0110	12/64" Tri.	
8.5/64" Rd	No. 0031	21/64" Rd	No. 0072	4-7/8 /64 x 3/4" Oblong	No. 0113	11.5/64 x 3/4" Oblong	No. 0111	(7/64 inscribed circle) ....	No. 0103
9/64" Rd	No. 0032	22/64" Rd	No. 0075	4/64 x 1/2" Oblong	No. 0109	12/64" x 3/4" Oblong	No. 0115		
9.5 /64" Rd	No. 0038	23/64" Rd	No. 0077	5.5/64 x 3/4" Oblong	No. 0104	12.5/64 x 3/4" Oblong	No. 0120		
10.5/64" Rd	No. 0039	24/64" Rd	No. 0080	6/64 x 3/4" Oblong	No. 0088	13/64 x 3/4" Oblong	No. 0116		
11/64" Rd	No. 0040	25/64" Rd	No. 0085	6.5/64 x 3/4" Oblong	No. 0099	14/64 x 3/4" Oblong	No. 0315		



**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 the USDA, the department's licensed inspectors, state grain inspection offices, Canadian Grain Commission and worldwide throughout the commercial grain grading 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. A partial list follows.

The Carter-Day Dockage Tester with noise reduction is furnished complete with a 1/2 HP electric motor. Actual dims. 27" L x 41" W x 55" H. with riddles and sieves from 450 lbs. to 475 lbs., Ship wt. 485 lbs., Ship dims. 32"x45"x62" **MADE IN USA**



- Dockage Tester 115/230V, 60Hz/1PH less riddles & sieves ..... **No. CDT/B**
- Dockage Tester 115/230V, 50Hz/1PH less riddles & sieves ..... **No. CDT/C**
- Caster Kit option (factory installed)..... **No. 440586**

Type of Grain	Riddle	Top Sieve	Middle Sieve	Bottom Sieve
Hard Red Spring/Red Durum Wheat	#2	--	#2	#2
White Winter Wheat (Small to Med. Size)	#2	--	#2	#2
Hard/Soft Red Winter Wheat and Large White Winter Wheat	#2	--	#2	#2
Rye & White Durum Wheat	#25	--	#2	#2
Corn	--	--	#3	--
Barley	#6	#8	#6	--
Flax	#000	#4	#2	#7
Oats	#6	#6	#5	#1
Sorghum	--	#6	--	#1
Soybean	--	#12	#3	#10

Where current modified USDA standards are required, information will be furnished on sieves or riddles needed.

SIEVE NO.	SIZE	SIEVE NO.	SIZE	SIEVE NO.	SIZE
<u>Round Hole:</u>		<u>Slotted:</u>		<u>Riddle:</u>	
No. 1-S	2.5/64"	No. 42-S	5/64 x 3/4"	No. 000-R	Riddle (Flax)
No. 7-S	4.5 /64"	No. 12-S	9/64 x 3/4"	No. 1-R	Riddle (Wheat)
No. 2-S	5/64"	No. 33-S	10/64 x 3/4" slot	No. 2-R	Riddle (Rye & Wheat)
No. 34-S	5.5 /64"	No. 4-S	0.064 x 3/8"	No. 25-R	Riddle (Lg Wheat)
No. 20-S	6/64"	No. 5-S	4.5/64 x 15/32"	No. 6-R	Riddle (Barley)
No. 27-S	6.5 /64"	No. 9-S	0.070 x 15/32" slot over 1/12" rd swag	No. 8-R	Riddle (Soybean)
No. 21-S	7/64"	No. 11-S	1/20 (.050) x 15/32" slot	No. 11-R	Riddle (Rice)
No. 10-S	8/64"	No. 18-S	1/18 (.055) x 15/32" slot	No. 12-R	Riddle (Sunflower-Edible)
No. 37-S	9/64"	No. 22-S	3.875 (.061) x 15/32" slot	No. 13-R	Riddle (Sunflower-Oil)
No. 32-S	10/64"	<u>Triangle:</u>		No. Blank-S	Blank Sieve - no perforation
No. 3-S	12/64"	No. 6-S	Triangle with 0.078" inscribed circle		
		No. 8-S	Triangle with 0.089" inscribed circle		

**SEEDBURO SIZER SHAKER**

The Seedburo Sizer Shaker is adaptable for use with the Seedburo Official Grain dockage sieves on page 36. The Shaker 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 sieve opening clean. Unit is equipped with a timer preset to the USDA specified 30 strokes however it can be set between 5 to 100 strokes. Drive components are covered with ABS guard. Ship wt. 44 lbs., Ship dims., 23"L x 15"W x 15"H **MADE IN USA**



- Seedburo Sizer, Model P, 110V, 60Hz ..... **No. ST-SS**
- Transformer for 220V operation ..... **No. K22**
- Crating for Seedburo Sieve Shaker ..... **No. ST-SS/DOM**



### 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 & 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.

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. 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 sec. (based on 500g of wheat) Ship. wt. 775 lbs., Ship dims. 43"L x 33"W x 83"H **MADE IN USA**

- 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**

#### MCI KICKER THREE SCREEN CHART

SCREEN LOC	SCALP	SECOND	THIRD	FEED	AIR
Barley	9 x 3/4	4-1/2 slot 5 slot	6rd	2	3/4
Corn	32rd 36rd	12rd 14rd	8rd 6rd	3 1/2	Closed
Millet	12rd 6 x 3/4	9rd 4 slot	.067rd	1	1/2
Oats	9 x 3/4	4 slot	10tri	2 1/2	3/4
Sorghum	12rd 9 slot	4 slot 5tri	5rd 2 1/2rd	2	3/4
Soybeans	24rd 26rd	9 x 3/4 10 x 3/4	8rd	3	Closed
Wheat	JGS 12rd	4 slot 10tri	5rd 4 slot	2	3/4
Sunflower "O"	18rd	12rd	8rd 5rd	2 1/2	1/2
Sunflower "C"	24rd 28rd	22rd 20rd	20rd Blank	3 1/2	3/4

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

### CUSTOM BRASS SIEVES

These sieves are available with an 8" or 12" diameter brass or stainless steel frame (as shown on page 39) and your choice of perforations from page 78. The frames are 'skirted' to nest together and available in full height, 2", or half height of 1".



- Custom 8" Brass Frame, Full Height, with Perforated Plate ..... **No. CUSTOM SIEVE**
- Custom 8" Brass Frame, Half Height, with Perforated Plate ..... **No. CUSTOM SIEVEH**
- Custom 8" Stainless frame, Full Height, with Perforated Plate ..... **No. CUSTOM SIEVE SS**
- Custom 12" Brass Frame, Full Height, with Perforated Plate ..... **No. CUSTOM SIEVE 12**
- Custom 12" Brass Frame, Half Height, with Perforated Plate ..... **No. CUSTOM SIEVE 12H**
- Custom 12" Stainless Frame, Full Height, with Perforated Plate ..... **No. CUSTOM SIEVE 12S**
- 8" Brass Cover ..... **No. CB8**
- 12" Brass Cover ..... **No. CB12**
- 8" Brass Bottom Pan ..... **No. PB8F**
- 12" Brass Bottom Pan ..... **No. PB12F**



### DURA TAP™ TESTING SIEVE SHAKER

The Dura Tap™ rotary sieves shaker is the 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 height. Full Height of the 8" diameter sieve is 2-5/8" and 2" from rim to cloth, the Half Height is 1-5/8" and 1" from rim to cloth. The Full Height of the 12" diameter sieve is 4-1/4" and 3-1/4" from rim to cloth, the Half Height is 2-5/8" and 1-5/8" from rim to cloth. The Dura Tap™ for 8" sieves can hold six (6) full height sieves plus 1 bottom pan, or thirteen (13) half height sieves plus 1 bottom pan. The Dura Tap™ for 12" sieves will hold three (3) full height sieves plus a bottom pan and cover, or seven (7) half height sieves plus a bottom pan and cover. To order half height sieves, use the letter "H" for half height in place of the "F" for full height. The unit is powered by a vertically mounted ¼ HP electric motor with a built-in 99 minute digital timer and available in a variety of voltages. Actual wt. 200 lbs., Actual dims. 21"L x 28"W x 25"H, Ship. wt. 225 lbs., Ship. dims. 31"L x 26"W x 30"H.



- 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**

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
3/4"	19.0mm	N/A	3/4"BS8F	3/4"SS8F	3/4"BB12F	3/4"BS12F	3/4"SS12F
1/2"	12.5mm	N/A	1/2"BS8F	1/2"SS8F	1/2"BB12F	1/2"BS12F	1/2"SS12F
3/8"	9.5mm	N/A	3/8"BS8F	3/8"SS8F	3/8"BB12F	3/8"BS12F	3/8"SS12F
1/4"	6.3mm	N/A	1/4"BS8F	1/4"SS8F	1/4"BB12F	1/4"BS12F	1/4"SS12F
3.5	5.6mm	N/A	3.5BS8F	3.5SS8F	3.5BB12F	3.5BS12F	3.5SS12F
4	4.75mm	N/A	4BS8F	4SS8F	4BB12F	4BS12F	4SS12F
5	4.00mm	N/A	5BS8F	5SS8F	5BB12F	5BS12F	5SS12F
6	3.35mm	N/A	6BS8F	6SS8F	6BB12F	6BS12F	6SS12F
7	2.80mm	N/A	7BS8F	7SS8F	7BB12F	7BS12F	7SS12F
8	2.36mm	8BB8F	8BS8F	8SS8F	8BB12F	8BS12F	8SS12F
10	2.00mm	10BB8F	10BS8F	10SS8F	10BB12F	10BS12F	10SS12F
12	1.7mm	12BB8F	12BS8F	12SS8F	12BB12F	12BS12F	12SS12F
14	1.4mm	14BB8F	14BS8F	14SS8F	14BB12F	14BS12F	14SS12F
16	1.18mm	16BB8F	16BS8F	16SS8F	16BB12F	16BS12F	16SS12F
18	1.00mm	18BB8F	18BS8F	18SS8F	18BB12F	18BS12F	18SS12F
20	850 µm	20BB8F	20BS8F	20SS8F	20BB12F	20BS12F	20SS12F
25	710 µm	25BB8F	25BS8F	25SS8F	25BB12F	25BS12F	25SS12F
30	600 µm	30BB8F	30BS8F	30SS8F	30BB12F	30BS12F	30SS12F
35	500 µm	35BB8F	35BS8F	35SS8F	35BB12F	35BS12F	35SS12F
40	425 µm	40BB8F	40BS8F	40SS8F	40BB12F	40BS12F	40SS12F
45	355 µm	45BB8F	45BS8F	45SS8F	45BB12F	45BS12F	45SS12F
50	300 µm	50BB8F	50BS8F	50SS8F	50BB12F	50BS12F	50SS12F
60	250 µm	60BB8F	60BS8F	60SS8F	60BB12F	60BS12F	60SS12F
70	212 µm	70BB8F	70BS8F	70SS8F	70BB12F	70BS12F	70SS12F
80	180 µm	80BB8F	80BS8F	80SS8F	80BB12F	80BS12F	80SS12F
100	150 µm	100BB8F	100BS8F	100SS8F	100BB12F	100BS12F	100SS12F
120	125 µm	120BB8F	120BS8F	120SS8F	120BB12F	120BS12F	120SS12F
140	106 µm	140BB8F	140BS8F	140SS8F	140BB12F	140BS12F	140SS12F
170	90 µm	170BB8F	170BS8F	170SS8F	170BB12F	170BS12F	170SS12F
200	75 µm	200BB8F	200BS8F	200SS8F	200BB12F	200BS12F	200SS12F
230	63 µm	230BB8F	230BS8F	230SS8F	230BB12F	230BS12F	230SS12F
270	53 µm	270BB8F	270BS8F	270SS8F	270BB12F	270BS12F	270SS12F
325	45 µm	325BB8F	325BS8F	325SS8F	325BB12F	325BS12F	325SS12F
400	38 µm	400BB8F	400BS8F	400SS8F	400BB12F	400BS12F	400SS12F
450	32 µm	N/A	450BS8F	450SS8F	450BB12F	450BS12F	450SS12F
500	25 µm	N/A	500BS8F	500SS8F	500BB12F	500BS12F	500SS12F
635	20 µm	N/A	635BS8F	635SS8F	635BB12F	635BS12F	635SS12F
8" Brass Bottom Pan			PB8F	12" Brass Bottom Pan			PB12F
8" Stainless Bottom Pan			PS8F	12" Stainless Bottom Pan			PB12F
8" Brass Cover			CB8	12" Brass Cover			CB12
8" Stainless Cover			CS8	12" Stainless Cover			CS12

## RICE MILLERS

### SEEDBURO NO. 2 MILLER

The Seedburo No. 2 Miller tests rice samples for milling quality, grading, color and style. This miller can provide results similar to the No. 3 Seedburo Miller. Designed primarily for the rice buyer as a guide. Not meant to replace the No. 3 Miller as a grading machine. Sample size approx. 160g. Provided complete with integrated digital timer or alternate model without timer but an optional external digital timer offered. Equipped with 1/3 HP, 1 PH motor. Net wt. 45 lbs., Ship wt. 68 lbs. Ship dims. 19" L x 18" W x 14" H.



Miller 115V, 60Hz, without Timer .....	<b>No.60-115-60-2</b>
Miller 230V, 60Hz, without Timer .....	<b>No.60-230-60-2</b>
Miller 110V, 50Hz, without Timer .....	<b>No.60-110-50-2</b>
Miller 220V, 50Hz, without Timer .....	<b>No.60-220-50-2</b>
Miller 115V, 60Hz, with Digital Timer .....	<b>No.60-115-60-DT</b>
Miller 230V, 60Hz, with Digital Timer .....	<b>No.60-230-60-DT</b>
Miller 220V, 50Hz, with Digital Timer .....	<b>No.60-220-50-DT</b>
Replacement standard screen, 3/64" .....	<b>No.60-09-00</b>
Stainless steel pressure cover .....	<b>No. 60-01-OS</b>
Replacement cylinder .....	<b>No. 60-07-00</b>
External Digital Timer 115 V,60 Hz.....	<b>No. 60EDT16</b>
External Digital Timer 220V,50Hz.....	<b>No. 60EDT25</b>
Required Domestic Packing, Cardboard Box, without timer .....	<b>No.60/DOM</b>
Required Export Crating, Wooden Box, without timer.....	<b>No.60/EX</b>
Required Domestic / Export Crating, Wooden Box, with timer.....	<b>No.60/DOM-T</b>

### 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 push button "stop" control is also provided.

All 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 U.S.D.A. Federal/State Rice Inspection Service. Sample size approximately 1000g.



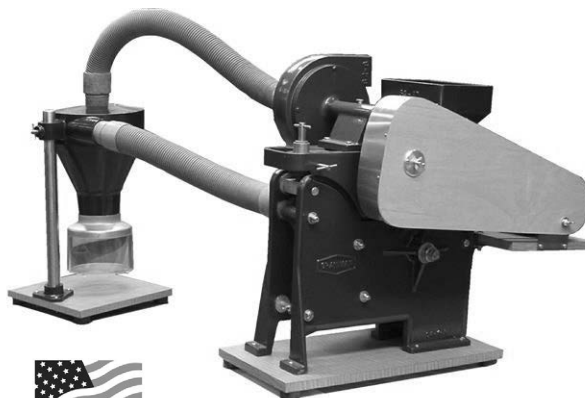
Equipped with 3HP motor, standard wiring, 220V, 60Hz. 3 phase, complete with automatic digital timer and starter. All wires connected and tested, ready for installation and connection to power source. Net wt. 250 lbs, Ship wt crated: 275 lbs. Ship dims. 35" L x 21" W x 30" H.

Miller 220V, 60Hz, 3Ph .....	<b>No. 65-220-60-3</b>
Miller 220V, 50Hz, 3Ph .....	<b>No. 65-220-50-3</b>
Required Wood crate for domestic or export .....	<b>No. 65/DOM</b>



## 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 w/ Dust Collector:** Net wt. 166 lbs., Ship wt. 196 lbs,  
Ship dims. 34" L x 21" W x 32" H

Sample Sheller with Dust Collector, 1/3 HP, 115V, 60Hz.....	No. 64-115-60-WDC
Sample Sheller with Dust Collector, 1/3 HP, 220V, 50Hz.....	No. 64-220-50-WDC
Sample Sheller without Dust Collector, 1/3 HP, 115V, 60Hz.....	No. 64-115-60-WDC
Sample Sheller without Dust Collector, 1/3 HP, 220V, 50Hz.....	No. 64-220-50-WDC
Required Crating for Sheller with or without Dust Collector.....	No. 64/DOM

## RICE SIZING DEVICE

The Rice Sizing Device provides a repeatable and consistent separation which can not 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.

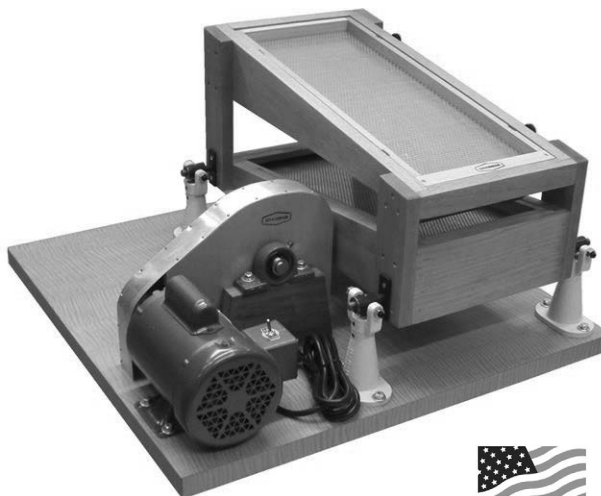
Because the total preweighed sample was 1000 grams, the percentage of each portion is obtained by weighing it and simply moving the decimal point one place. The percentage of whole rice is taken from the weight of the rice which remains after the last set of plates have been used.

**Rice Sizing Device:** Net wt. 110 lbs, Ship wt. 200 lbs. Ship wt with Set of 10 Plates 250 lbs, Ship dims. 36" L x 35" W x 20" H  
**Single Plate:** Net wt.3 lbs., Ship wt. 5 lbs, Ship dims 25" L x 11" W x 4" 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") 6/64" (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
12/64" Plate .....	No. 61-12
10/64" Plate .....	No. 61-10
6/64" Plate .....	No. 61-6
5/64" Plate .....	No. 61-5
.135" Plate .....	No. 61-135
13/64" Plate .....	No. 61-13
11/64" Plate .....	No. 61-11





**LABORATORY RICE LENGTH GRADER**

The Model 68 Length Grader is a basic one cylinder machine which is designed to work in the testing laboratory. Broken kernels can be removed from the whole grain with the use of the variable speed controls and change of cylinder size. This grader makes separations only by length on grains which have an elongated shape such as wheat, rice, 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 catcher, into which the broken product falls and the speed of the cylinder rotation. The operator can maximize the efficiency of the production size equipment by first measuring the length-sizing separations on this laboratory equipment. Aluminum, stainless steel and brass materials are used for long life and quality.

Standard Features: Variable speed control, catcher tilt adjustment control with angle indication, timer control, sealed

gear drive, vibration free operation, cylinder shell, separate control box with On/Off and Run controls  
 Net wt. 40 lbs. Domestic ship wt. 60 lbs. Export ship wt. 60 lbs. in a wood crate. Shipping dims.: 21" W x 16" L x 18"H with one cylinder. Individual cylinder ship wt. 5 lbs. Ship dims. 11" W x 11" L x 9" H.

Lab Rotary Length Grader w/ digital timer, 115V, 50/60HZ without cylinders.....	No. LG6816DT/B
Lab Rotary Length Grader w/ digital timer, 220V, 50/60HZ without cylinders .....	No. LG6825DT/C
Indent Cylinder No. 12.....	No. 680112
Indent Cylinder No. 14.....	No. 680114
Required Domestic Packing .....	No. 68BOX-W
Required Export Crating.....	No. 68BOX-E

**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.

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. When the cycle is completed the foreign material that has been removed from the sample can be viewed in the removable transparent plastic cup.

The three quart hopper holds approximately 5 lbs. of rice allowing larger samples to be fed continuously. Each unit comes complete with 300 Watts DC motor, one triangular pan and 2 qt. plastic cup. Net wt. 43 lbs. Domestic ship wt. 50 lbs. Export ship wt. 77 lbs. Domestic ship dims. 24" L x 16" W x 29" H, Export ship dims. 26" L x 18" W x 34" H.



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
Required Domestic Packing (carton box).....	No. 63-BOX-OD
Required Export crating (wooden box).....	No. 63-BOX-OE

**LABORATORY THICKNESS GRADER**

The Laboratory Thickness Grader is used for sample size grading of grains according to the kernel thickness. Some of the grains which would be suitable are paddy rice, brown or milled rice, barley, wheat, rye or oats. The model 70 allows for the pre-testing of a sample lot within just 2 – 3 minutes to determine the proper settings and cylinder sizes for the production equipment. There is a wide range of cylinder sizes available to provide a prediction on the amount of separation to be expected in the larger equipment. The quality of the grain can be determined by the thickness of the kernel for milling or further processing.



Standard features: Feed hopper, timer control, sealed gear drive, anti-vibration rubber pads, electric cord, On/Off switch, fuse, 110 V, 60 Hz single phase operation, separate receiving boxes for the “thrus” portion and the “overs” portion. Cylinders are sold separately\*. Sample size approx. 300- 500g. Equipped with 65 watt, single phase motor, 110 V, 60Hz. Net wt. 56 lbs., Ship wt. 110 lbs. Ship Dims. 29” L x 29” W x 34” H.

**Available cylinder slot sizes:**

Item #	Size	Item #	Size	Item #	Size
<b>7007160</b>	1.60mm(0.063")	<b>7007185</b>	1.85mm(0.073")	<b>7007220</b>	2.20mm(0.087")
<b>7007165</b>	1.65mm(0.065")	<b>7007190</b>	1.90mm(0.075")	<b>7007230</b>	2.30mm(0.091")
<b>7007170</b>	1.7mm(0.067")	<b>7007195</b>	1.95mm(0.077")	<b>7007240</b>	2.40mm(0.094")
<b>7007175</b>	1.75mm(0.069")	<b>7007200</b>	2.00mm(0.079")	<b>7007250</b>	2.50mm(0.098")
<b>7007180</b>	1.80mm(0.071")	<b>7007210</b>	2.10mm(0.083")	<b>7007270</b>	2.70mm(0.106")

\*Select the cylinder item number when ordering.

Lab Thickness Grader, 110V, 60Hz .....	<b>No.70LTG716</b>
Cylinders (add three digit designation above to specify size).....	<b>No. 7007*</b>
Required Domestic Packing, Cardboard Box .....	<b>No.70/DOM</b>
Required Export Crating, Wooden Box .....	<b>No.70/EX</b>

**MINI TESTING HUSKER**

The Mini Testing Husker provides a quick and complete husking of paddy rice in a simple and quiet, single pass operation. The clear panel on the side provides for viewing of the husking action. This allows for adjustment of the fan or feed rate to maximize capacity and maintain complete husking. Paddy is husked into brown rice when it passes through the clearance between two rubber rolls which rotate at different speeds. The husked rice, husks and immature paddy are separated automatically by the fan. The clearance between the two rubber rolls is adjusted by the side mounted adjustment handle. The unit is light weight for easy transportation between sites. A high husking ratio is achieved and maintained due to the large (1 ½” x 4”) rubber rolls used in the husker. Capacity of up to 36-40 kg / hour (80-88 lbs / hr). Net wt. 82 lbs, Ship wt crated: 115 lbs. Ship Dims. 30” L x 14” W x 30” H.



Mini Testing Husker 115V, 60Hz, 1Ph .....	<b>No. MTH-35A-115-60</b>
Mini Testing Husker 220V, 50Hz, 1Ph .....	<b>No. MTH-35A-220-50</b>
Required Wood crate for domestic or export .....	<b>No. MTH/DOM</b>

### SEEDBURO COMPUTER GRAIN SCALE

The Seedburo 8800SS, Digital Computer Grain Scale is the industry leader in grain grading scales. With the 8800SS 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 & readability of 2000g x 0.2g and can



read to 0.01 in lbs/bu, kg/hl and % mode. The 8800SS balance appears on the USDA-GIPSA approved equipment list. Other features on the 8800SS 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 8800SS is NTEP certified and features a serial interface which lets you connect it to your printer or computer. Scale includes a 64P plastic triangular sample pan and has a 2-year manufacturers' warranty. Net Wt. 10 lbs., Ship wt. 12 lbs. Actual dims. 11.5" L x 8.5" W x 5" H, Ship dims. 17" L x 13" W x 13" H. **MADE IN USA**



Shown with optional cups & Strike-Off Stick

- Computer Grain Scale 115V, 50/60Hz..... **No. 8800SS**
- Computer Grain Scale 230V, 50/60Hz ..... **No. 8800SS/A**
- Calibration Weight Set  
(includes two 1000 gram stainless steel weights) ..... **No. WT88**

### OHAUS GRAIN GRADING SCALES

The Ohaus Adventurer Pro Grain Grading Scale has been designed to provide a durable, high-precision testing scale for use in both commercial and USDA-GIPSA applications. The ADV4102N is NTEP certified and features functions for test weight and dockage (FM) readability to 0.01%.



Model AVD4102N

Standard features include easy to use operation with brilliant backlit LCD, English prompts and simple four key operation. The test weight and dockage modes have dedicated key functions to speed use. The Adventurer can be used for simple weighing, test weight, and both standard and reciprocal dockage modes. The AVD4102N will read in pounds per bushel with a quart or pint cup and kilos per hectoliter with a liter or half-liter cup. Capacity 4100g x 0.01g (non-approved mode) or 0.0[1] for approved applications. Capacity is by subtraction, full range memory and less than 3 seconds for stabilization time. Scale includes No. 64P plastic triangular sample pan. Net wt. 10 lbs., Ship wt. 12 lbs., Actual dims 11.8" L x 8.7" W x 3.3" H, Ship dims 21" L x 16" W x 14" H.

Also available is the No. AV612N Adventurer Pro, which is approved for use by USDA-GIPSA for large grains damage use. Capacity is 610g x 0.1g with a 4.75 diameter platform. Net wt. 3 lbs., Ship wt. 6 lbs., Actual dims 10"L x 7.6"W x 2.8"H. Ship dims 16" L x 13" W x 7" H.

- Ohaus Grain Grading Scale, 110V, 50/60Hz ..... **No. AVD4102N**
- Ohaus Grain Grading Scale, 220V, 50/60Hz ..... **No. AVD4102N/A**
- Ohaus Grain Damage Scale, 110V, 50/60Hz ..... **No. AV612N**
- Ohaus Grain Damage Scale, 220V, 50/60Hz ..... **No. AV612N/A**

### SEEDBURO FILLING HOPPER AND STAND

The Seedburo 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-GIPSA for official inspection. The filling hopper is 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 inch 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 13" L x 13" W x 15" H. **MADE IN USA**



Shown with optional cups & Strike-Off Stick

- Seedburo Filling Hopper & Stand (without cup & strike-off stick) ..... **No. 151**
- Half Liter Cup (Canadian Standard) ..... **No. 103**
- Pint Cup ..... **No. 104**
- Liter Cup ..... **No. 203**
- Quart Cup (U.S. Official Standard) ..... **No. 204**
- Strike-Off Stick (Official) ..... **No. 65**

### EASI-WAY PORTABLE HECTOLITER TEST WEIGHT KIT

The EASI-WAY 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 (**wheat, oats, barley only**). The EASI-WAY is matched to the EEC 20 liter volume. Meets ISO 7971-2:2009 standards.

Each kit includes: stainless steel chondrometer, cylindrical weight, digital balance, sample container, cut-off slide, conversion chart and instructions. Uses one 9V battery. Net wt. 5 lbs. Ship wt 7 lbs. Ship dims 19"L x 13"W x 7"H.



EASI-WAY Portable Hectoliter Test Weight Kit ..... **No. EZ1**

### 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" height. A hanger accommodates the hand-held devices shown below. Ship wt 6 lbs. Ship dims 19" L x 13" W x 10" H. **MADE IN USA**



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

### SEEDBURO COX FUNNEL

The Cox 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. Made of powder coated mild steel. Ship wt 5 lbs. Ship Dims 15" L x 15" W x 9" H. **MADE IN USA**



Cox Funnel with 1-1/4" Diameter Opening ..... **No. 29**

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

### SEEDBURO HAND TYPE DENSITY TESTERS

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



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/cu ft) ..... **No. 37F**

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. Ship wt 3 lbs. Ship Dims 20"L x 9"W x 9"H. **MADE IN USA**



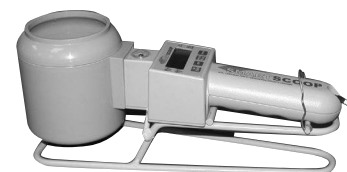
Grain Test Weight Scale (lb/bu & Kg/hl) ..... **No. E26**

Fertilizer Density Scale (lb/cu ft & Kg/cu dm) ..... **No. E37**

*Economy Test Weight Scales*

### 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 for 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 battery included. Net wt. 0.6 lbs., Ship wt. 4 lbs., Actual Dims 12"L x 4"W x 4"H, Ship dims 20"L x 8"W x 8"H.



Hand Held Digital Test Weight Scale ..... **No. 26HS**

Hands Free Stand ..... **No. 26HST**

## METTLER TOLEDO CLASSIC MS SERIES PRECISION TOP LOADING BALANCES



MS303S/A



The Classic MS Series of Analytical and Precision Balances offer a winning combination of strong performance and increased productivity due to fast settling time and consistently reliable results. Simple and user-friendly operation, the MS Series is the ideal solution for fast and accurate weighing applications in grain grading. With the added advantage of proven MonoBloc weighing technology (high-performance weighing cell) this series of balances is the standard for everyday weighing tasks. The MS Series has a high contrast display with large easy-to-read digits, clear symbols and an intuitive menu which enables users to operate the balance quickly and easily. And with three freely programmable SmartKeys, routine tasks can be started at the touch of a button. Additional features include: high-quality aluminum housing, stainless steel weighing pan with draft guard (analytical models) or draft ring (top-loading models), easy leveling, overload protection, Quicklock (quick, easy dismantling of draft shield), SmartTrac (shows how much of the entire weighing range has been used), Diagnostics (easy running of balance diagnostics test



MS802S/A

e.g. keypad test, repeatability test), Protective Cover (encloses the entire housing, protecting the balance from stains and scratches, and built-in RS232 interface capabilities. **The MS Series balances shown are NTEP certified and USDA GIPSA (FGIS) approved.**

Model No.	MS303S/A	MS403S/A	MS603S/A	MS1003S/A
Maximum capacity	320 g	420 g	620 g	1020 g
Readability	0.001 g	0.001 g	0.001 g	0.001 g
Repeatability (sd)	0.001 g	0.001 g	0.001 g	0.001 g
Linearity	0.002 g	0.002 g	0.002 g	0.002 g
Stabilization time (seconds)	1.5	1.5	2	2
Usable height of draft shield	6.5"	6.5"	6.5"	6.5"
Weighing pan dimensions	5" x 5"	5" x 5"	5" x 5"	5" x 5"
Balance dimensions LxWxH	14" x 8" x 11"	14" x 8" x 11"	14" x 8" x 11"	14" x 8" x 11"



Model No.	MS802S/A	MS1602S/A	MS3002S/A	MS4002S/A	MS6002S/A	MS4002SDR/A*	MS6002SDR/A*
Maximum capacity	820 g	1620 g	3200 g	4200 g	6200 g	4200 g	6200 g
Maximum capacity*	-	-	-	-	-	820 g	1220 g
Readability	0.01 g	0.01 g	0.01 g	0.01 g	0.01 g	0.1 g	0.1 g
Readability*	-	-	-	-	-	0.01 g	0.01 g
Repeatability (sd)	0.01 g	0.01 g	0.01 g	0.01 g	0.01 g	0.06 g	0.06 g
Repeatability (sd)*	-	-	-	-	-	0.01 g	0.01 g
Linearity	0.02 g	0.02 g	0.02 g	0.02 g	0.02 g	0.2 g	0.2 g
Linearity, fine range	-	-	-	-	-	0.02 g	0.02 g
Stabilization time (seconds)	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Weighing pan dimensions	6.7" x 7.9"	6.7" x 7.9"	6.7" x 7.9"	6.7" x 7.9"	6.7" x 7.9"	6.7" x 7.9"	6.7" x 7.9"
Balance dimensions LxWxH	14" x 8" x 4"	14" x 8" x 4"	14" x 8" x 4"	14" x 8" x 4"	14" x 8" x 4"	14" x 8" x 4"	14" x 8" x 4"

\* Delta Range: fine range up to 20% of the weighing range, depending on the model

### 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 display, 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, draftshield on Model AV53N. All models shown are NTEP certified.



Model No.	AV53N	AV212N	AV412N	AV612N	AV812N	AV2101N	AV4101N	AV6101N	AV8101N
Capacity (g)	51	210	410	610	810	2100	4100	6100	8100
Readability	0.02	0.1				1.0			
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)	2.5	1.5	3			2			
Operating Temp Range	50° - 104°F / 10° - 40°C								
Power Requirements	AC Adapter (Included) or 4 AA Batteries (Not Included)								
Calibration	Digital with External Weight								
Display Type	2-Line Alphanumeric Backlit LCD								
Pan Size (in/cm)	3.9 / 10 dia.		4.7 / 12 dia.		5.8 x 6.3 / 14.9 x 16.2				
Ship Dimensions (in/cm)	10.9 x 10.9 x 15.2 / 27.6 x 27.6 x 38.5		10.9 x 6.3 x 15.2 / 27.6 x 16 x 38.5						
Ship Weight (lb./Kg)	5.7 / 2.6		4.8 / 2.2		5.5 / 2.5				

### 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.



Model No.	PA64	PA114	PA214	PA153	PA313	PA512	PA1502	PA3102	PA4101	
Capacity (g)	65	110	210	150	310	510	1500	3100	4100	
Readability	0.1 mg		0.001 g		0.01 g			0.1 g		
Repeatability (Std Dev)	0.1 mg		1 mg		10 mg			100 mg		
Linearity	0.2 mg		0.3 mg		2 mg		20 mg		100 mg	
Application Modes	Weighing, Parts Counting, Percent									
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, mesghal, Newton, ozt, teals			g, kg, lb, ct, oz, dwt, tical, tola, mommes, baht, grain, mesghal, Newton, ozt, teals		
Platform Size	3.54 in / 9 cm diameter		4.72 in / 12 cm diameter		7.1 in / 18 cm diameter					
Taring Time	1 second									
Stabilization Time	3 seconds									
Draftshield	7.3 in / 18.5 cm inside height				None					
Operating Conditions	50° F / 10° C to 104° F / 40° C at 10% to 80% relative humidity, non-condensing, up to 4000m above sea level									
Ship Weight (Lb/Kg)	15.2 lb / 6.9 kg				11.8 lb / 5.4 kg					
Ship Dimensions (in/cm)	19.5 x 15.5 x 20.6 in / 49.5 x 39.5 x 52.2 cm				19.5 x 15.5 x 12.8 in / 49.5 x 39.5 x 32.7 cm					



### OHAUS SCOUT PRO™ PORTABLE ELECTRONIC BALANCE

Designed for use in laboratory, industrial or education applications, the Ohaus Scout Pro™ features easy-to-use two-button operation, a high-contrast LCD display, multiple weighing units, four application modes, and the option of either RS232 or USB connectivity, the Scout Pro™ is the portable balance for all your needs!

**Multiple Weighing Units** - Including grams, kilograms, pounds, ounces, a combined pound:ounce display, troy ounces and penny-weights. **Multiple Application Modes** - Including enhanced parts counting, percentage weighing, totalization, and display hold. **Easy to Use** - The high-contrast LCD display combined with two key operation makes the Scout Pro™ a snap to

operate. **USB or RS232 Connectivity** - Quickly-installed option with integral cable allows data connection to PC or printer. **Easy to Clean** - Removable stainless steel weighing platform, sealed front panel and molded spill ring help keep the Scout Pro™ safe from spills. **Battery or AC Power** - Uses 4 "AA" batteries with auto shut-off feature for 40 hours of operation, or the Scout Pro™ can be run on the included AC adapter. **Integral Weigh-Below Hook** - Critical for density or specific gravity determination.

Model	SP202	SP402	SP602	SP401	SP601	SP2001	SP4001	SP6001	SP6000
Capacity (g)	200	400	600	400	600	2000	4000	6000	6000
Readability (g)	0.01			0.1			1		
Capacity x Readability (kg)	N/A	N/A	N/A	N/A	N/A	2.0000 x 0.0001	4.0000 x 0.0001	6.0000 x 0.0001	6.000 x 0.001
Capacity x Readability (oz)	7.0550 x 0.0005	14.1095 x 0.0005	21.645 x 0.0005	14.110 x 0.005	21.165 x 0.005	70.550 x 0.005	141.095 x 0.005	211.645 x 0.005	211.65 x 0.05
Capacity x Readability (lb)	N/A	N/A	1.32280 x 0.00005	N/A	1.3230 x 0.0005	4.4090 x 0.0005	8.8185 x 0.0005	13.2280 x 0.0005	13.230 x 0.005
Application Modes	Parts Counting with Average Piece Weigh Recalculation, Percentage Weighing, Totalization, Display Hold								
Tare Range	To Capacity By Subtraction								
Over Range Capacity	Capacity +90d								
Stabilization Time	3 seconds								
Power Requirements	AC Adapter (included) or 4 AA Batteries (not included)								
Calibration Type	Digital Calibration from Keypad								
Pan Size (in/cm)	4.7 / 12 diameter				6.5 x 5.5 / 16.5 x 14.2				
Dimensions WxHxD (in/cm)	7.56 x 2.13 x 8.27 / 19.2 x 5.4 x 21.0								
Net Weight (lb/kg)	1.5 / 0.7		1.8 / 0.8						
Shipping Dimensions WxHxD	10 x 4 x 12 in / 25.4 x 10.2 x 30.5 cm								
Shipping Weight (lb/kg)	4 / 1.8								

### OHAUS 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 to 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.



### SEEDBURO PC400 SERIES TOP-LOADING BALANCE

The Seedburo PC400 Top-loading Balances have the exclusive quad-spring design that virtually eliminates damage from shock overload. The scales read in pounds, ounces, kilograms or grams. They run on an internal rechargeable battery or AC plug-in power adapter. The scale can even be used while recharging. The small size of the PC400 allows you to use it in tight spaces. In addition, the scales are easy to clean and made of 304 stainless steel, which is wipe down safe. Complete with bidirectional RS232 output. The PC400-05 and PC400-10 are both NTEP approved\*. Power requirements 115V or 230V, 50/60Hz. Actual wt 5 lbs. Actual dims 8.75" L x 8.5" W x 4.25" H. Ship wt 6 lbs. Ship dims 10" x 10" x 6".



Model	Capacity	Readability	Platform
No. CS200	200g	0.1g	7.1" Diam.
No. CS2000	2000g	1.0g	7.1" Diam.
No. CS5000	5000g	1.0g	7.1" Diam.
No. CS/ADAPTER	Replacement Adapter 110V/230V, 50/60Hz		

Model	Capacity x Readability		
	Grams	Ounces	Pounds
No. PC400-02	1000 x 0.1	35 x 0.005	2 x 0.0002
No. PC400-05*	2300 x 1	80 x 0.05	5 x 0.002
No. PC400-10*	4500 x 2	160 x 0.1	10 x 0.005
No. PC400-Adapter	Adapter for 220V Operation of above scales.		

**U.S./Canada**  
Toll Free: **1-800-284-5779**

**Fax: 312-738-5329**

**International: 312-738-3700**

## OHAUS DEFENDER™ 5000 BENCH SCALES

The OHAUS Defender™ 5000 Series and Defender™ 5000 Low Profile Series feature an ABS plastic T15P indicator head with a square, painted steel base (base also available in rectangular configurations - call for sizes and quote). Ideal for production, packaging, shipping & receiving and many general commercial and industrial weighing applications, the Defender™ 5000 offers a multifunctional indicator with multiple weighing units and software modes to meet the requirements of industrial and laboratory applications. With rugged construction, comprehensive yet intuitive software and multiple connectivity options, the Defender™ 5000 can meet the needs of demanding industrial operations. The Defender™ 5000 series is NTEP Certified and Measurement Canada Approved.



### OHAUS DEFENDER™ 5000 BENCH SCALES

Model	D51P10QR1	D51P25QR1	D51P50QL2	D51P100QL2	D51P250QX2
Capacity x Default Readability	25 lb x 0.002 lb 400 oz x 0.05 oz 25 lb : 0.05 oz 10 kg x 0.001 kg 10,000 g x 1 g	50 lb x 0.005 lb 800 oz x 0.1 oz 50 lb x 0.1 oz 25 kg x 0.002 kg 25,000 g x 2 g	100 lb x 0.01 lb 1,600 oz x 0.2 oz 160 lb : 0.2 oz 50 kg x 0.005 kg 50,000 g x 5 g	250 lb x 0.02 lb 4,000 oz x .5 oz 250 lb : .5 oz 100 kg x 0.01 kg 100,000 g x 10 g	500 lb x 0.05 lb 8,000 oz x 1 oz 500 lb : 1 oz 250 kg x 0.02 kg 250,000 g x 20 g
Capacity x Certified/Approved Readability	25 lb x 0.005 lb 10 kg x 0.002 kg	50 lb x 0.01 lb 25 kg x 0.005 kg	100 lb x 0.02 lb 50 kg x 0.01 kg	250 lb x 0.05 lb 100 kg x 0.02 kg	500 lb x 0.10 lb 250 kg x 0.05 kg
Column	13.8 in / 350 mm painted steel			26.8 in / 680 mm painted steel	
Safe Overload Capacity	150% of maximum capacity				
Weighing Units	lb, oz, lb:oz, kg, g, metric tonnes, custom unit				
Modes	Static Weighing, Dynamic Weighing, Counting, Checkweighing, Percent Weighing, Display Hold				
Display	1 in / 25mm high 6-digit, 7-segment bright white backlit LCD				
Keyboard	4-button membrane switch				
Stabilization Time	Within 2 seconds				
Power	100-240 VAC / 50-60Hz internal universal power supply, 6 'C' cell batteries (not supplied) with 80 hour life				
Interface	RS232 and external input				
Operating Temperature Range	14°F to 104°F / -10°C to 40°C				
Platform Dimensions (W x H x D)	12 x 3.7 x 12 305 x 95 x 590 x 305 x 425 mm		18 x 37 x 18 457 x 115 x 940 x 457 x 577 mm		24 x 37 x 24 610 x 137 x 940 x 610 x 730 mm
Shipping Dimensions (L x W x H)	19.3 x 16.1 x 17.3 in 490 x 410 x 440 mm		31.2 x 23.6 x 9.5 in 810 x 600 x 240 mm		39.4 x 29.9 x 9.8 in 1000 x 760 x 250 mm
Shipping Weight	37.7 lb / 17.1 kg		71.4 lb / 32.4 kg		97.9 lb / 44.4 kg

### OHAUS DEFENDER™ 5000 LOW PROFILE BENCH SCALES

Model	D51P10QR5	D51P25QR5	D51P50QL5	D51P100QL5	D51P250QX5
Capacity x Default Readability	25 lb x 0.002 lb 400 oz x 0.05 oz 25 lb : 0.05 oz 10 kg x 0.001 kg 10,000 g x 1 g	50 lb x 0.005 lb 800 oz x 0.1 oz 50 lb x 0.1 oz 25 kg x 0.002 kg 25,000 g x 2 g	100 lb x 0.01 lb 1,600 oz x 0.2 oz 160 lb : 0.2 oz 50 kg x 0.005 kg 50,000 g x 5 g	250 lb x 0.02 lb 4,000 oz x .5 oz 250 lb : .5 oz 100 kg x 0.01 kg 100,000 g x 10 g	500 lb x 0.05 lb 8,000 oz x 1 oz 500 lb : 1 oz 250 kg x 0.02 kg 250,000 g x 20 g
Capacity x Certified/Approved Readability	25 lb x 0.005 lb 10 kg x 0.002 kg	50 lb x 0.01 lb 25 kg x 0.005 kg	100 lb x 0.02 lb 50 kg x 0.01 kg	250 lb x 0.05 lb 100 kg x 0.02 kg	500 lb x 0.10 lb 250 kg x 0.05 kg
Safe Overload Capacity	150% of maximum capacity				
Platform Dimensions (W x H x D)	12 x 3.7 x 12 305 x 95 x 305 x 530 mm		18 x 4.5 x 18 457 x 115 x 457 x 680 mm		24 x 5.4 x 24 610 x 137 x 610 x 833 mm
Shipping Dimensions (L x W x H)	19.3 x 16.1 x 17.3 in 490 x 410 x 440 mm		31.2 x 23.6 x 9.5 in 810 x 600 x 240 mm		39.4 x 29.9 x 9.8 in 1000 x 760 x 250 mm
Shipping Weight	35.9 lb / 16.3 kg		68.5 lb / 31.1 kg		95.0 lb / 43.1 kg



No. 99S



**TRIPLE BEAM BALANCE**

Seedburo offers the very best in mechanical balances. Manufactured by Ohaus, these balances carry a 5 year warranty (10 year on the Triple® Pro!). 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 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 2-3/4", or with round 6" dia. stainless steel plate (No. 750-S0 & No. 760). Ship wt. 7 lbs., Ship dims 21" L x 15" W x 11" H.



No. 750-S0



No. TP2611

The Triple® Pro triple beam balance is accurate and dependable. The scale features a unique, easy grip handle that is ergonomically designed and perfectly balanced to allow effortless movement of the scale. The scale is provided with an attachment weight set that can be stored in a convenient storage compartment on the scale. The total capacity of the Triple® Pro is 2610g x 0.1g. Also included is a rod & clamp assembly for below balance weighing (specific gravity determination). Ship wt. 7 lbs, dims 21" L x 15" W x 11" H.

Gram Scale with poly scoop, spider platform style .....	<b>No. 99</b>
Gram Scale with SS scoop, spider platform style .....	<b>No. 99S</b>
Gram Scale with SS plate .....	<b>No. 750-S0</b>
Gram Scale with SS plate and tare beam .....	<b>No. 760</b>
Triple® Pro Scale with SS plate, 707 weight set and rod & clamp assembly .....	<b>No. TP2611</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.



No. 1650-WO

Capacity is 610g and 2610g with a 707 weight set. The stainless plate is 6" in. dia. to accommodate the stainless scoop and counter weight (703S.) Dial 10g x 0.1g, rear beam 100g x 10g, center beam 500g x 100g. Ship wt. 9lbs., ship dims 22" L x 9" W x 9" H.

Dial-O-Gram with SS plate and tare beam .....	<b>No. 1650-00</b>
Dial-O-Gram with SS plate, tare beam and 707 weight set .....	<b>No. 1650-WO</b>

**TRIPLE BEAM & DIAL-O-GRAM ACCESSORIES**



No. 703S



Weight set, two 1000g and one 500g weights .....	<b>No. 707</b>
Stainless scoop and counter weight .....	<b>No. 703S</b>
Poly scoop and counter weight .....	<b>No. 703</b>
Footed poly scoop used with 99g scale (white) .....	<b>No. 1101</b>
Footed poly scoop used with 99g scale (gray) .....	<b>No. 1101G</b>
Stainless steel scoop used with 99S gram scale .....	<b>No. 80250400</b>
Maxi-Scoop, 10" x 2-1/2" polypropylene, for tare models only .....	<b>No. 3369</b>



No. D500M

**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 19" x 28" and the scale capacity is 1000 lb x 0.5 lb. The D500M is NTEP Certified. Net wt 114 lbs. Ship wt 124 lbs. Ship dims 32"L x 50"W x 8"H.



D500M Portable Platform Scale .....	<b>No. D500M</b>
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### SALTER ELECTRO SAMSON DIGITAL HANGING SCALE

The Salter Electro Samson Digital Hanging Scale is perfect for outdoor and on the go use. 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, angled 4-digit LCD display, "Hold" feature, tare capability and powered by a 9V battery (not included). Ship wt 3 lbs. Ship dims 14" x 4" x 3".



Digital Hanging Scale, 22 lb x 0.02 lb, 10 kg x 0.02 g.....	<b>No. HS43730</b>
Digital Hanging Scale, 55 lb x 0.05 lb, 25 kg x 0.05 g .....	<b>No. HS43731</b>
Digital Hanging Scale, 100 lb x 0.1 lb, 45 kg x 0.10 g .....	<b>No. HS75593</b>
Stainless Steel Round Pan .....	<b>No. A251</b>
Galvanized Oval Pan .....	<b>No. A250</b>

### 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 a protective case. All weights are Class F, stainless steel.

#### WEIGHT SETS

Part No.	12500	12506	12512	12591	12593
Range	50g – 1g	100g – 1g	500g – 1g	1 lb – 1/32oz	1 lb – 0.001 lb
	1 – 50g	1 – 100g	1 – 500g	1 – 1lb	1 – 1lb
	2 – 20g	1 – 50g	2 – 200g	1 – 8oz	1 – 0.5lb
	1 – 10g	2 – 20g	1 – 100g	1 – 4oz	2 – 0.2lb
	1 – 5g	1 – 10g	1 – 50g	1 – 2oz	1 – 0.1lb
	2 – 2g	1 – 5g	2 – 20g	1 – 1oz	1 – 0.05lb
	1 – 1g	2 – 2g	1 – 10g	1 – 1/2oz	2 – 0.02lb
		1 – 1g	1 – 5g	1 – 1/4oz	1 – 0.01lb
			2 – 2g	1 – 1/8oz	1 – 0.005lb
			1 – 1g	1 – 1/16oz	2 – 0.002lb
				2 – 1/32oz	1 – 0.001lb
Piece Count	8	9	12	11	13
Total Weight	110.00 g	221.00 g	1.110 kg	2 lb	2.111 lb
	Metric	Metric	Metric	Avoirdupois	Avoirdupois



No. 12506 Weight Set

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

#### INDIVIDUAL WEIGHTS

Metric		Metric with Traceable Certificate		Avoirdupois		Avoirdupois with Traceable Certificate	
1g	WT-1F	1g	WT-1FTC	1/16 oz	12575	1/16 oz	12575FTC
2g	WT-2F	2g	WT-2FTC	1/8 oz	12578	1/8 oz	12578FTC
3g	WT-3F	3g	WT-3FTC	1/4 oz	12581	1/4 oz	12581FTC
5g	WT-5F	5g	WT-5FTC	1/2 oz	12584	1/2 oz	12584FTC
10g	WT-10F	10g	WT-10FTC	1 oz	12587	1 oz	12587FTC
20g	WT-20F	20g	WT-20FTC	2 oz	12590	2 oz	12590FTC
30g	WT-30F	30g	WT-30FTC	4 oz	12592	4 oz	12592FTC
50g	WT-50F	50g	WT-50FTC	8 oz	12594	8 oz	12594FTC
100g	WT-100F	100g	WT-100FTC	12 oz	12626	12 oz	12626FTC
150g	WT-150F	150g	WT-150FTC	1 lb	12596	1 lb	12596FTC
200g	WT-200F	200g	WT-200FTC	2 lb	12598	2 lb	12598FTC
300g	WT-300F	300g	WT-300FTC	3 lb	12600	3 lb	12600FTC
400g	WT-400F	400g	WT-400FTC	4 lb	12602	4 lb	12602FTC
500g	WT-500F	500g	WT-500FTC	5 lb	12604	5 lb	12604FTC
1kg	WT-1000F	1kg	WT-1000FTC	10 lb	12606	10 lb	12606FTC
2kg	WT-2000F	2kg	WT-2000FTC	10 lb	12673*	10 lb	12673FTC*
3kg	WT-3000F	3kg	WT-3000FTC	20 lb	12674*	20 lb	12674FTC*
4kg	WT-4000F	4kg	WT-4000FTC	25 lb	12675*	25 lb	12675FTC*
5kg	WT-5000F	5kg	WT-5000FTC	30 lb	12676*	30 lb	12676FTC*
--	--	--	--	50 lb	12677*	50 lb	12677FTC*

\*These weights are grip-handled for easier lifting.



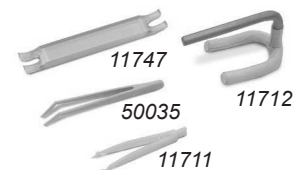
Cylindrical



Grip-handle

### TRANSFER/LIFTING TOOLS FOR TEST WEIGHTS

Forceps, 3 5/8" for 100g – 1mg .....	<b>No. 11711</b>
Forceps, 4 3/4" .....	<b>No. 50035</b>
Plastic Bar for 200g – 4kg .....	<b>No. 11747</b>
Metal Handle for 5kg + .....	<b>No. 11712</b>



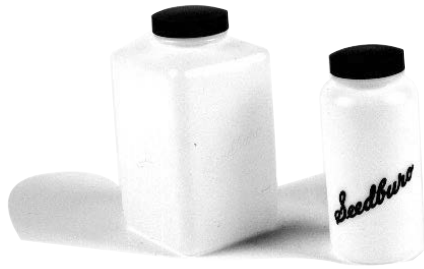
### ANTI-VIBRATION KASOTA STONE SLAB

For use with top-loading balances to reduces vibration and shock. Ideal for use near dump pit or railroad tracks. Actual wt 100 lbs. Actual dims 20"L x 15"W x 3"H.



Balance Slab, Kasota Stone .....	<b>No. 83779</b>
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## SEEDBURO SAMPLE CONTAINERS AND PANS



### QUART AND PINT SAMPLE BOTTLES

Seedburo'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/ GIPSA (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.

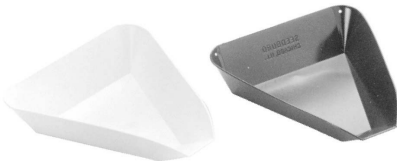
- Quart Sample Bottle, 3-3/4" L x 3-3/4" W x 7" H ..... **No. 630**
- Pint Sample Bottle, 2-3/4" Dia x 6" H ..... **No. 635**



### 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. Commonly used in inspection offices and laboratories, they are great for "stackable" storage. Both the 625 and 640 containers have screw-top plastic cap. **MADE IN USA**

- Half Gallon Square Container, Snap-On Lid, 5" L x 5" W x 6-3/4" H ..... **No. 5095**
- Half Gallon Container, Screw-Top Cap, 5" L x 5" W x 6-1/2" H ..... **No. 625**
- Half Gallon Round Container with Snap-on Lid, 6" dia. X 5-3/4" H ..... **No. 645**
- Gallon Container, 6" Dia x 10" H with 3-3/4" neck opening, Screw-Top Cap ..... **No. 640**



### 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 is the same pan made of durable, white, static resistant plastic. **MADE IN USA**

- Blue Tin 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**



### 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. **MADE IN USA**

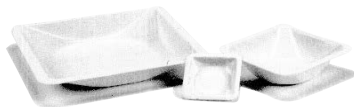
- Spouted Sample Pan, 1-1/2 Quart 11-3/8"L x 7-1/4" W x 1-3/8"H ..... **No. 33**
- Spouted Sample Pan, 3 Quart 15-1/4"L x 9-7/8"W x 2-1/8"H ..... **No. 31**
- Mini-Tin Pan (7" L x 5" W x 7/8" H) ..... **No. 7**



### ROUND SAMPLE PANS

The 44 sample pan series is made of stainless steel and are available in the following sizes:

- Round Aluminum Sample Pan (Pkg/12) - 5" Dia x 1" H..... **No. 44**
- Round Sample Pan, 2 qt liquid (1.7 qt dry) - 8" Dia x 2-3/4" H ..... **No. 44-2**
- Round Sample Pan, 4 qt liquid (3.4 qt dry) - 9-1/4" Dia x 2-7/8" H ..... **No. 44-4**
- Round Sample Pan, 6 qt liquid (5.1 qt dry) - 11" Dia x 3-1/2" H ..... **No. 44-6**



### SEEDBURO 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. Also available in blue.

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

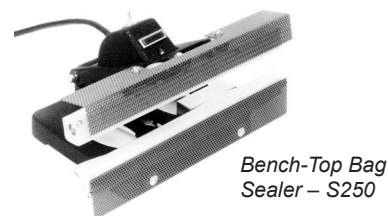
## SEEDBURO BAG SEALERS

Seedburo offers two styles of Bag Sealers. Our Hand-Operated Impulse Bag Sealer S210 series and our Bench Top S250 series. Ideal for use with polyethylene sample bags (see below). Units feature 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.

The bench-top S250 series features an accurate thermostat to control the sealing temperature on the upper and lower jaws. All jaw surfaces are heated evenly by a durable heating cartridge. No hot or cold spots. All of the S250 series electrical components are easily replaced. Each provides a strong ¼" seal. A foot pedal kit is supplied with each S250 series sealer.

We also offer an adjustable stand for use with the bench-top units that features a tilt-top for right angle sealing, adjustable legs (20" to 39" high) and assembly for foot pedal use. Ship wt. 29 lbs. Ship dims. 15" x 12" x 30"

Hand-Operated Impulse Bag Sealer with 8" Teflon Jaw, 110V, 50/60Hz, Ship wt 7 lbs. Ship dims. 14"x4"x8" .....	<b>No. S210-8</b>
Hand-Operated Impulse Bag Sealer with 12" Teflon Jaw, 110V, 50/60Hz, Ship wt 12 lbs. Ship dims. 21"x6"x10" .....	<b>No. S210-12</b>
Hand-Operated Impulse Bag Sealer with 12" Teflon Jaw & Cutter Blade, 110v 50/60Hz, Ship wt 12 lbs. Ship dims. 19-3/4"x4-1/2"x9" .....	<b>No. S210-12C</b>
Bench-Top Heat Sealer with 8-1/4" Teflon Jaw, 110V, 50/60Hz, Ship wt 10 lbs. Ship dims. 17-1/2"x6 1/2"x9-1/2" .....	<b>No. S250</b>
Bench-Top Heat Sealer with 12" Teflon Jaw, 110V, 50/60Hz, Ship wt 10 lbs. Ship dims. 10 lbs. Ship dims 17-1/2"x6 1/2"x9" .....	<b>No. S252</b>
Bench-Top Heat Sealer with 24" Teflon Jaw, 110V, 50/60Hz, Ship wt 13 lbs. Ship dims. 26"x7"x10" .....	<b>No. S254</b>
Adjustable Stand .....	<b>No. 825</b>
Transformer for 220v .....	<b>No. K20</b>



Bench-Top Bag Sealer – S250



Impulse Bag Sealer – S210

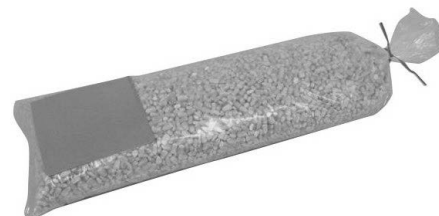


Adjustable Stand – 825

## 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. Poly bags sold in lots of 100 or 1000's. Available in sizes specified or in rolls (specify width and thickness). **MADE IN USA**

Poly Bag with Pockets, 8"W x 26"H x .003 ml thickness .....	<b>No. 620</b>
Poly Bag, 6"W x 13"H x .006 ml thickness .....	<b>No. 621</b>
Poly Bag, 8-1/2"W x 18"H x .003 ml thickness .....	<b>No. 622</b>
Poly Bag 6"W x 12"H x .006 ml thickness .....	<b>No. 628</b>
Poly Bag 8"W x 18"H x .006 ml thickness .....	<b>No. 629</b>
Roll of Polyethylene Tubing (Specify Width and Thickness) .....	<b>No. 623</b>
Plastic "Twistie" Ties (pkg/1000).....	<b>No. 624</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 double stitched drawstring. Private labeling is available - Call for quotation. **MADE IN USA**

Canvas Drawstring Bag, 8" W x 16" H .....	<b>No. 155</b>
Canvas Drawstring Bag, 8-1/2" W x 19" H .....	<b>No. 156</b>
Canvas Drawstring Bag, 10-1/2" W x 16-1/2" H .....	<b>No. 157</b>

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

Canvas Drawstring Bag, 9-1/2"W x 17-1/2"H .....	<b>No. 152</b>
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No. 155

No. 157

No. 156



### CIRCLINE MAGNIFIER LAMP

Seedburo's Circline Magnifier Lamp provides uniform lighting to illuminate and enlarge objects placed under the lens. Unit is 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". Circular lamp uses a 22-watt bulb. 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. **MADE IN USA**

**Circline Magnifier:**

- Clamp-On Model 110V, 60 Hz.....**No. MC150**
- Clamp-On Model 220V, 50Hz .....**No. MC150/C**
- Desk Base Model 110V, 60Hz.....**No. MC100**
- Desk Base Model 220V, 50Hz .....**No. MC100/C**
- Replacement Bulb, 22 Watt (for 110V and 220V) ..... **No. MCB**
- Add-A-Lens attachment to increase magnification to +275% at a focal length of 3-3/4" ..... **No. M1400**



### HIGHLIGHTING 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 26" and the lamp uses a 13-watt fluorescent bulb (9-watt for 220V). 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. **MADE IN USA**

**Highlighting Magnifier:**

- Clamp-On Model 110V, 60Hz..... **No. MG450**
- Clamp-On Model 220V, 50Hz .....**No. MG450/C**
- Desk Base Model 110V, 60Hz..... **No. MG400**
- Desk Base Model 220V, 50Hz .....**No. MG400/C**
- Replacement Bulb:**
- 13 Watt (for 110V) ..... **No. MGB**
- 9 Watt (for 220V) ..... **No. MGB/C**



### SWIFT STEREO MICROSCOPES

These modular stereo microscopes offered by Seedburo incorporate the latest optical technology. The SBM80 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.

Model	Objective	Eyepiece	Total Magnification
SBM91	1X, 2X	10X	10X & 20X
SBM95	1X, 3X	10X	10X & 30X
SBM98	2X, 4X	10X	20X & 40X

### SEEDBURO HAND-HELD MICROSCOPE

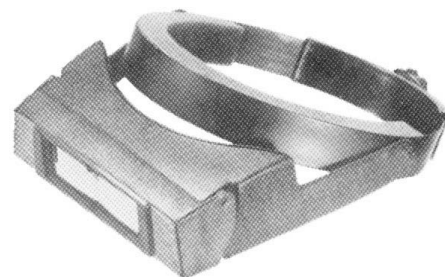
The IPM Scope combines a digital movie camera, precision optics and LED lighting in a microscope that fits in the palm of your hand. 40 to 140X magnification lets you zoom in on the fine details of insects, textiles, electronics or anything else too small to see.

Place the IPM Scope over the object and comfortably view the 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. The IPM Scope connects to your computer's USB port where it's always ready to use. Ship wt. 2 lbs, Ship dims. 7"x5"x3"

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

### FLIP-UP MAGNI-FOCUSER

The Seedburo Magni-Focuser comes with a flip-up front, a snap-on interchangeable lens plate, and a choice of 4 different magnifications. This head-worn magnifier includes a lightweight adjustable headband and can be worn with or without regular glasses. Net wt.5 oz. Ship wt. 1 lb. Ship dims. 13"x11"x3"



Flip-Up Magni-Focuser available with these features:

Focal Length	Power	Model No.
14"	1.75X	No. 103A
8"	2.25X	No. 105A
6"	2.75X	No. 107A
4"	3.5X	No. 110A

### SEEDBURO FLASH-O-LENS

This hand-held magnifier illuminates the field of vision much like a flashlight. It comes in either a battery operated or an electric model. The cut-out base allows easy use of forceps or other instruments on seeds being examined. The fixed focus lens is easily removed for cleaning. Overall length is 9". Ship Wt. 2 lbs, Ship dims. 12"x9"x5"



- Flash-O-Lens, Battery Operated, 5X Power ..... No. 170
- Flash-O-Lens, Battery Operated, 7X Power ..... No. 171
- Flash-O-Lens, Electric (110V), 7X Power ..... No. 172/B
- Flash-O-Lens, Electric (220V), 7X Power ..... No. 172/C

### 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"x6"x10".



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

### 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 lb. Ship dims. 7"x5"x3"



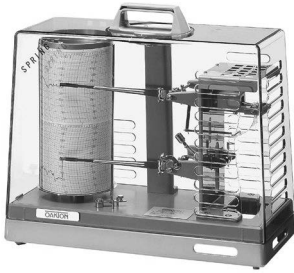
- Seed Analysts Special, 6X Power ..... No. 107
- Seed Analysts Special, 10x Power, Lighted ..... No. 107-L

### 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 lb. Ship dims. 7"x5"x3"



Focal Length	Power	Lens Dia.	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 chart drum even when batteries are weak. The unit includes two felt tipped pens (blue and red) and two "C" batteries. A removable clear plastic cover with handle allows for chart and component access. An optional axial fan is also available to produce more uniform measurements in environments with varying conditions. Net wt. 7-½ lbs. Ship wt. 9 lbs. Actual dims. 13-1/4" L x 5-7/8" W x 11-1/2" H. Ship Dims. 21" L x 11" W x 15" H.

Battery Operated Hygrothermograph .....	<b>No. 3725Q</b>
Optional Axial Fan, 110V .....	<b>No. 3725F</b>
220V Transformer for Axial Fan.....	<b>No. 3725T</b>
Replacement Pens, Blue (pkg of 6) .....	<b>No. 3725PB</b>
Replacement Pens, Red (pkg of 6) .....	<b>No. 3725PR</b>

#### Hygrothermograph Charts:

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



### 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 adaptor, (3) AAA batteries, built-in stand, and LabView-based PC software compatible with Windows® 95/98/2000/NT/ME/XP. Net wt. 1 lb. Ship wt. 2 lbs. Actual dims. 7.7" L x 0.9" W x 5" H. Ship Dims. 12" L x 10" W x 3" H.

Paperless Humidity/Temperature Chart Recorder.....	<b>No. 2302</b>
Replacement Humidity/Temperature Probe.....	<b>No. 2302P</b>
DC Alarm Relay Module 9-ft. (3m) cable (to activate an external warning device).....	<b>No. 2302AR</b>
Adapter for 220V Operation.....	<b>No. 2302ADPT</b>

#### Specifications:

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



### 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, built-in rain gauge installation level, 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), quartz clock with calendar, programmable time zones, day of the week in English, German, French, Spanish or Italian, 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' batteries (not included). Actual dims: main unit: 3" x 1" x 6", remote sensor: 3" x 1" x 4", remote rain gauge: 7" x 5" x 7". Ship wt. 4 lbs. Ship dims. 13" L x 10" W x 13" H.

Wireless Rain Gauge.....	<b>No. RGR150</b>
Additional Remote Temp Sensor .....	<b>No. RS150</b>



### 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 of 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.

Seedburo Rain Gauge, English.....	<b>No. RGE</b>
Seedburo Rain Gauge, Metric.....	<b>No. RGM</b>

**SEEDBURO DUAL TIMER/CLOCK**

This dual timer/clock features two channels that can be operated simultaneously. Use both channels to count down, or use one channel to count up and the other to count down. Built-in real time clock displays time in 12 or 24-hour formats. The clock features easy-to-read tilt display with 1" high LCD readout, a selectable 70 db alarm and a large stop/start button. Use on tabletop or mount on wall using bracket and screws. Comes with one AAA battery. Net wt. 8 oz. Ship wt. 2 lbs. Actual dims. 5.5" L x 3.75" W x 0.625" H. Ship wt. 12" L x 10" W x 3" H.



Seedburo Dual Timer/Clock ..... **No. DTC**

**SEEDBURO THERMOMETER/TIMER**

The countdown timer includes a remote, heat-resistant probe that will measure temperature from 32 to 392°F (0-200°C). Pushbuttons on the thermometer/timer allow for easily setting temperature set point, time set point and start/stop memory. Timer has a built-in alarm for both temperature and time. Timer display easily pivots on stand for easy reading and storage and features a 6.5" stainless steel probe with 4 foot long cable. Thermometer has 1°C resolution, ±2°C accuracy. Net wt. 8 oz. Ship wt. 2 lbs. Actual dims. 4" L x 2-5/8" x 1" H. Ship dims. 12" L x 10" W x 3" H.



Seedburo Thermometer/Timer ..... **No. STT**

**ANTI-FATIGUE MAT**

Ideal for laboratory, plant and office use, the Anti-Fatigue Mats offered by Seedburo provide comfort in the workplace. Stimulating blood flow and providing relief on sore and tired feet, legs and lower back, these mats provide overall comfort at an economical price. The polyurethane overlay cleans easily and lasts longer. Mats are 5/8" thick with yellow beveled edges for safety. Used in any dry work area.

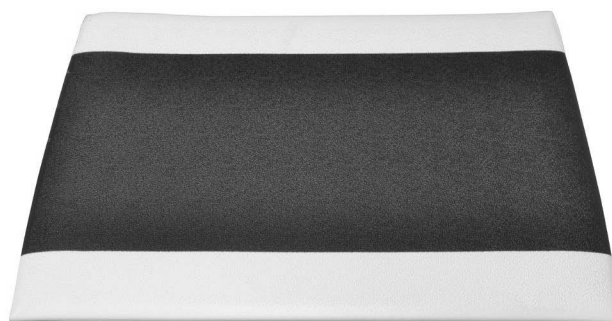


Size	Weight	Part No.
2' x 3'	4.5 lbs	<b>No. AF23</b>
3' x 5'	11.25 lbs	<b>No. AF35</b>
3' x 12'	27 lbs	<b>No. AF312</b>

Custom sizes available up to 60' x 2', 3' and 4'. Priced per sq. ft.

**ANTI-FATIGUE CUSHIONED MAT**

For those employees who need an even softer, more comfortable standing surface, choose the Anti-Fatigue Cushioned floor mat with a 7/8" thickness. Closed Cell Nitrile PVC cushion is molded to a Nitrile Rubber Surface to ensure a cleaner and more uniform construction. Used in mostly dry work areas and around chemicals, these mats offer exceptional resistance to many chemicals and caustic cleaning solutions. The mats are static dissipative and have bright yellow borders to offer a visual warning.



Size	Weight	Part No.
2' x 3'	5 lbs	<b>No. AF23Y</b>
3' x 5'	11 lbs	<b>No. AF35Y</b>
3' x 12'	27 lbs	<b>No. AF312Y</b>

Custom sizes available up to 60' x 2', 3' and 4'. Priced per sq. ft.



### SEEDBURO GUN STYLE INFRARED THERMOMETER

Ideal for most applications, this gun style thermometer 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° to 122°F, 10-90% RH. One 9 volt battery included. Net wt. 1 lb. Ship wt. 2 lbs. Ship dims. 12" L x 8" W x 5" H.

Gun Style Infrared Thermometer ..... **No. IRT206**

### SEEDBURO CALIBRATEABLE DIGITAL PSYCHROMETER

This calibratable digital psychrometer with remote probe to measure relative humidity by comparing dry-bulb and wet-bulb air temperatures is fast and accurate. Unit comes complete with remote probe and features a large display, rotating head to protect sensor, remote temperature probe, field calibratable Min/Max memory, T1-T2 and T1 dew point functions. Optional calibration salt MgCl 33% or NaCl 75% are available. Unit runs on two AAA batteries (included). Net wt. 1lb. Ship wt. 2 lbs. Ship dims. 12" L x 10" W x 3" H.



**Specifications:**

Temperature Measurement Range: -4° to 160°F (-20° to 50°C)  
 Temperature Measurement Accuracy: +/- 1.0°F (+/- 0.6°C)  
 Relative Humidity Range: 10-90%  
 RH Measurement Accuracy: +/- 3% of reading  
 Response Time: 60 sec.

Calibratable Digital Psychrometer ..... **No. EM8716**  
 Replacement Probe ..... **No. P8706**  
 Calibration Salt, MgCl 33% (optional) ..... **No. HR33**  
 Calibration Salt, NaCl 75% (optional) ..... **No. HR75**

### SEEDBURO DIGITAL POCKET PSYCHROMETER

This ergonomically designed pocket psychrometer fits in your pocket and will perform just like its larger counterparts. The unit features minimum/maximum memory with reset, large digital display, auto power with low battery indicator. It displays wet bulb, dew point, temperature and humidity, and has a response time of approximately 60 seconds.



**Specifications:**

Temperature range: -4° to 122°F (-30° to 50°C)  
 Humidity range: 0 -100% HR. Dew Point: -22° to 122°F (-30° to 50°C)  
 Temperature accuracy: +/- 1.8°F (1°C)  
 Humidity accuracy: +/- 5%  
 Dew point accuracy: +/- 3%

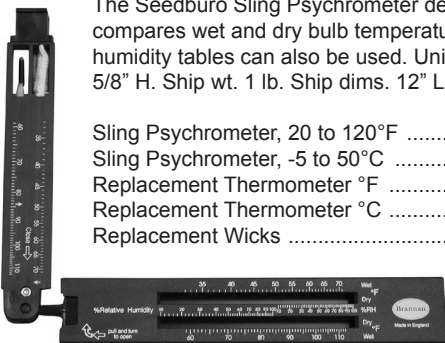
Unit includes one CR2032 battery and pocket clip on back. Net wt. 1 lb. Ship wt. 2 lbs. Actual dims 6.88" x 1.57" x 0.91". Ship dims. 12" x 10" x 3".

Digital Pocket Psychrometer ..... **No. SAMJR995**

### 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 mercury filled thermometers and wick. Net wt. 4 oz. Actual dims. 8 1/2" L x 1 1/2" W x 5/8" 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**



### FOLDING TRACEABLE 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 and 6" lanyard.

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. Unit operates on one (1) AAA battery (included) and is turned on or off by extending the probe.

The folding thermometer is shipped with a Traceable™ Certificate of Calibration and the calibration complies with ISO 17025. 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. 8oz. Ship wt. 1 lb. Ship Dims. 12" L x 3" W x 10" H.



Folding Digital Traceable Thermometer ..... **No. 6000**  
 Carrying Case..... **No. 6000-CASE**

### 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.

#### Single and Dual Temperature Ranges Available:

-40/160°F	0/220°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

(Specify temperature range: dual or single, °F or °C when ordering)



3" Dial, 2-1/2" Stem ..... <b>No. 3000R2</b>	5" Dial, 2-1/2" Stem ..... <b>No. 5000R2</b>
3" Dial, 4" Stem ..... <b>No. 3000R4</b>	5" Dial, 4" Stem ..... <b>No. 5000R4</b>
3" Dial, 6" Stem ..... <b>No. 3000R6</b>	5" Dial, 6" Stem ..... <b>No. 5000R6</b>
3" Dial, 9" Stem ..... <b>No. 3000R9</b>	5" Dial, 9" Stem ..... <b>No. 5000R9</b>
3" Dial, 12" Stem ..... <b>No. 3000R12</b>	5" Dial, 12" Stem ..... <b>No. 5000R12</b>
3" Dial, 24" Stem..... <b>No. 3000R24</b>	5" Dial, 24" Stem ..... <b>No. 5000R24</b>
3" Dial, 36" Stem..... <b>No. 3000R36</b>	5" Dial, 36" Stem ..... <b>No. 5000R36</b>

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



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



### SEEDBURO GLASS GRAIN, NIST TRACEABLE AND REFILL THERMOMETERS

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



**SEEDBURO MINI ANEMOMETER**

This Mini Anemometer measures wind speed, maximum wind speed temperature, and wind chill factors. The unit features one-button operation, backlit LCD display, stainless steel back, and is weatherproof (can be submerged 6 feet). Dual temperature range: -58° to 212°F (-50° to 100°C). Wind speed measured in km/h, mph, m/s, fps, or knots. Range 0.7 to over 94 mph, 1.1 to over 150 km/h. Meter includes a replaceable Lithium battery and wrist lanyard. Net wt. 1 lb. Ship wt. 2 lbs. Actual dims. 3.5" x 1.5" x 0.75" Ship dims. 12" L x 3" W x 10" H.

Mini Anemometer..... **No. DAF3010**



**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. 8oz. Ship wt. 1 lb. Actual dims. 3 1/2" L x 3/4" W x 4 1/4" H. 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**



**SEEDBURO MASON HYGROMETER**

The Mason Hygrometer has easy reading thermometers for wet and dry bulb temperatures. 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. 12" H x 3" W. Ship wt. 1 lb. Ship dims. 12" L x 3" W x 10" H.

Mason Hygrometer ..... **No. 312D**



No. 444



No. 444T

**HUMIDITY AND TEMPERATURE GUIDES**

Seedburo 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 3 3/4" 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 4-1/2" 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 ..... **No. 444**  
 Humidity and Temperature Guide ..... **No. 444T**



**DIGITAL THERMOHYGROMETER**

Seedburo offers a durable, low-cost humidity and temperature monitor with selectable °F/°C scale. Ideal for lab, office, greenhouse, seed storage room and many other applications. The instrument is encased in corrosion resistant plastic housing. Comes with wall mounting bracket and one AA battery. Reads relative humidity from 20 to 100%RH and temperature from 0 to 160°F / -18 to 72°C. Accurate to ±4% from 20 to 90%RH and ±1.8°F / ±1°C. Actual Dims. 1-1/8" H x 5" Dia. Net wt. 1 lb. Ship wt. 2 lbs. Ship dims. 12" L x 5" W x 10" H.

Digital ThermoHygrometer ..... **No. DT100**

**DELUXE pH METER KIT FOR pH/mV/°C**

Our popular Deluxe pH Meter kit comes complete with everything you need for fast, reliable pH calibration and measurement. This kit includes the pH11 economy pH/mV/°C meter, "all-in-one" Ph/temperature probe, calibration solution pouches, sample bottles, two electrode holders, batteries, and hard carrying case. Ideal for pH checks in both laboratory and field use, the pH11 kit features a microprocessor based meter with full pushbutton operation, multipoint pH calibration, automatic temperature compensation and large LCD display. Unit is powered by four 1.5V AAA batteries (included) or by an AC adapter (optional). Net wt. 6 lbs. Ship wt. 7 lbs. Actual dims. 16" L x 14" W x 4" H. Ship dims. 20" L x 15" W x 5" H.



pH Range: -2.00 to 16.00 pH with 0.01 resolution and ±0.01 accuracy. Temperature range: -10° to 110.0°C with 0.1° resolution and ±0.5° accuracy. mV range: -199.9 to +199.9mV/-1999 to +1999 mV with 0.1/1 mV resolution and ±0.2/2 mV ±199.9 mV/ ±2 mV beyond ±199.9 mV accuracy.

Deluxe pH Meter Kit Complete .....	<b>No. PHK</b>
Replacement pH/Temperature Probe .....	<b>No. PHES</b>
pH "Singles" Solution Pouches, Asst. Pack, 5 ea. pH 4.01; 7.00; 10.00 & Rinse Water .....	<b>No. PHS</b>
AC Adapter, 110V .....	<b>No. PHAC</b>
AC Adapter, 220V .....	<b>No. PHAC2</b>

**WATERPROOF pHTestrs® 10, 20, & 30 KIT**

Seedburo offers portable waterproof pH testers with three-point (USA or NIST) push-button calibration with buffer recognition. Three models to choose from: PH10 with ±0.1 pH accuracy, PH20 with ±0.01 pH accuracy or PH30 with ±0.01 pH accuracy, double-junction electrode, auto temperature compensation and self-diagnostic error messages. Each kit includes one pHTestr, two single-use pouches of pH 4.01, 7.00, 10.00 each, and rinse solution; one sample jar; and hard carrying case.



These waterproof pH meters measure 6-½" L x 1-½" diam. and weigh 4 oz. Net wt. 3 lbs. Ship wt. 4 lbs. Actual dims 14" L x 10" W x 3 ½" H. Ship dims. 15" L x 15" W x 5" H.

Waterproof pHTestr1 Kit Complete .....	<b>No. PH10</b>
Waterproof pHTestr2 Kit Complete .....	<b>No. PH20</b>
Waterproof pHTestr3 Kit Complete .....	<b>No. PH30</b>
pH "Singles" Solution Pouches, Asst. Pack, 5 ea. pH 4.01; 7.00; 10.00 & Rinse Water .....	<b>No. PHS</b>

**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 dims. 3" L x 1-5/8" W x 8" H. Ship dims. 13" L x 10" W x 7" H. Actual wt. 1 lb. Ship wt. 3 lbs.



Thermo-Hygrometer .....	<b>No. HT-3000</b>
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### CARDY TWIN EC METER

The Cardy Twin EC Meter offered by Seedburo measures the conductivity of soluble salts on plant growth. Conductivity (or EC) is the measure of total dissolved salts in a solution, the factor that influences a plant's ability to absorb water. In horticultural applications, monitoring of salinity helps manage the effects of soluble salts on plant growth. EC is a meaningful indicator of water quality, soil salinity and fertilizer concentration. This ultra slim meter features push-button auto-calibration, automatic temperature compensation and a salinity conversion from 0% to 1.1%. Incl.: batteries, case, solution and instructions. Range: 0-199  $\mu$ S/cm; 0-19.0 mS/cm; Resolution: 1  $\mu$ S/cm, 0.01 mS/cm; Accuracy:  $\pm$ 2% Net wt. 1 lb. Ship wt. 2 lbs. Ship dims. 12" L x 10" W x 5" H.



- Cardy Twin EC Meter ..... **No. 2205**
- Cardy Twin EC Refill Solution ..... **No. 2210**
- Replacement Sensor ..... **No. 2242**

### 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 the risk of 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 (approx. 3/32" x 1/8"). The meter has a 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 a 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  $\pm$ 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 (incl. software)..... **No. 2900PDL**
- GPS/DGPS Cable for SPAD502 & SPAD502PDL Chlorophyll meter..... **No. 2900C**

### SEEDBURO UV METER

The Seedburo UV meter is useful for determining UV (ultra violet) rays, particularly the UV filtering capacity of transparent plastic and glass barriers used below electric lamps. Plants use some types of radiation more than others. Certain wave lengths can be detrimental to development. The 280 to 315 nanometer (nm) range has crop-specific response on growth and physiologic processes. This range includes harmful UV light (UVB) which affects plant color. Sensor response to the UVB range is less than the UVA range of 320 to 400 nm which begins the process of chlorophyll absorption, influences photoperiodism and inhibits cell elongation. Meter features a digital LCD display and is powered by a 9V 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 to 400nm (in units  $\mu$ mol m<sup>-2</sup>s<sup>-1</sup>)
- Temperature response: 32°F to 122°F (0°C to 50°C)
- Seedburo UV Meter ..... **No. 3414**

### 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 pre-drilled with 100 openings and are available in three frame sizes. **Custom frame size, hole size and hole count available, contact us for quote.**

Model	Frame Size	Commodity	Commonly Used w/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.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.



### 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. 10 lbs. Actual dims 32" L x 10-1/2" W x 4-1/4" H. Ship wt 12 lbs. Ship dims 35" L x 17" W x 8" H.



- Purity Workboard & Diaphanoscope with Fluorescent Bulb, 110V, 50/60Hz..... **No. 135**
- Purity Workboard & Diaphanoscope with Fluorescent Bulb, 220V, 50/60Hz..... **No. 135/A**
- Replacement Plexiglass (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 button produces 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 13/4" dia. x 1-1/8"W. Ship wt. 1 lb. Ship dims. 7" x 5" x 3"



Seedburo Hand Tally ..... **No. HT**

### DIGITAL HAND TALLY

A hand held counter with 4 digital 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 1.5V battery (included) or equivalent. Dims. 2.4" L x 1.4" W x 0.5" D. Wt. 0.7 oz. Ship wt. 1 lb. Ship dims. 7" x 5" x 3"



Digital Hand Tally ..... **No. HTD**

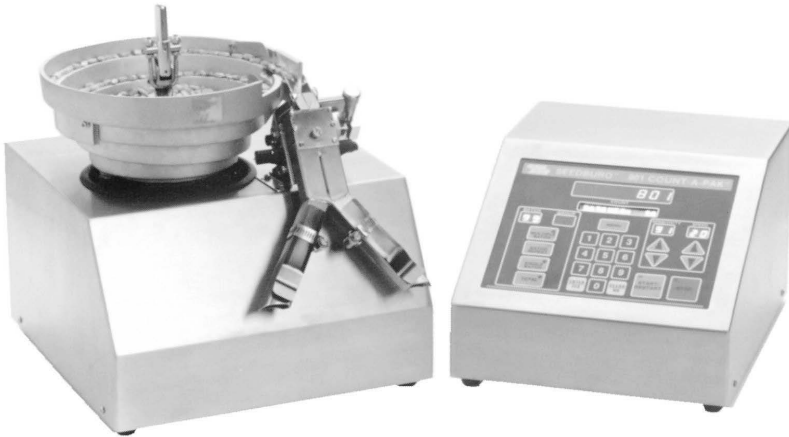
### SEEDBURO TETRAZOLIUM POWDER

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. 12" x 9" x 5"



Tetrazolium Powder, 50 gram jar ..... **No. 3126**

## COUNT-A-PAK® SEED COUNTERS



**SAVES MONEY**

**SAVES TIME**

**SAVES ON LABOR**

**MAINTAINS LABELING  
CERTIFICATION**

**MONITORS BAGGING  
PROCESSES**

**TOTALIZE:** The 801 registers complete counts on preweighed or volumetrically measured samples for assistance in calibrating bagging scales or determining seed count by pound, kilo or other sample weights 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.



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. A bright display guides you through seed count, batch or group 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 vibratory 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.

As a seed travels down the chute, a microprocessor-controlled sensor detects it. Unlike 'electric-eye' counters, this sensors 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 bowls 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, 220V/60Hz and 230V/50Hz. Weights and dimensions - Control console: Net Wt. 18 lbs. Ship Wt. 21 lbs. Actual dims. 13 3/4" L x 11" W x 8" H. Ship Dims. 19" L x 15" W x 14" H. Feeder Base: Net Wt. 40 lbs. Ship Wt. 45 lbs. Actual dims. 15 1/4" L x 13" W x 15" H. Ship Dims. 25" L x 17" W x 16" H.

801 w/10" regular bowl complete 110V/60Hz .....	<b>No. 801-10/B</b>
801 w/10" shallow bowl complete 110V/60Hz .....	<b>No. 801-10S/B</b>
801 w/7" regular bowl complete 110V/60Hz .....	<b>No. 801-7/B</b>
801 w/10" regular bowl complete 110V/50Hz .....	<b>No. 801-10/D</b>
801 w/10" shallow bowl complete 110V/50Hz .....	<b>No. 801-10S/D</b>
801 w/7" regular bowl complete 110V/50Hz .....	<b>No. 801-7/D</b>
Feeder Base only w/10" bowl .....	<b>No. 801-10B/B</b>
Feeder base only w/10" shallow bowl .....	<b>No. 801-10SB/B</b>
Feeder Base only w/ 7" bowl .....	<b>No. 801-7B/B</b>
10" Regular Bowl Only .....	<b>No. 80110</b>
Control Console only 110V/60Hz .....	<b>No. 801C</b>
*Spare parts kit for 10" bowl 110V/60Hz.....	<b>No. 801-10SPK</b>
*Spare parts kit for 7" bowl 110V/60Hz .....	<b>No. 801-7SPK</b>
Optional Foot switch pedal w/10 ft. cable, for all models.....	
Required Packing for all Models.....	

Same in 230V/50Hz .....	<b>No. 801-10/C</b>
Same in 230V/50Hz .....	<b>No. 801-10S/C</b>
Same in 230V/50Hz .....	<b>No. 801-7/C</b>
Same in 220V/60Hz .....	<b>No. 801-10/E</b>
Same in 220V/60Hz .....	<b>No. 801-10S/E</b>
Same in 220V/60Hz .....	<b>No. 801-7/E</b>
Same in 230V/50Hz .....	<b>No. 801-10B/C</b>
Same in 230V/50Hz .....	<b>No. 801-10SB/C</b>
Same in 230V/50Hz .....	<b>No. 801-7B/C</b>
10" Shallow Bowl Only .....	<b>No. 80110S</b>
Same in 230V/50Hz .....	<b>No. 801C/C</b>
Same in 230V/50Hz .....	<b>No. 801-10SPK/A</b>
Same in 230V/50Hz .....	<b>No. 801-7SPK/A</b>
	<b>No. 801-FS</b>
	<b>No. 801/DOM</b>

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

## COUNT-A-PAK® SEED TOTALIZER

Counts Seeds in a Given Weight or Volume Quickly, Accurately and Simply.

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. Net Wt. (both pieces) 35 lbs. Actual dims for Control Box: 15" L x 10" W x 5" H. Actual dims for Feeder Base: 9" L x 9" W x 9" H. Ship wt. (complete): 40 lbs. Ship Dims (complete): 21" L x 21" W x 17" H. **MADE IN USA**

Seed Totalizer with 10" bowl 110V/60Hz .....	<b>No. 77-10/B</b>
Seed Totalizer with 10" bowl 110V/50Hz .....	<b>No. 77-10/D</b>
Seed Totalizer with 10" shallow bowl 110V/60Hz .....	<b>No. 77-10S/B</b>
Seed Totalizer with 10" shallow bowl 110V/50Hz .....	<b>No. 77-10S/D</b>
Seed Totalizer with 7" bowl 110V/60Hz .....	<b>No. 77-7/B</b>
Seed Totalizer with 7" bowl 110V/50Hz .....	<b>No. 77-7/D</b>
Transformer for 220 volt operation .....	<b>No. K25</b>
Spare parts kit for 10" bowl 110 or 220V .....	<b>No. 7710/SPK*</b>
Spare parts kit for 7" bowl 110 or 220V .....	<b>No. 777/SPK*</b>
Replacement Frosted Glass Only (each) .....	<b>No. 77FG</b>
Replacement Clear Glass Only (each) .....	<b>No. 77CG</b>
Required Packing for all models .....	<b>No. 77/DOM</b>

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

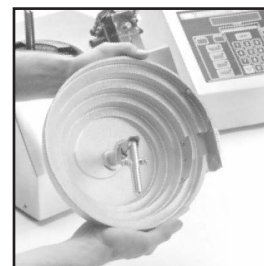
### Quick Disconnect Feeder Bowl Standard on Model 801 only.



Unlock Mechanism...



Remove and Dump...



Replace and Lock

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

Variety	Average Speed	10-Inch Capacity	Time to Empty	7-Inch Capacity	Time to Empty	10S-Inch Capacity	Time to Empty
Corn	160	3,600	20-25 min	650	4-5 min	1,500	9-11 min
Soybeans	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	1 ¾-2 hrs	4,500	15-20 min	10,000	35-45 min
Milo	315	40,000	2-2 ¼ 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 to 3 times faster. Capacity is approximate number of seeds in a full bowl.

## SEEDBURO MICROPROCESSOR GERMINATOR: One of the Most Technically Advanced Germinators Available.

Seedburo's Deluxe 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 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, 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.

Applications of the MPG-3000 versatile testing chamber would typically include meeting specific requirements of temperatures, humidity and light level intensity, such as: pre-chiller, seed germination, seed tests and research, plant test and research, plant growth, propagation, accelerated aging, photo stability tests, zoology, botany, tetrazolium, biological research and tissue culture tests.

The "Flow-Thru" air distribution system is comprised of an independent heating system and separate cooling system, as well as a humidification 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 MPG-3000 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 tubes, three (3) mounted on 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 cu ft of interior.

Unit 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.

If your operation is looking for the ultimate answer to testing procedures made easy, the fully automatic MPG-3000 programming features allow the most dependable and versatile testing parameters to date. Net Wt. 580 lbs. Actual dims 53" W x 32" D x 81.5" H, Export boxed Wt. 1040 lbs. 61" W x 41" D x 89" H.



Model MPG 3000

### INSTRUMENTATION

- LIGHTED ON/OFF SWITCH
- PROGRAMMABLE TOUCH SCREEN
- READOUT SHOWS: Relative Humidity, Temperature, Test and Cycle Time Remaining, Time of Day
- PLC DATA STORAGE, USB DOWNLOADABLE

### INTERIOR CAPACITY

- 28.5 CU. FT.
- INTERIOR DIMENSIONS: 29-1/2" L x 25-1/2" W x 61" H
- CHAMBER: Can hold up to forty (40) trays on 1-1/2" spacings.
- TRAYS: Ten (10) 20" x 25.375" Perforated Stainless Steel
- Trays are included.

### DIMENSIONS

- EXTERIOR DIMENSIONS: 53" L x 32" W x 81.5" H
- NET WEIGHT: 580 lbs.
- EXPORTED BOXED WEIGHT: 1040 lbs.

### CONTROL PANEL

- TOUCH SCREEN CONTROLLER: Controls Temperature (F°/C°), Real Time Clock, Printer Function, Test Cycles, Heat/Cool and Light/Dark, Relative Humidity, Light Level, Test Duration
- SIMPLE ON/OFF SWITCH
- USB Data / Printer Port

### MADE IN USA

Microprocessor Germinator 115V, 60Hz .....	<b>No. MPG3000/B</b>
Microprocessor Germinator 230V, 50Hz .....	<b>No. MPG3000/C</b>
Microprocessor Germinator 230V, 60Hz .....	<b>No. MPG3000/E</b>
Extra Trays, 20" x 25.375" .....	<b>No. MP6</b>
Extra Tray Slides, Per Pair .....	<b>No. MP7</b>
Required Domestic Crating .....	<b>No. MPG/DOM</b>
Required Export Boxing .....	<b>No. MPG/EX</b>

## ACHIEVA BASIC STYLE CONSOLE GERMINATOR

The Achieva Basic Style Console Germinator is packed with all the features you expect from Seedburo. Used for plant growth, propagation of seeds, germination test and incubation that requires a controlled environment (heat/cold cycles, light and dark wet or dry operations).

The Achieva features include a hermetically sealed air cooled refrigeration system, enclosed heat system operating in tandem to maintain set point temperature in either heat or cool modes. Cool bright white LED light system. Water spray mist system controlled via a dual stage digital display timer where you can set both the interval time and mist time, which operates independent of heat or cool mode selection. Large capacity bottom mounted water tank and interior drain to replenish water supply. Walls use thick foam-in-place insulation. Germinator is equipped with dual digital display temperature controllers, heat mode and cool mode is independently controlled. A single dual stage timer allows automatic switching between heat and cool modes. Lights can be on or off in either mode controlled through dual light switches, one for each mode. Digital display data logger records both temperature and humidity at your desired time interval and time span. Data is easily downloaded to any Windows based PC or laptop computer via USB port, provided program converts data into easy to read data charts. Heavy duty insulated stainless steel door with magnetic gasket.

Exterior is white texture-coated steel. Smooth white interior produces an enhanced light refraction (lumens) for propagation tests. Interior stainless steel air duct, fan and evaporator cover assures greater air flow and even air distribution. Oversized heavy-duty door, handle and door edge protector provide greater operator safety. The Achieva can hold a total of twenty eight (28) 18" x 26" shelves at a 1-1/2" fixed spacing. Each germinator is shipped with four (4) 18" x 26" shelves and can hold an additional 24 shelves.

Additional shelves can be ordered to increase overall capacity. Temperature operating range is 32° to 125° F. Interior Dims: 20-1/2" D x 26-3/4" W x 53" H. Exterior Dims: 30" D x 32" W x 82-1/2" (with casters). Ship Dims 46" D x 48" W x 90" H. Net Wt. 395 lbs, Crated Wt. 690 lbs. Compressor 1/3 HP, Refrigerant R-134a, amp load: 13.65A, 120V, 1PH.

**Model A3920** is fully automated. Equipped with a dual digital temperature controllers, dual stage timer, light system with dual On / Off switch, water spray system and data logger. Unit may be set for Manual heat or cold test, or automatic reset timers alternately control heat/cool, and light/dark cycles for the required duration of your test. White light LED lighting system generate 9,828 lumens for the photo (light) test periods.

Single Chamber, 110V, 60Hz ..... **No. A3920/B**  
 Single Chamber, 220V, 50Hz ..... **No. A3920/C**

**Model A3820** provides the technician with all of the automatic controls and functions of our A3920, with the exception of the data logger. An eye-level, large dial thermometer, indicating chamber temperature shows Fahrenheit and Celsius.

Single Chamber, 110V, 60Hz ..... **No. A3820/B**  
 Single Chamber, 220V, 50Hz ..... **No. A3820/C**

Extra 18" x 26" Shelf ..... **No. A38S**  
 Domestic Packing ..... **No. A3/DOM**  
 Export Crating ..... **No. A3/EX**





Model D7440

## SEEDBURO ALL-STAINLESS STEEL GERMINATORS IN SINGLE OR DOUBLE CHAMBER MODELS

**QUALITY MATERIALS AND WORKMANSHIP  
COMBINED WITH ADVANCED  
ENGINEERING AND DESIGN  
TO ASSURE YOU ACCURATE TEST  
RESULTS EVERY TIME**

**Seedburo Console Germinators range from sophisticated to basic models. They are available in single-chamber units when less volume is required and double-chamber units with individually controlled and monitored chambers.**

### CONSTRUCTION

Heliarc welded tubular 18 gauge stainless steel base forms the foundation for the type 304 stainless steel chamber and cabinet. To preserve the controlled interior testing environment and prevent exterior condensation, high-density foam insulates the entire cabinet. Non-conductive materials separate the interior chamber from the exterior doors are fully gasketed to ensure a leak proof seal. Stainless steel trays lift out for easy cleaning. Water reservoir is easily removable for filling or cleaning. A solid stainless steel bottom panel prevents rodent infestation. Units are completely mobile on large 5" heavy-duty casters.

### HEAT/REFRIGERATION SYSTEMS

Constant and even temperature is continually maintained via dual solid state digital temperature controllers, constantly monitoring and adjusting cabinet temperature utilizing both heating and cooling systems. Heating element is constructed with a stainless steel sheath and premium grade ceramic / magnesium oxide insulation, high-temperature alloy resistance wire 500 watt moisture sealed. Heating section is enclosed for efficient heat transfer and operator safety. Uniform cooling is maintained through a high efficiency self-contained condenser / compressor unit, 1/3 HP air cooled system using 404a refrigerant. Self-contained evaporator section consisting of tube and fin evaporator coil, thermal expansion valve and an efficient evaporator fan that evenly distributes air through the cabinet. All refrigerant lines are copper and fully insulated. Dual chamber units are constructed with two fully independent system controllers for separate heating and cooling systems.

### AIR-HUMIDITY CIRCULATION

Unique forced air circulation maintains an even, continuous air flow that eliminates temperature stratification. Perforated trays further enhance even air distribution and temperature holding.

Humidity and moisture are introduced into the chamber via a water spray system. Water spray system consists of PVC spray tube with brass spray nozzles located in the rear cabinet wall. Brass nozzles are full cone spray to evenly distribute a fine water mist throughout the cabinet interior. High volume water pump and large stainless steel water reservoir located in the unit base, easily accessed for filling and cleaning. Water spray system is controlled through a dual stage solid state digital control timer. The operator controls the water spray interval time and spray on time.

### DATA LOGGING

A state of the art temperature and humidity data logger, running independent of the control system, is mounted to the front control panel for easy reading and setting on models with data logger function. The data logger system comes with the removable digital display recorder, temperature and humidity sensors, software and download cable. Simply set the data logger to the desired recording interval and start. Data can be transferred to any Windows based PC or laptop. Included software automatically creates a detailed data report with graphs showing time, temperature and humidity. This advanced data logger system eliminates the need to work with paper discs and messy ink pens.

- SINGLE SETPOINTS ON CONTROLS
- 1° C TEMPERATURE CONTROLLERS
- REMOVEABLE TRAY RACKS
- INDEPENDENT MODE SELECTION
- TOTAL AIR CIRCULATION
- RODENT RESISTANT DESIGN



## CONTROLS AND MONITORING INSTRUMENTS

Recessed eye-level instrument panel includes:

- Top mounted eye level controls and displays that are easily read and operated
- Dual units come with independent control systems
- On/Off Lighted main power switch
- Two (2) single setpoint temperature controllers; one for heat mode and one for cool mode. Operational range of 35°F to 125°F (2°C to 52°C) with variation factor of 2°F.
- Two bright cool white LED Strips, full length rear mounted to ensure full light coverage throughout the interior
- Two (2) reset timers with pilot lights, automatically and individually control heat and cool modes. Selector switch allows manual operation, if required (models with timers only).
- Temperature display can be set to display temperature in either °F or °C
- Independent digital time, temperature and humidity data logger with software to automatically create reports and graphs depending on model
- Depending on model, units operate in heat mode or cool mode operated manually or in either mode with timed automatic mode switching



**Models S6920** (single-chamber) and **D7440** (double-chamber) are fully automated and equipped with data logger system for temperature and humidity readings and recording of data. Software included for the downloading of data and creation of PC based graphs or charts.

Automatic controls with dual solid state digital temperature and humidity controllers regulate heat/cool, and light/ dark cycles for the required duration of your test. Vertically mounted Bright Cool LED light tube strips generate 4880 lumens for the photo test periods. These units may be set for continuous operation of any of the modes, freeing the technician from manual adjustments. Recorder and lights have manual override switch, should their function not be required.

Single Chamber, 110V, 60Hz .....	<b>No. S6920/B</b>
Single Chamber, 220V, 60Hz .....	<b>No. S6920/E</b>
Single Chamber, 230V, 50Hz .....	<b>No. S6920/C</b>
Double Chamber, 110V, 60Hz .....	<b>No. D7440/B</b>
Double Chamber, 220V, 60Hz .....	<b>No. D7440/E</b>
Double Chamber, 230V, 50Hz .....	<b>No. D7440/C</b>

**Models S6820** (single-chamber) and **D7340** (double-chamber) provide the technician with all of the automatic controls and functions of our S6920 and D7440 units, with the exception of the data logger system. Eye-level digital temperature displays from the controller are standard on this and our other models.

Single Chamber, 110V, 60Hz .....	<b>No. S6820/B</b>
Single Chamber, 220V, 60Hz .....	<b>No. S6820/E</b>
Single Chamber, 230V, 50Hz .....	<b>No. S6820/C</b>
Double Chamber, 110V, 60Hz .....	<b>No. D7340/B</b>
Double Chamber, 220V, 60Hz .....	<b>No. D7340/E</b>
Double Chamber, 230V, 50Hz .....	<b>No. D7340/C</b>

**Specifications** - Single Chamber Germinator  
Capacity: Ten (10) 17-1/8" x 24-1/8" trays on 1-1/4" centers are provided as standard. Total capacity of trays is Twenty nine (29) trays on 1-1/4" centers. Exterior Dims: 32" W x 24" D x 73-3/8" H, Interior Dims: 29-3/4" W x 21" D x 39-1/8" H, Volume: 14.15 cu. ft. Working area: 11,980 sq. in. Net weight: 425 lbs Shipping wt.: 608 lbs. Shipping dims: 38"L x 40"W x 80" H

**Models S6620** (single-chamber) and **D7240** (double-chamber) are used when complete automation is not required. These models function with the same close temperature and humidity tolerances as their sophisticated predecessors, but are manually operated and thermostatically controlled. Light/dark and cool/heat cycles will produce the same accurate test results.

Single Chamber, 110V, 60Hz .....	<b>No. S6620/B</b>
Single Chamber, 220V, 60Hz .....	<b>No. S6620/E</b>
Single Chamber, 230V, 50Hz .....	<b>No. S6620/C</b>
Double Chamber, 110V, 60Hz .....	<b>No. D7240/B</b>
Double Chamber, 220V, 60Hz .....	<b>No. D7240/E</b>
Double Chamber, 230V, 50Hz .....	<b>No. D7240/C</b>

**Models S6520** (single-chamber) and **D7140** (double-chamber) are our most basic germinators. They retain all of Seedburo's quality construction, features and close temperature and humidity tolerances. Units operate manually, either heat or cool cycles, with no light/dark capabilities.

Single Chamber, 110V, 60Hz .....	<b>No. S6520/B</b>
Single Chamber, 220V, 60Hz .....	<b>No. S6520/E</b>
Single Chamber, 230V, 50Hz .....	<b>No. S6520/C</b>
Double Chamber, 110V, 60Hz .....	<b>No. D7140/B</b>
Double Chamber, 220V, 60Hz .....	<b>No. D7140/E</b>
Double Chamber, 230V, 50Hz .....	<b>No. D7140/C</b>

**Crating:**

Domestic Packing, Single Chamber .....	<b>No. S6/DOM</b>
Export Crating, Single Chamber .....	<b>No. S6/EX</b>
Domestic Packing, Double Chamber .....	<b>No. D7/DOM</b>
Export Crating, Double Chamber .....	<b>No. D7/EX</b>

**Special Tray Spacing Available On All Models - REQUEST QUOTE**

**Optional Equipment** - Single Chamber Germinator

Locking Doors .....	<b>No. SLDOOR</b>
Clear Lock Control Panel Cover .....	<b>No. SLPCOVER</b>
Push Handles (2) .....	<b>No. SPHANDLE</b>
Full Perimeter Bumpers .....	<b>No. SFPBUMPER</b>
Extra 17" x 19" Tray .....	<b>No. SXTRAY</b>
Extra Tray Slides (Pair) .....	<b>No. STSLIDE</b>

**Optional Equipment** - Double Chamber Germinator

Locking Doors .....	<b>No. DLDOOR</b>
Clear Lock Control Panel Cover .....	<b>No. DLPCOVER</b>
Push Handles (2) .....	<b>No. DPHANDLE</b>
Full Perimeter Bumpers .....	<b>No. DFPBUMPER</b>
Extra 17" x 19" Tray .....	<b>No. DXTRAY</b>
Extra Tray Slides (Pair) .....	<b>No. DTSLIDE</b>

**(230V/60Hz avail. on all models, request quote for this voltage)**

**Specifications** - Double Chamber Germinator  
Capacity: Twenty (20) 17-1/8" x 24-1/8" trays on 1-1/4" centers are provided as standard. Total capacity of trays is Fifty eight (58) trays on 1-1/4" centers Interior dims: 29-3/4" W x 21" D x 39-1/8" (14.15 Cu ft per side) Exterior Dims: 64" W x 24" D x 73-3/8" H  
Total Volume: 28.3 cu. ft. Total Working Area: 23,962 sq. in.  
Net Weight: 850 lbs. Shipping wt.: 945 lbs. Shipping dims: 68" L x 40" W x 80" H



## SEEDBURO ACHIEVA DRY GERMINATOR

### SINGLE CHAMBER MODELS

This exceptional quality germinator is fully automated, creating an accurately controlled, dry test environment for covered samples. Allows for simultaneous testing of different samples within each container. The advanced air circulation system assures the technician of even, constant heat and uniform refrigeration of samples by enveloping each container 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.

The SDA8700 Dry Germinator is equipped with two digital display temperature controllers, one each for heat mode and cool mode, each independently controlled. A single dual stage digital timer allows automatic switching between heat and cool modes. Lights can be on or off in any mode controlled through dual switches, one for each 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, provided program converts data into easy to read data charts. 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. All models have 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. Fully-contained, hermetically-sealed refrigeration system. No additional plumbing needed. White, poly-coated steel interior is bright, durable, and easy to clean. Four casters, two lockable. Gray textured steel exterior with a stainless steel door which

provides a durable, yet less expensive, option. Two and a half inches of wall insulation make these units some of the most energy efficient in the industry. Quiet, bottom-mounted compressor, 1/3 HP, provides plenty of capacity for all kinds of applications.

Equipped with 28 fixed shelf positions at 1-1/2" spacing. The Achieva is shipped with 10 shelves approximately 18" x 26" and can hold an additional 18 shelves. Working / holding capacity of 13,104 sq. in. Temperature operating range is 32° to 125°F precisely measured via K-type thermocouple temperature probes. **MADE IN USA**

Dry Single Chamber, 110V, 60Hz .....	No. SDA8700/B
Dry Single Chamber, 220V, 50Hz .....	No. SDA8700/C
Required Domestic Packing .....	No. SDA/DOM
Required Export Crating .....	No. SDA/EX

Interior Chamber Volume: .....	22 cu. ft.
Interior Dims: .....	23-3/4" D x 27" W x 53" H
Exterior Dims: .....	29" D x 32" W x 83-1/2" H (w/Casters)
Ship Dims: .....	36" D x 38" W x 90" H
Net Wt.: .....	395 lbs.
Crated Wt.: .....	480 lbs.
Amp. Load: .....	13.65, 120V/1PH

## “ACHIEVA” PRECISION TABLE TOP GERMINATOR

Seedburo’s Achieva tabletop germinator offers features similar to our larger units, but these 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.

Features include separate set-point digital controllers for hot and cold cycles. A single dual stage, digital timer controls both the selection for single mode operation or dual mode operation. The controller allows for automatic mode switching. Temperature range is between 30F° and 120F°/1°C and 49°C. Digital display temperature showing both set-point and actual cabinet temperature. Lighted cycles help to perform photo tests with excellent refraction from white interior and stainless steel door liner. An internal fan distributes air evenly and gently with minimal temperature stratification. Heat is maintained by a long-life, stainless steel, 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 2-1/2” spacing, are included. Interior dims are 19” D x 20.75” W x 24.5” H. Exterior dims are 24” L x 24” W x 37” H. Ship Wt. 84 lbs. Ship Dims. 24” L x 24” W x 39” H. Export boxed wt. 244 lbs. Ship Dims. 31” L x 28” W x 45” H.



Achieva Table Top Germinator, 115V, 60Hz .....	No. ATTGPT/B
Achieva Table Top Germinator, 220V, 50Hz .....	No. ATTGPT/C
Required Domestic Boxing .....	No. ATTGPT/DOM
Required Export Boxing .....	No. ATTGPT/EX

## SEEDBURO 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. A thermostatically controlled heat element maintains even temperatures up to 104° F (40° C) ± 1° C. Thermometer, lighted on-off switch and rubber feet are standard. Net wt. 82 lbs. Ship wt. 88 lbs. Dims. 24” L x 18” W x 26-1/2” H. Ship Dims. 28” L x 22” W x 28” H. **MADE IN USA**



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

### PRECISION LABORATORY SEED TRAY WATERING SYSTEM



Seedburo introduces the Precision Watering System which is designed to apply an exact amount of water to seed trays very quickly and consistently. Seed germination paper on the trays must be fully and evenly saturated, yet not lose excess water. This system provides automatic watering at +/- 1.0 gram of water on up to 6 trays per minute. An optional bar code reader scans each tray to record processing data thru a color touch screen user interface. The system fully integrates into your watering operation by supporting trays in and out, eliminating the need to manually lift the trays. Automatically monitors the water pressure for consistent tray filling, will not operate without the correct water pressure.

Easy to operate with very few moving parts which ensures years of trouble free operation. A clear plastic machine guard prevents splash over, yet allows the operator supervision of the application

process. An easy to program color "touch screen" with optional clear protective screen covers provides clean operation. All surface contact materials are stainless steel or HDP plastic. Water supply connection is a standard 3/4" garden type hose. Ship wt 150 lbs, dims 60" L x 24" W x 48" H for base model. **MADE IN USA**

Precision Lab Seed Tray Watering System, 110V, 60 Hz, .....	No. WT101/B
Precision Lab Seed Tray Watering System, 220V, 50Hz,.....	No. WT101/C
Optional In Feed / Out Feed Conveyors (specify in / out or both) .....	No. WT101/FC
Optional Adjustable Height Stand .....	No. WT101/AS
Bar Code Scanning Capability (Includes Color Touch Screen User Interface) .....	No. WT101/BC
USB Data Port .....	No. WT101/DP
Replacement Clear Tops .....	No. WT101/CT
Clear Protective Touch Screen Covers (pkg of 5) .....	No. WT101/SC

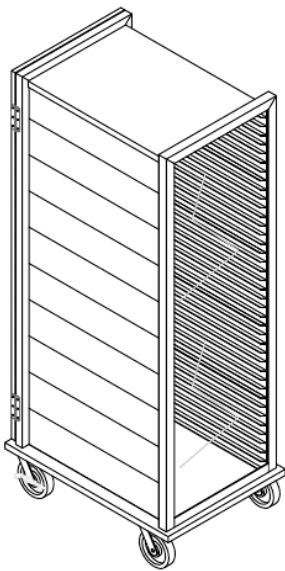
### ENCLOSED SEED GERMINATION CARTS

Enclosed Seed Germination Carts provide the means to achieve flexibility in high capacity seed germination walk-in rooms.

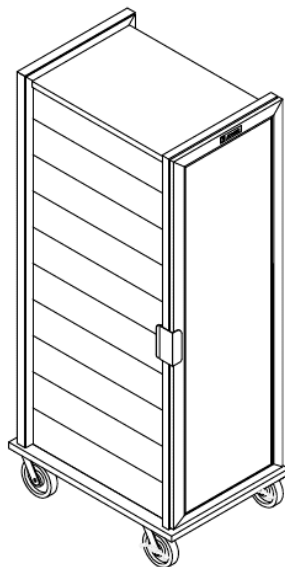
These transport cabinets are made of high tensile aluminum with a clear polycarbonate door. The clear front door allows for the carts to be positioned against a wall of lights to provide uniform coverage to all trays. The door latch and magnetic door seals provide a firm closure to minimize moisture loss within the cabinet. Casters are 5" diameter with high tech non-marking swivel plate. Pan capacity is 40 (maximum) on 1-1/2" centers. Fits standard 18" X 26" food trays. Cabinet measure 71-3/4"H x 22-7/8"W X 29-3/8"D, weight approximately 120 lbs. **Sold in minimum quantities of 10 cabinets to reduce overall freight charges.**

Open frame transport carts are also available for the movement of trays within a lab or short term storage. Built to the same specification, except there are no doors, side or back panels. **Sold in minimum quantities of 10 each.** Transport carts measure 71-3/4" H x 22-7/8" W X 29-3/8" D.

Actual cart weight approximately 100 lbs.



Transport Cart



Germination Cart

Enclosed Seed Germination Carts (min order of 10 each).....	No. ESGC
Open Frame Food Tray Transport Cart (min order of 10 each).....	No. SGCART
Fiberglass Food Tray 18" x 26" (min order of 100 trays) .....	No. FT1826

## SEEDBURO VERSAPAK GERMINATION PAPER

Seedburo 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" .....	<b>No. 87</b>
12" x 15" .....	<b>No. 384</b>
19" x 17"(Series S & D) .....	<b>No. 396</b>
21" x 15" ( 548) .....	<b>No. 399</b>
16-1/2" x 24" (Food Tray).....	<b>No. 398</b>

### ROLLS

18" x 270' Long .....	<b>No. 401</b>
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## NON-TOXIC PAPER TOWELING

Regular Weight (per 1,000) 12" x 18" .....	<b>No. 400PT</b>
Extra Heavy Weight (per 1,000) 12" x 18" .....	<b>No. 400HPT</b>

## SEEDBURO GERMINATION BLOTTERS

Seedburo Seed Germination Blotters are manufactured for specific porosity, water absorption, .025" thickness and weight for the seed industry. Package of 100 sheets.

18-1/2" x 16-1/2"(series S & D) .....	<b>No. 382</b>
6" x 9-1/2" .....	<b>No. 383</b>
12" x 16" .....	<b>No. 385</b>
21" x 15" (548) .....	<b>No. 394</b>
10" x 14" .....	<b>No. 41</b>
Waterproof Pen for Germination papers and Pollination bags .....	<b>No. 300P</b>

## INDENTED PADS

Seedburo 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 .....	<b>No. 28</b>
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## ANALYTICAL DISHES

Disposable aluminum dish, smooth sides, 90 ml. capacity. Sold in boxes of 100.

Diameter 2-7/8", 3/4" deep (Box of 100) .....	<b>No. 25D</b>
Aluminum analytical dish with cover, 76 mm diameter x 19 mm deep. Sold as each.....	<b>No.25</b>



## PYREX GLASS PETRI DISH

Cover fits loosely to provide proper ventilation. Diameter 4". Depth 5/8"

Petri Dish .....	<b>No. 296</b>
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## GRAIN SAMPLE BOX

Heavy gauge plastic. Complete with cover. Diameter 2-3/4". Depth 5/8" (12 per box)

Sample container .....	<b>No. 298</b>
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## SEED CONTAINERS

Plastic rectangular seed container with friction fitting lids. Sold in standard carton quantity only.

Dim: 6-3/4" L x 4-13/16" W x 2-3/8" H. Carton of 40 ...	<b>No. 293</b>
Dim: 7-7/16" L x 5-5/16" W x 3-3/4" H Carton of 18 ....	<b>No. 294</b>



## SEED 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 .....	<b>No. 297</b>
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## SEEDBURO 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 Dia x 95mm Ht.....	<b>No. DS92E</b>
4 oz Bottle, 51mm Dia. x 121mm Ht.....	<b>No. DS94E</b>
8 oz Bottle, 63mm Dia. x 152mm Ht.....	<b>No. DS98E</b>
16 oz. Bottle, 70mm Dia. x 208mm Ht.....	<b>No. DS916E</b>



## CANVASBACK® POLLINATION BAGS

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 and calendar with stripes or plain.

Add the following part numbers to indicate stripe color choices; for example T410-BK for black stripes. BK-BLACK, BL-BLUE, G-GREEN, R-RED, BN-BROWN, PU-PURPLE, or O-ORANGE (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. **MADE IN USA**



CATALOG NUMBER	SIZE IN INCHES (WIDTH/GUSSET/LENGTH)	PACKED IN CTNS OF 1,000's	DESCRIPTION
<b>GRAIN BAGS</b>			
G16	1-1/2 X 6	2	GRAIN BAG - WAXED GLASSINE
G27	2 X 7-1/2	2	GRAIN BAG - WAXED GLASSINE
G28	2 X 8-1/2	2	GRAIN BAG - WAXED GLASSINE
<b>SHOOT BAGS</b>			
S26*	2-1/2 X 6-1/4	5	SHOOT BAG - WHITE WAXED WET STRENGTH HEAVY DUTY
S27*	1-7/8 X 2-1/8 X 1 X 7	5	SHOOT BAG - WHITE WAXED
S27HG	1-7/8 X 2-1/8 X 1 X 7	5	HEAVY DUTY GLASSINE SHOOT BAG
S28*	1-7/8 X 2-1/8 X 1 X 8-1/2	5	LONG WHITE WAXED SHOOT BAG
S310	3-3/4 X 3-3/4 X 2-1/2 X 10-1/2	3	WHITE WAXED SHOOT BAG
S37	3 X 7	5	WHITE WAXED SHOOT BAG
S38*	2-1/2 X 1 X 8-1/2	5	WHITE WAXED SHOOT BAG
S38H	2-1/2 X 1 X 8-1/2	3	SHOOT BAG - WHITE WAXED WET STRENGTH HEAVY DUTY
S39*	3-1/4 X 3-3/4 X 2 X 9	3	WHITE WAXED SHOOT BAG
S39H	3-1/4 X 3-3/4 X 2 X 9	3	WHITE WAXED SHOOT BAG
S411	3-7/8 X 4-1/8 X 2-1/4 X 11	3	WHITE WAXED SHOOT BAG
<b>TASSEL BAGS</b>			
T410*	4-1/4 X 4-3/4 X 2-1/2 X 10	1	NATURAL KRAFT TASSEL BAG
T412*	4-1/4 X 4-3/4 X 2-1/2 X 12-1/2	1	NATURAL KRAFT TASSEL BAG
T412H*	4-1/4 X 4-3/4 X 2-1/2 X 12-1/2	1	NATURAL KRAFT HEAVY DUTY TASSEL BAG
T415*	4-1/4 X 4-3/4 X 2-1/2 X 15-1/2	1	NATURAL KRAFT SORGHUM BAG
T415H	4-1/4 X 4-3/4 X 2-1/2 X 15-1/2	1	NATURAL KRAFT SORGHUM BAG - HEAVY DUTY
T514**	5-1/4 X 5-3/4 X 4-1/4 X 14	1	NATURAL KRAFT TASSEL BAG
T514H	5-1/4 X 5-3/4 X 4-1/4 X 14	1	NATURAL KRAFT HEAVY DUTY TASSEL BAG
T614**	5-1/2 X 6-1/2 X 4 X 14-1/2	1	NATURAL KRAFT TASSEL BAG
T615**	6-1/4 X 6-3/4 X 4-3/4 X 15-1/2	1	NATURAL KRAFT TASSEL BAG
T615H*	6-1/4 X 6-3/4 X 4-3/4 X 15-1/2	1	NATURAL KRAFT HEAVY DUTY TASSEL BAG
<b>MILLET BAGS</b>			
M315	3 X 15	1	NATURAL KRAFT MILLET BAG
M315G*	3 X 15	1	WAXED GLASSINE MILLET BAG
M318*	3 X 18	1	NATURAL KRAFT MILLET BAG
M318G*	3 X 18	1	WAXED GLASSINE MILLET BAG
<b>TREE BAGS</b>			
A620	6-1/4 X 6-3/4 X 4-3/4 X 20-1/2	1	NATURAL KRAFT TREE BAGS
A620H	6-1/4 X 6-3/4 X 4-3/4 X 20-1/2	0.5	TREE BAG
A721	7.5 X 6 X 21	0.5	TREE BAG

\* Available with colored stripes \*\* Available with colored stripes and calendars

**U.S./Canada**  
Toll Free: **1-800-284-5779**

**Fax: 312-738-5329**

**International: 312-738-3700**

## SPEAR SAMPLE ENVELOPES

The fold down, tuck-in flaps resists 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 and sold in quantities of 1,000. **MADE IN USA**



Model	Capacity	Size	Ship Wt.	Ship Dims.
No. 1SE	1 oz	3" x 4-1/2"	10 lbs.	15"X15"X11"
No. 2SE	2 oz	3-1/2" x 5-1/4"	14 lbs.	21"X21"X15"
No. 4SE	4 oz	4" x 6"	2 ctn 10 lbs.ea.	13"X9"X18"
No. 6SE	6 oz	4-1/2" x 7"	2 ctn 13 lbs ea.	13"X9"X18"
No. 8SE	8 oz	5" x 8"	2 ctn 16 lbs.ea.	13"X11"x11"
No. 10SE	10 oz	5-1/2" x 9"	38 lbs.	21"X15"X13"
No. 12SE	12 oz	6" x 10"	2 ctn 23 lbs ea.	13"X14"X13"
No. 16SE	16 oz	7" x 11-1/2"	2 ctn 29 lbs ea.	16"x13"x16"

Minimum order 1000.



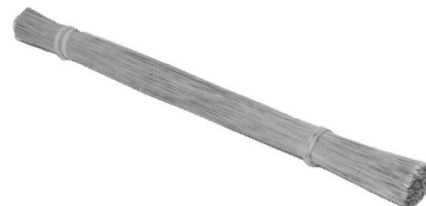
## MANILA TAGS

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.

2-3/4" x 1-3/8" .....	No. TAG-1
3-1/4" x 1-5/8" .....	No. TAG-2
4-1/4" x 2-1/8" .....	No. TAG-4
5-3/4" x 2-7/8" .....	No. TAG-7
6-1/4" x 3-1/8" .....	No. TAG-8

## ANNEALED TAG WIRES

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**

## COIN ENVELOPES

Brown kraft envelopes, 24 lb. paper, with waterproof seam, ideal for sending or storing samples, 3-1/8" x 5-1/2". Sold in quantities of 500. Ship Wt. 4 lbs., Ship Dims.12"L x 10"W x 6"H

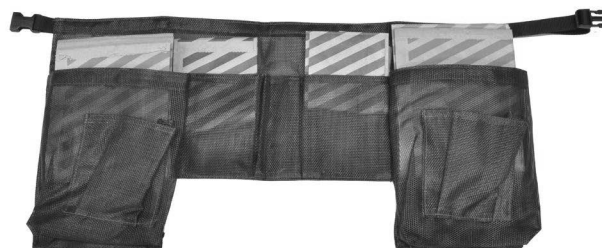


Coin Envelope ..... **No. CE3**

## POLLINATION BAG APRONS

These handy aprons are used with any brand of pollination bags, whether our Canvasback® brand or others. They will hold bags, tags or pollination accessories that are carried in to the field. Both aprons are poly mesh with 2 large and 5 small pockets.

No. APRON-PLB, large pocket apron is 15"H x 28"W overall – large pocket is 10" top to bottom, 3" projection, and 8" side to side. APRON-PSB is 15"H x 27"W overall – large pocket is 10" top to bottom, 3" projection and 6" side to side. Net wt. 3/4 lbs. Ship wt. 2 lbs., Ship dims 13"L x 10"W x 3"H.



Large Pollination Apron, Blue Mesh .....	No. APRON-PLB
Small Pollination Apron, Blue Mesh.....	No. APRON-PSB
Large Pollination Apron, Red Mesh.....	No. APRON-PLR
Small Pollination Apron, Red Mesh .....	No. APRON-PSR



**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: 160 lbs, dims. 20”L x 34”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; bulkier 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 thru a stainless steel perforated baffle after leaving the plenum. This evenly distributes the air before entering a converging cone on the under side 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 Volts 50Hz). The cabinet unit is constructed of heavy gauge stainless steel. A digital timer is mounted on front of unit. Ship wt. 48 lbs, Ship dims. 23”L x 23”W x 18”H (less tube and cup). Large or Small tube – Ship wt. 9 lbs, dims. 8”L x 16”W x 41”H



- Seedblower with tube kit, please specify tube size, 115V, 60Hz..... **No. HMC-67**
- Seedblower with tube kit, please specify tube size, 220v. 50/60Hz..... **No. HMC-67/A**
- Large tube kit w/large tube (3”dia), ring & cup..... **No. HMC-LTK**
- Small tube kit w/small tube (1-1/2”), ring & cup..... **No. HMC-STK**
- Domestic Packing..... **No. HMC/DOM**
- Export Crating..... **No. HMC/EX**
- Tube Set Packing..... **No. HMCT/DOM**

## SEEDBURO 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: 1-1/2" I.D. x 23-1/4" H, 3" I.D. x 34-1/4" H, and 4" I.D. x 35-1/4"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 prevent seed from falling into the fan. Mesh sizes are: 1-1/2"-100 mesh, 3"-50 mesh and 4"-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 timer, on/off control knob and a hand brake to stop the motor instantly to eliminate coasting of the blower fan. Ship dims. 25" L x 20" W x 40" H, Ship wt. 155 lbs. Net. wt. 110 lbs. Tube sets Ship wt. 5 6 lbs. Ship dims. 21"x9"x9" **MADE IN USA**



Seedblower table 115V, 60Hz, 3450 RPM, 1/3HP motor .....	<b>No. 757</b>
Seedblower table 220V, 60Hz, 3450 RPM, 1/3HP motor .....	<b>No. 757/A</b>
Seedblower table 220V, 50Hz, 2850 RPM, 1/3HP motor .....	<b>No. 757/C</b>
Small tube set (1-1/2" & 3" columns) .....	<b>No. 757-3</b>
Large tube set (4" column) .....	<b>No. 757-4</b>
Replacement timer for Seedblower .....	<b>No. 757-TIMER</b>
Required Crating .....	<b>No. 757/DOM</b>

## SEEBURO 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. Ship wt. 10 lbs, Ship dims. 21"x21"x16" Tube shown mounted on table. Table sold separately. See above.

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>



## 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, 2 seed catch pans, Screen sizes not included are 1/2", 1/4", 1/8", 3/8", wood base, 6 ft. drop cord and switch. Ship wt. Domestic 68 80 lbs. Ship dims. 23"L x 18"W x 26"H. Export 100 lbs. Ship dims. 25"L x 24"W x 26"H. Screen: Ship wt. 10 lbs, Ship dims. 16"L x 10"W x 10"H.

Seed cleaner 115V, 60Hz without screens .....	<b>No. SABSC/B</b>
Seed cleaner 220V, 50Hz without screens .....	<b>No. SABSC/C</b>
Screen with 1/2" opening .....	<b>No. SABSC-S12</b>
Screen with 1/4" opening .....	<b>No. SABSC-S14</b>
Screen with 1/8" opening .....	<b>No. SABSC-S18</b>
Screen with 3/8" opening .....	<b>No. SABSC-S38</b>
Seed catch pans .....	<b>No. SABSCP</b>
Domestic crating .....	<b>No. SABSC/DOM</b>
Export crating .....	<b>No. SABSC/EX</b>





### 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 constant results. The shaker comes complete with a 1/3 HP 110V, 60Hz or 220V, 50Hz motor. Net wt. 53 lbs. Ship wt. 83 lbs. Ship dims. 27" L x 24" W x 18" H. **MADE IN USA**

Screen Shaker with Digital Timer 110, 60Hz/1HP .....	<b>No.98-SSDT</b>
Screen Shaker with Digital Timer 220V, 50Hz/1HP .....	<b>No. 98-SSDT/C</b>
Screen Shaker with Spring Wound Timer 110V, 60Hz/1PH .....	<b>No. 98-SS</b>
Screen Shaker with Spring Wound Timer 220V, 50Hz/1PH .....	<b>No. 98-SS/C</b>
Required Crating .....	<b>No. 98-SS/DOM</b>



### STORAGE RACK FOR SCREENS

Wood constructed hand testing screen rack holds either 24 or 12 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. Actual dims. for the 98-24SR are 11-1/4" L x 13-3/4" W x 30" H. Net wt. 20 lbs. Ship dims. 15" L x 20" W x 40" H. Ship wt. 30 lbs. Actual dims. for 98-12SR are 11-1/4" L x 13-1/4" W x 15-3/4" H. Net wt. 12 lbs. Ship dims. 15 L x 20" W x 25" H. Ship wt. 25 lbs. **MADE IN USA**

Storage Rack for 24 hand test screens .....	<b>No. 98-24SR</b>
Storage Rack for 12 hand test screens .....	<b>No. 98-12SR</b>

### HAND TESTING SCREENS

Seedburo'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. 3lbs. **MADE IN USA**

Hand Test Screens, 12" x 12" .....	<b>No. 98-12Q</b>
Hand Test Bottom Pan, 12" x 12" .....	<b>No. 98-12BQ</b>
Screen Perforation Gauge .....	<b>No. PFG</b>

Round Holes (64ths of an inch)		Round Holes (64ths of an inch)		Round Holes (64ths of an inch)		Round Holes (64ths of an inch)		Oblong Holes		Oblong Holes		Oblong Holes		Oblong Holes		Wires/sq. in.	Wires/sq. in.
Inches	MM	Inches	MM	Inches	MM	Inches	MM	Inches	MM	5/8x3/4	3/4x3/4	Inches	MM	5/8x3/4	3/4x3/4	10 x 10	6 x 20
1/25	1.016	10 3/4	4.167	21	8.334	35	13.890	1/26 x 1/2	0.98 x 12.70	6/64 x 1/2	2.380 x 12.700	**	4.25mm x 31mm	**	5.75mm x 31mm	12 x 12	6 x 22
1/24	1.058	11	4.366	21 1/2	8.532	35 1/2	14.090	1/25 x 1/2	1.02 x 12.70	6/64 x 3/4	2.380 x 19.050	**	4.35mm x 20mm	14 1/2 x 3/4	5.75 x 19.050	14 x 14	6 x 24
1/23	1.102	11 1/2	4.564	22	8.731	36	14.287	1/24 x 1/2	1.06 x 12.70	6/64 x 1-1/32	2.380 x 26.160	**	4.35mm x 31mm	15/64 x 3/4	5.953 x 19.050	15 X 15	6 x 26
1/22	1.153	11 3/4	4.660	22 1/2	8.929	38	15.081	1/23 x 1/2	1.10 x 12.70	6 1/2 x 3/4	2.579 x 19.050	11/64 x 3/4	4.366 x 19.050	**	6mm x 20mm	16 x 16	6 x 28
3/64	1.190	12	4.763	23	9.127	40	15.875	1/22 x 1/2	1.153 x 12.70	7/64 x 3/4	2.778 x 19.050	11/64 x 1-1/4	4.366 x 31.75	**	6mm x 23mm	18 x 18	6 x 30
1/21	1.200	12 1/2	4.961	23 1/2	9.330	42	16.669	3/64 x 5/16	1.191 x 7.938	7.25 x 3/4	2.88 x 19.050	**	4.4mm x 20mm	**	6mm x 31mm	20 x 20	6 x 32
1/20	1.270	13	5.159	24	9.525	44	17.460	3/64 x 1/2	1.19 x 12.70	7 1/2 x 3/4	2.972 x 19.050	**	4.4mm x 31mm	15 1/2 x 3/4	6.15 x 19.050	22 x 22	6 x 34
1/19	1.336	13 1/2	5.357	24 1/2	9.720	46	18.260	1/20 x 1/2	1.270 x 12.700	8/64 x 3/4	3.175 x 19.050	**	4.5mm x 20mm	16/64 x 3/4	6.350 x 19.050	24 x 24	6 x 36
1/18	1.410	**	5.5mm	25	9.922	47	18.650	1/19 x 1/2	1.34 x 12.70	8/64 x 1	3.18 x 25.4	**	4.5mm x 31mm	16 1/2 x 3/4	6.55 x 19.050	26 x 26	6 x 38
1/16	1.587	14	5.556	**	10mm	48	19.050	1/18 x 3/4	1.410 x 19.050	8/64 x 1-1/4	3.18 x 31.75	11 1/2 x 3/4	4.564 x 19.050	17/64 x 3/4	6.747 x 19.050	28 x 28	6 x 40
1/15	1.691	14 1/2	5.754	25 1/2	10.120	50	19.840	1/18 x 1/2	1.410 x 12.700	8 1/2 x 3/4	3.373 x 19.050	11 1/2 x 1-1/4	4.564 x 31.75	17 1/2 x 3/4	6.95 x 19.050	30 x 30	6 x 42
1/14	1.813	14 3/4	5.850	26	10.319	52	20.640	1/17 x 1/2	1.494 x 12.700	8 1/2 x 1-1/4	3.37 x 31.75	**	4.75mm x 20mm	18/64 x 3/4	7.144 x 19.050	32 x 32	
1/13	1.953	15	5.953	26 1/2	10.520	54	21.430	1/15 x 1/2	1.691 x 12.700	9/64 x 1/2	3.57 x 31.75	**	4.75mm x 31mm	18 1/2 x 3/4	7.34 x 19.050	34 x 34	
1/12	2.116	15 1/2	6.150	27	10.716	55	21.83	1/15 x 3/4	1.69 x 19.05	9/64 x 3/4	3.527 x 19.050	12/64 x 3/4	4.763 x 19.050	19/64 x 3/4	7.541 x 19.050	36 x 36	Triangular
6	2.381	16	6.350	27 1/2	10.910	56	22.225	4 1/2 x 1/2	1.785 x 12.700	9/64 x 1-1/4	3.57 x 31.75	12/64 x 1-1/4	4.763 x 31.75	20/64 x 3/4	7.939 x 19.050	38 x 38	9/64 or 5-1/2V
6 1/2	2.579	16 1/2	6.548	28	11.113	57	22.620	4 1/2 x 3/4	1.785 x 19.050	**	3.75mm x 20mm	12 1/2 x 3/4	4.961 x 19.050	21/64 x 3/4	8.33 x 19.050	40 x 40	10/64 or 6V
7	2.778	17	6.747	28 1/2	11.310	64	25.400	4 3/4 x 3/4	1.890 x 19.050	9 1/2 x 3/4	3.770 x 19.050	12 1/2 x 1-1/4	4.961 x 31.75	22/64 x 3/4	8.731 x 19.050	45 x 45	11/64 or 6-1/2V
7 1/2	2.976	17 1/2	6.945	29	11.509	1-1/4"	31.750	4-7/8 x 1/2	1.934 x 19.050	9 1/2 x 1-1/4	3.77 x 31.75	13/64 x 3/4	5.159 x 19.050	22 1/2 x 1	8.93 x 25.400	50 x 50	12/64 or 7V
7 3/4	3.080	18	7.144	29 1/2	11.710			4-7/8 x 3/4	1.934 x 19.050	10/64 x 3/4	3.969 x 19.050	13/64 x 1-1/4	5.159 x 31.75	23/64 x 3/4	9.13 x 19.050	55 x 55	17/64 or 9-1/2 V
8	3.175	18 1/2	7.342	30	11.906			5/64 x 1/2	1.984 x 12.700	10/64 x 1-1/4	3.969 x 31.75	**	5.25mm x 20mm	24/64 x 3/4	9.525 x 19.050	60 x 60	
8 1/2	3.373	**	7.5mm	30 1/2	12.100	Square		5/64 x 3/4	1.984 x 19.050	**	4mm x 20mm	**	5.25mm x 31mm	26/64 x 3/4	10.320 x 19.050	3 x 20	
8 3/4	3.470	19	7.541	31	12.303	32/64	12.700	5.25/64 x 3/4	2.080 x 19.050	**	4mm x 23mm	13 1/2 x 3/4	5.357 x 19.050	28/64 x 3/4	11.110 x 19.050	4 x 18	
9	3.572	19 1/2	7.739	31 1/2	12.500			**	2.15mm x 20mm	**	4mm x 31mm	13 1/2 x 1-1/4	5.357 x 31.75	**	12mm x 30mm	4 x 19	
9 1/2	3.770	20	7.938	32	12.700			5 1/2 x 1/2	2.182 x 12.700	10 1/2 x 3/4	4.17 x 19.050	**	5.5mm x 20mm	30/64 x 3/4	11.910 x 19.050	4 x 20	
9 3/4	3.870	20 1/2	8.136	33	13.100			5 1/2 x 3/4	2.182 x 19.050	10 1/2 x 1-1/4	4.17 x 31.75	**	5.5mm x 31mm	32/64 x 3/4	12.700 x 19.050	4 x 22	
10	3.969			34	13.949			**	2.25mm x 20mm	**	4.25mm x 20mm	14/64 x 3/4	5.556 x 19.050	36/64 x 3/4	14.29 x 19.050	6 x 18	

\*\*Only available in metric size

## CLIPPER OFFICE TESTER & CLEANER

The Clipper Model 400 Office Tester & Cleaner offered by Seedburo is an extremely efficient cleaner for office and laboratory use. This machine will provide accurate, dependable performance for small lot cleaning, testing or sampling. 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 pg. 78). 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 (45 3/4" L with catchall) x 17" W x 23" H. Domestic ship wt. 110 lbs. Domestic ship dims. 32" L x 24" W x 32" H. Export ship wt. 185 lbs. Export ship dims 33" L x 25" W x 33" H.



Shown with optional Back Air Catchall with removable trays



Office Tester and Cleaner complete with 2 screens - 1/6 HP, 115V, 60Hz/1PH .....	No. 400/B
Office Tester and Cleaner complete with 2 screens - 1/6 HP, 230V, 60Hz/1PH .....	No. 400/E
Office Tester and Cleaner complete with 2 screens - 1/4 HP, 230V, 50Hz/1PH .....	No. 400/C
Office Tester and Cleaner complete with 2 screens - 1/4 HP, 230V, 50Hz/1PH Motor, CE Certified.....	No. 400/CE
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

## CLIPPER MODEL AGM224 SEED & GRAIN CLEANER

The Clipper AGM224 cleaner is a mid-range cleaner that will provides excellent results and fits the market for those in need of a cleaner larger than the Office Clipper and smaller than 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) 24-1/2" x 22-1/4" 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. Actual 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 pg. 78).



Shown with optional Bagging Auger



Clipper AGM224 Cleaner complete with 2 Screens, 3/4 HP, 110/220V, 60 Hz, Single Phase .....	No. AGM224
Clipper AGM224 Cleaner complete with 2 Screens, 3/4 HP, 110/220V, 50 Hz, Single Phase .....	No. AGM224/A
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 & 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) 24-1/2" x 22-1/4" 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 pg. 78). **MADE IN USA**

**Approximate Capacities (Bushels Per Hour):**

Commodity	Fast Clean	Precision Clean
Soybeans, Wheat, Corn	*80 BPH	*55 BPH
Rice, Oats, Barley	*60 BPH	*35 BPH

- Eclipse 324 Cleaner Complete With 3 Screens - 3/4 HP, 110/220V, 60Hz, Single Phase ..... **No. ECL324**
- Eclipse 324 Cleaner Complete With 3 Screens - 3/4 HP, 110/220V, 50Hz, Single Phase ..... **No. ECL324/A**
- Extra Standard Metal Perforated Screens..... **No. ECLSM**
- Extra Standard Metal Perforated Screens, Cross Slot ..... **No. ECLSMCS**
- Extra Square Wire Screen..... **No. ECLSWS**
- Extra Rectangle Wire Screen ..... **No. ECLSWR**
- Extra Wire Mesh Screens..... **No. ECLSW**
- Bagging Auger Attachment..... **No. ECLBA**
- Required crating for domestic or export ..... **No. ECL/DOM**



**CLIPPER ECLIPSE MODEL 334 SEED & 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 off material exits 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. New wt. 1800 lbs. Ship wt. 2300 lbs. Actual dims. 77" L x 50" W x 85" H. Ship dims.

75" L x 57" W x 92" H. (For screen perforations, see pg. 78). **MADE IN USA**

**Approximate Capacities (Bushels Per Hour):**

Commodity	Fast Clean	Precision Clean
Soybeans, Wheat, Corn	*250 BPH	*120 BPH
Rice, Oats	*190 BPH	*75 BPH

- 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 Rectangle Wire Screen ..... **No. ECL3RW**
- Extra Square Wire Screen..... **No. ECL3SW**
- Bagging Auger Attachment..... **No. ECL3BA**
- Required crating for domestic or export ..... **No. ECL334/DOM**

\*Capacity may vary depending on seed condition, moisture content, seed varieties, types and volumes of contaminants to be separated and the percentage of foreign material acceptable in final product. Capacities shown above are for the split-flow arrangement.

**CLIPPER PRELUDE MODEL 526 SERIES CLEANER**

The Prelude 526 series air screen cleaner is designed for precision seed cleaning for many applications. The Prelude will efficiently clean most varieties of cereal grains, oilseeds, legumes and many more. The Prelude utilizes a 54" wide screen and provides adaptable screen arrangements. The cleaner has three screen decks with a total of five (5) 54" W x 26" L screens. The top deck holds one scalping screen while the next two hold two screens that can be set up for scalp/sift or a split sift configuration. With a screening capacity of more than 50 square feet, precision separations can be made efficiently. Over 175 different sizes of perforated metal or wire cloth screen are available (for screen perforations, see pg. 78).



Stability distinguishes the Prelude 526 from other similar sized cleaners. The 3" x 3" tubular steel frame and smooth eccentric motion allow for many applications. The optional air system is designed to take full advantage of quick and efficient air lift separation. Fan velocity adjustments are easily made and will accommodate a wide range of commodities. The Prelude Model 526 base model is available without the optional fan air system, while our Model 526A includes the fan/air system. Net wt. 3800 lbs. Domestic Ship dims. 91-1/2" L x 78-1/2" W x 91" H. Export Ship wt. 5000 lbs. Export Ship dims. (two crates) 96" L x 84" W x 60" H and 75" L x 78" W x 55" H.

**MADE IN USA**

**Approximate Capacities (Bushels Per Hour/Tons Per Hour):**

Small Seed	Medium Seed	Large Seed & Wheat	Market Cleaning
*100BPH/2.6TPH	*175BPH/4.6TPH	*300BPH/8.0TPH	*600BPH/14.7TPH

- Prelude 526A Cleaner, 2 HP, 230/460V, 60Hz, 3ph with 5 screens ..... **No. PR526/F**
- Prelude 526A Cleaner, 2 HP, 200/380V, 50Hz, 3ph with 5 screens ..... **No. PR526/G**
- Prelude 526A Cleaner, 2 HP, 230/460V, 60Hz, 3ph with 10 HP Fan/Air, System and 5 Screens..... **No. PR526A/F**
- Prelude 526A Cleaner, 2 HP, 200/380V, 50Hz, 3ph with 10 HP Fan/Air, System and 5 Screens..... **No. PR526A/G**
- Extra Standard Metal Perforated Screens..... **No. PR526SM**
- Extra Square Wire Screen..... **No. PR526SW**
- Required crating for domestic or export ..... **No. PR526/DOM**

**OPTIONAL ACCESSORIES:**

- AC Controlled, Adjustable Vibratory Hopper ..... **No. PR526VH**      Hopper Agitator Kit..... **No. PR526HAK**
- AC Controlled, Adjustable Eccentric..... **No. PR526E**      Grease Line Package ..... **No. PR526GLP**
- Enclosed Panel System..... **No. PR526EPS**      Grease Line Pkg w/air..... **No. PR526AGLP**

*\*Capacity may vary depending on seed condition, moisture content, seed varieties, types and volumes of contaminants to be separated and the percentage of foreign material acceptable in final product. Capacities shown above are for the split-flow arrangement.*

**DELUXE ECLIPSE CLEANER PLATFORM & ACCESSORIES**

The Clipper Eclipse 324 Deluxe Platform system is designed to provide what many customers wish they had built once they purchase an Eclipse seed cleaner. This system provides the accessories needed to create the preferred cleaning station. The mobile platform is a rugged 4 ft square platform which elevates the cleaner to over 4 ft to provide access for a bagging system, conveyors, discharge spout connections or even for general cleaning. Platform height can be custom built in 6 inch increments for greater flexibility to your site. Designed as a permanent structure in a warehouse or seed conditioning station or as a portable system. Each component is priced separately for individual customization. System is shipped in assembled condition. Contact us for freight quotes.



- Deluxe 4 ft Mobile Platform (less stairs)..... **No. ECL-DMP**
- Stair Package ( moves with cleaner)..... **No ECL-SP**
- Surge Hopper with two sight glasses ..... **No. ECL-SH**
- Air Collector Expansion Duct..... **No ECL-AC**
- Four Point Trash Pickup Chutes..... **No. ECL- 4PT**
- Required crating for domestic or export ..... **No. ECL-DMP/DOM**



### MATER ERGOSTATION SEED INSPECTION STATION

The Ergostation Seed Inspection station delivers greater productivity with less operator fatigue. The seed analyst adjusts the Ergostation to comfortably fit themselves rather than force themselves to fit an inflexible workstation. This helps seed analysts avoid the costly neck and back pains and serious arm and wrist problems that plague seed analysts who typically sit in stressful body positions.

The basic Ergostation is supplied as follows: contoured front, independently adjustable rest for both right and left arms, easy access to controls, 2 storage drawers, white laminated plywood work surface, substantial plywood base with rigid stainless risers, and 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, Leica Microscope, or video camera. To facilitate analysis, the Inspection Station 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. Call or write for specifications and prices. Basic Ergo Station, less accessories, Ship wt. 99 lbs, Ship dims 44" L x 26" W x 11" H.

Ergo Station, basic model, no accessories included, (no power required).....	<b>No. ESS2000</b>
Ergo Station w/2 vibratory feeders, control, trough, quick-change inspection tray and positioning slide for optics package, 115V, 50/60Hz.....	<b>No. ESS2001</b>
Ergo Station w/2 vibratory feeders, control, trough, quick-change inspection tray and positioning slide for optics package, 220V, 50/60Hz .....	<b>No. ESS2002</b>
Mantis Elite Magnifier Head (as shown in photo), less lens .....	<b>No. ESS9300</b>
(Adapted for Leica Microscope or video camera instead of Mantis Head, upon request)	
Mantis Mount, Manual Adjustment for Magnifier Head.....	<b>No. ESS9201</b>
Hand Switch with coiled cord.....	<b>No. ESS0008</b>
Foot Switch.....	<b>No. ESS0009</b>
Seed Hopper (contact us for specific sizes) .....	<b>No. ESS02XX</b>
Quick Change Inspection Trays (contact us for specific sizes) .....	<b>No. ESS03XX</b>

### MATER SINGLE DECK VIBRATORY SEPARATOR



The Mater Single Deck Separator, offered by Seedburo, 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, 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.

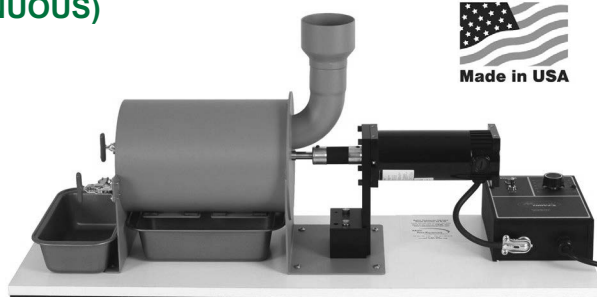
Standard equipment includes fully adjustable funnel style bulk feed hopper, which holds 500cc. Three 1000cc sample boxes for collecting the separated fractions, two Syntron brand vibratory feeders, which actuate the bulk feeder and seed deck. Dual digital counters to indicate the vibratory feeder control 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 .....	<b>No. SD1001</b>
Single Deck Vibratory Separator, 230V, 50/60Hz, 90 Watts .....	<b>No. SD1002</b>
Optional Hand Switch with Coiled Cord.....	<b>No. ESS0008</b>
Optional Foot Switch .....	<b>No. ESS0009</b>
1000cc Funnel Style Bulk Feed Hopper .....	<b>No. SD0270</b>
Optional Bare Aluminum Deck.....	<b>No. SD0100-B</b>
Optional Sand Blasted Aluminum Deck.....	<b>No. SD0100-SB</b>
Additional Decks of Various Textures (contact us for specific types and textures).....	<b>No. SD0100-XXX</b>
Domestic Crating.....	<b>No. SD9901</b>
Export Crating, ISPM No. 15 Compliant.....	<b>No. SD9911</b>

## 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 Seedburo, 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 add 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. 130 lbs, Ship dims 41" L x 18" W x 18"H Continuous Debearder: Ship wt. 145 lbs, Ship dims 41"L x 18"W x 23"H



### Typical Applications Include:

- Remove appendages and hulls or break-up multiple florets.
- Prepare seeds to freely flow through automated planting equipment.
- Separate seeds from seed heads or extract seeds from fibrous matrix.
- Add an abrasive liner to scarify seeds for optimum germination.

Batch Debearder, 115V/60Hz, with DB0100 End Plate .....	<b>No. DB1001</b>
Batch Debearder, 230V/50Hz, with DB0100 End Plate .....	<b>No. DB1002</b>
Continuous Debearder, 115V/60Hz, with DB0160 End Plate Assembly with Exit Chutes.....	<b>No. DB1101</b>
Continuous Debearder, 230V/50Hz, with DB0160 End Plate Assembly with Exit Chutes .....	<b>No. DB1102</b>
Vibratory Feeder kit for continuous operation, 115V/60Hz.....	<b>No. DB0801</b>
Vibratory Feeder kit for continuous operation, 230V/50Hz.....	<b>No. DB0802</b>
Domestic Crating for Batch Debearder (with up to 2 drums).....	<b>No. DB9901</b>
Domestic Crating for Continuous Debearder (with up to 2 drums).....	<b>No. DB9902</b>
Export Crating for Batch Debearder, ISPM 15 Compliant (with up to 2 drums).....	<b>No. DB9911</b>
Export Crating for Continuous Debearder, ISPM 15 Compliant (with up to 2 drums).....	<b>No. DB9912</b>

### Drums:

Perforated Carbon Steel Drum, 3.0mm holes .....	<b>No. DB0500</b>
Perforated Carbon Steel Drum, 2.0mm holes .....	<b>No. DB0505</b>
Rubber Wrap for Perforated Drum Assemblies .....	<b>No. DB0570</b>
Unperforated Carbon Steel Drum.....	<b>No. DB0600</b>
Unperforated Carbon Steel Drum, Ribbed for Rice.....	<b>No. DB0650</b>
Unperforated Carbon Steel Drum with removable stationary tines .....	<b>No. DB0680</b>

### Agitators and Brushes:

Brush Holder Assembly .....	<b>No. DB0201</b>
Brush Strip Pair, Fine, Black.....	<b>No. DB0265</b>
Brush Strip Pair, Fine, Crimped Black .....	<b>No. DB0266</b>
Brush Strip Pair, Medium, Blue .....	<b>No. DB0270</b>
Brush Strip Pair, Coarse, White.....	<b>No. DB0275</b>
Impeller Agitator Assembly with Fixed Tines .....	<b>No. DB0400</b>
Paddle Assembly with Wipers .....	<b>No. DB0700</b>
Paddle Wiper, Urethane .....	<b>No. DB0730</b>

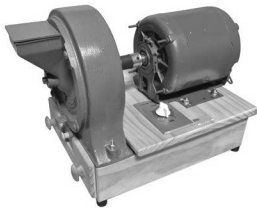
(Other Impeller & Drum Kits available – Call for quote or assistance)

## 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 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. Precision controls regulate air "blasts" and seed feeding. 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. Air velocity adjustable from 0.5 meters to 18.0 meters per second (98 to 3540 feet per minute). 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, Speed Control, one ESS0270 Hopper 1000cc and Gravity Batch Feeder. Ship wt. 240 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 .....	<b>No. CB3001</b>	Export Crating for Continuous Blower, ISPM 15 Compliant.....	<b>No. CB9911</b>
Continuous Seed Blower, 230V, 50/60Hz/1PH .....	<b>No. CB3002</b>	Domestic Crating for Large Hopper & Bagging Accessories .....	<b>No. CB9921</b>
Large Capacity Hopper with Stand and Bagging Accessories (capacity 3.8 cu ft (0.10 cu M)).....	<b>No. CB1003</b>	Export Crating for Large Hopper & Bagging Accessories, ISPM 15 Compliant.....	<b>No. CB9931</b>
Extra Capacity Hopper, 1.5 cu ft (44 liter), Box Style .....	<b>No. CB3004</b>		
Funnel Style Hopper, 500cc flat bottom.....	<b>No. ESS0160</b>		
Funnel Style Hopper, 1000cc flat bottom.....	<b>No. ESS0170</b>		
Funnel Style Hopper, 2000cc flat bottom.....	<b>No. ESS0180</b>		
Domestic Crating for Continuous Blower.....	<b>No. CB9901</b>		



### SEEDBURO BARLEY OR WHEAT PEARLER

The Seedburo Barley Pearler is used to dehull barley for the determination of mellowness and heat-damaged kernels. It uses a 30 grit carborundum stone and a No. 7 mesh screen. The wheat pearler determines the hardness in wheat and comes with a 24 grit stone and a No. 8 mesh screen. The hulled (pearled) grain is discharged through the spout, while the chaff and hulls are passed through the screen into the catch drawer. Each unit is equipped with a 1/4 HP motor and a 5 minute timing switch. Net wt. 35 lbs. Ship wt. 38 lbs. Ship Dims. 19”L x 13”W x 14”H. **MADE IN USA**

Barley Pearler, 110V, 60Hz .....	<b>No. 109B/B</b>	Wheat Pearler, 220V, 60Hz .....	<b>No. 109W/E</b>
Barley Pearler, 220V, 50Hz .....	<b>No. 109B/C</b>	Replacement Screen for Barley Pearler, 7 mesh .....	<b>No. 109SB</b>
Barley Pearler, 220V, 60Hz .....	<b>No. 109B/E</b>	Replacement Screen for Wheat Pearler, 8 mesh .....	<b>No. 109SW</b>
Wheat Pearler, 110V, 60Hz .....	<b>No. 109W/B</b>	Replacement Stone for Barley Pearler, 30 grit .....	<b>No. 109BS</b>
Wheat Pearler, 220V, 50Hz .....	<b>No. 109W/C</b>	Replacement Stone for Wheat Pearler, 24 grit .....	<b>No. 109WS</b>



### SEEDBURO ELECTRIC SEED SCARIFIER

The Electric Sample Seed Scarifier is designed and built for convenient office or lab use on small sample seed lots. It features all steel construction for durability and long use. The processing drum is lined with caborundum and equipped with a rotating steel propeller for thorough and efficient scarification of your sample seeds. Several grits of sand paper liners are available for use on the scarifier (40 grit is the standard). Electric motor 1/3 HP. **This machine is not supplied with a power cord & on/off switch and must be supplied by user.** Net wt. 30 lbs. Ship wt. 34 lbs, Dims. 17”L x 12”W x 11”H. **MADE IN USA**

Electric Seed Scarifier, 110V, 60Hz .....	<b>No. 390/B</b>	Additional Sand Paper Liners (available grits: 24, 36, 40, 60, 80, —add to end of part no.) .....	<b>No. 390-SPLXX</b>
Electric Seed Scarifier, 220V, 50Hz .....	<b>No. 390/C</b>	Replacement Drum with Sand Paper Liner (specify grit) .....	<b>No. 390-DRUM</b>
Electric Seed Scarifier, 110V, 50 Hz .....	<b>No. 390/D</b>		
Electric Seed Scarifier, 220V, 60Hz .....	<b>No. 390/E</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. Domestic Ship wt. 218 lbs. Ship dims 27”L x 42”W x 90”H. Export Ship wt. 300 lbs. Ship dims 90”L x 42”W x 28”H (unit must be laid down on side). **MADE IN USA**

Oat Huller, 110V, 60Hz .....	<b>No. OH5095/B</b>
Oat Huller, 220V, 50Hz .....	<b>No. OH5095/C</b>
Oat Huller, 110V, 50Hz .....	<b>No. OH5095/D</b>
Oat Huller, 220V, 60Hz .....	<b>No. OH5095/E</b>
Required Domestic Crating .....	<b>No. OH5095/DOM</b>
Required Export Crating .....	<b>No. OH5095/EX</b>



### MATER PNEUMATIC SEED SCARIFIER

This seed scarifier is ideal for research or repetitive laboratory work on small samples. Easy to use, quickly 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 3 grams. 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. Actual wt 5 lbs. Actual dims 6”L x 6”W x 8”H. Ship wt 7 lbs. Ship dims 8”L x 8”W x 10”H. **MADE IN USA**

Pneumatic Seed Scarifier .....	<b>No. PSS2000</b>
Replacement Abrasive Liners, Standard, pkg of 2 .....	<b>No. PSS1010</b>
Replacement Abrasive Liners, Coarse, pkg of 2 .....	<b>No. PSS1011</b>
Replacement Abrasive Liners, Extra Coarse, pkg of 2 .....	<b>No. PSS1012</b>
Replacement Tempered Steel Inserts, pkg of 2 .....	<b>No. PSS1015</b>
Inlet Adapter Fitting, ¼ NPT (US thread) to ¼ BSPT (metric thread) .....	<b>No. PSS1020</b>

**SEEDTECH MOBILE PRECISION AIR SEPARATOR**

Seedburo offers SeedTech Systems Mobile and Wall Mounted Separators, a breakthrough in cleaning and upgrading seed quality. The SeedTech 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 Separators have 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 680 CFM. Capacity from 25-125 lbs./hr. 125 lbs per hour. Overall dims. 48” L X 48” W X 88” H, Ship Dims 54” L x 54” W x 96” H, Ship Wt. 995 lbs.



STS-MC3

Mobile Metal Cabinet Precision Separator 230V 1PH, 50/60Hz (also avail. in 3PH).....	<b>No. STS-MC3</b>
Required Domestic or Export Packing Charge.....	<b>No. STS-MC3/DOM</b>

**DELUXE PRECISION WALL MOUNT SEPARATORS**

Wall mounted separator systems, the Deluxe Precision Separator, **STS-WM3**, 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. Standard hopper shelf is included. (Feeding hopper metal cabinet standard as shown is optional.) Separates up to 125 lbs. per hour depending upon species. Total system draws 16 AMPS. Actual Dims 24”L x 26”W x 84”H, Ship data: total of 3 crates, 140 cu.ft. 500 lbs.

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 680 CFM programmable computerized keypad controlled vacuum, and with locking casters up to 75 lbs. per hour capacity depending upon the species. Total system draws 12 AMPS. Actual dims 22” L x 30” W x 80” H. Ship data: total of 3 crates, 84 cu.ft., 475 lbs.

The **STS-WM2** Lab Precision Separator operates on a shop vacuum and comes with a precision 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 50 lbs. per hour. Total system draws 16 AMPS. Actual dims 18” L x 22” W x 48” H, Ship data: total of 3 crates, 51 cu.ft., 250 lbs.



STS-WM2

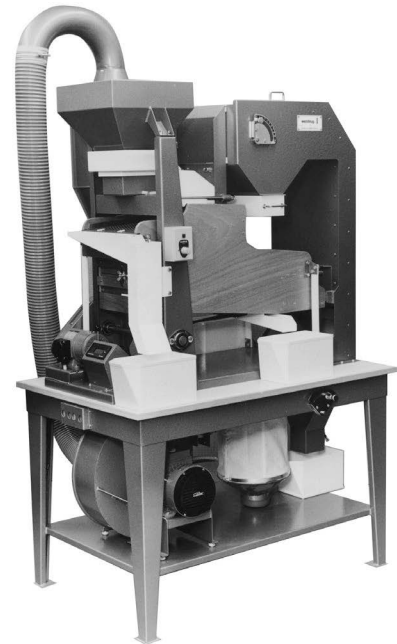
Deluxe Precision Separator 230V 50/60Hz 1Ph.....	<b>No. STS-WM3</b>
Domestic or Export Packing .....	<b>No. STS-WM3/DOM</b>
Precision Separator 230V/50/60Hz 1Ph.....	<b>No. STS-WM2D</b>
Domestic of Export Packing .....	<b>No. STS-WM2D/DOM</b>
Lab Precision Separator 115V/60Hz/1Ph, 16 Amps. ....	<b>No. STS-WM2</b>
Required Domestic or Export Packing.....	<b>No. STS-WM2/DOM</b>

## WESTRUP LABORATORY EQUIPMENT

### 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 150 kg 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 & 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 60 Hz, 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 250x250 mm and 2 long grading/fines screens 250x500 mm; screen area 0.34 m<sup>2</sup>; long screens with rubber ball cleaning; speed drive with frequency converter and digital readout. Ship. wt. 672 lbs, ship. dims. 49"Lx33"Wx81"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 (1.0 mm ot 1.95mm Perf.) .....	No. LA-LSMS1
Main Screen No.2 (2.00mm and Larger Perf.) .....	No. LA-LAMS2
Pre Scalp Screen No.1 (1.0 mm to 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(less Buckets).....	No. LA-LSOP
(Contact us for additional accessories not listed.)	

### 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 LA-K 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. (100Kgs) per hour on wheat. Complete with 4/5HP motor which requires 870 watts of power and generates 0-500RPM, and one full or reduced area deck. Dims. with stand: 42"L x 27" W x 60"H, Ship. Wt. 594 lbs., Ship. Dims. 60"Lx36"Wx72"H.

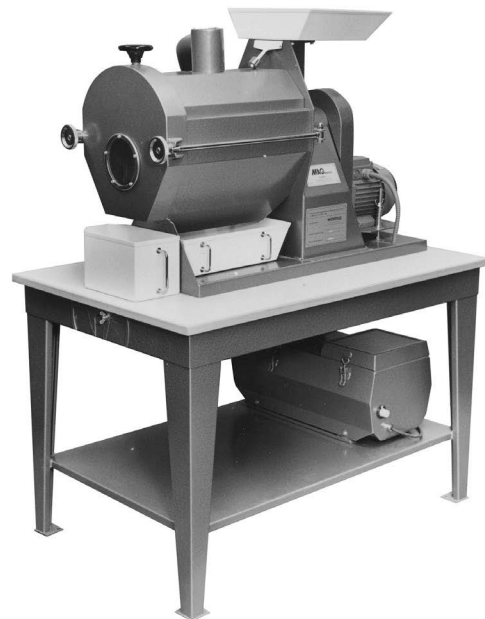


Laboratory Gravity Separator w/Full Sized Deck, 110V, 60Hz/1PH .....	No. LA-K/B
Laboratory Gravity Separator w/Full Sized Deck, 220V, 50Hz/1PH .....	No. LA-K/C
Additional full size deck cover .....	No. LA-KD
Additional reduced area deck .....	No. LA-KDR
Aspiration Hood .....	No. LA-KA
Large Feed Hopper .....	No. LA-KH

### LA-H LABORATORY BRUSH MACHINE

The Westrup LA-H Brush Machine, distributed by Seedburo, 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 60 Hz, single phase power with start/stop. It operates with a 3/4 HP motor and requires 1550 watts. The brush shaft revolves at 500-700RPM. Dims with stand: 53”H x 20”W x 27”L, Net Wt. 550 lbs. Ship Wt. 600 lbs., Ship dims. 60”H x 36”W x 66”L.



- Laboratory Brush Machine 110V, 60Hz/1PH ..... **No. LA-H/B**
- Laboratory Brush Machine 220V, 50Hz/1PH ..... **No. LA-H/C**
- Optional Inlet Hopper with Vibratory Feeder ..... **No. LA-HVF**
- Additional Mantles ..... **No. LA-HM**
- Additional Set of Brushes ..... **No. LA-HB**
- Frequency Converter for Variable Brush Speed ..... **No. LA-HFC**
- Support Cage for Lighter Round Wire Type Mantles ..... **No. LA-HSC**

### 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 150 kg (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 1/5 HP motor that requires 90 watts of power and an eccentric shaft that operates at 18 or 40RPM. 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. Dims with stand: 56”H x 27”W x 42”L, Net Wt. 550 lbs. Ship. Wt. 594 lbs., Ship. dims. 60”L x 36”W x 72”H.



- Laboratory Indent Cylinder Separator 110V, 60Hz/1PH ..... **No. LA-T/B**
- Laboratory Indent Cylinder Separator 220V, 50Hz/1PH ..... **No. LA-T/C**
- Conversion Kit for Perforated Cylinders ..... **No. LA-G**
- Additional cylinders, please specify indent  
or perforated hole sizes ..... **No. LA-TC**

## LARGE PLOT THRESHER

The Almaco Large Plot Thresher is a versatile, high-capacity machine perfect for threshing large plots of small grains, cereals, forages and legumes. Ship. wt. 1700 lbs. domestic packed, 1800 lbs. export packed, Ship dims. 125"L x 53"W x 67"H. The thresher is standard equipped as follows:

- \* Overshot-style cylinder and concave w/14" diameter X 17-5/8", with your choice of cylinder type
- \* Variable speed v-belt drive for threshing cylinder, cylinder speed range 300 – 1500 R.P.M.
- \* 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 & radial tires
- \* Combination tail/stoplights, turn signals, rear reflectors
- \* Strawpuller assembly



Please select the **BASE MODEL** and one each from the following four configurations: **A – Power Configurations**, **B – Threshing Cylinder & Concave Configurations**, **C – Sieve Configurations** and **D – Machine Options & Accessories**.

BASE MODEL FOR GAS, ELECTRIC OR DIESEL NO.SLPT	
<b>POWER CONFIGURATIONS</b>	<b>SIEVE CONFIGURATIONS</b>
5HP 220V/60Hz Electric Motor <b>No. SLPT-A1</b>	6mm Graepel Sieve (grass) & Tailrake <b>No.SLPT-C1</b>
5HP 220V/50Hz Electric Motor <b>No. SLPT-A2</b>	10mm Graepel Sieve for Small Seeded Crops & Tailrake <b>No.SLPT-C2</b>
8HP Honda Gas Engine <b>No. SLPT-A3</b>	18mm Graepel Sieve & Tailrake <b>No.SLPT-C3</b>
8HP Honda Gas Engine w/Elec. Start <b>No. SLPT-A4</b>	20mm Graepel Sieve & Tailrake <b>No.SLPT-C4</b>
10HP Yanmar Diesel Engine <b>No. SLPT-A6</b>	Peterson Adjustable Sieve <b>No.SLPT-C6</b>
10HP Yanmar Diesel Engine w/Elec. Start <b>No. SLPT-A7</b>	SN Sieve for Corn <b>No.SLPT-C7</b>
<b>THRESHING CYLINDER &amp; CONCAVE</b>	<b>MACHINE OPTIONS &amp; ACCESSORIES</b>
Rubber Raspbar <b>No.SLPT-B1</b>	Seed Catch Bucket <b>No.SLPT-D1</b>
Spiked Tooth <b>No.SLPT-B2</b>	Seed Tag Holder <b>No.SLPT-D2</b>
Metal Raspbar <b>No.SLPT-B3</b>	Pneumatic Seed Delivery To Operator <b>No.SLPT-D3</b>
Metal Raspbar with Threshing Cylinder E-Brake <b>No.SLPT-B4</b>	Air Compressor w/Horizontal Air Tank <b>No.SLPT-D4</b>
	Electric Engagement Clutch for Threshing Cylinder Drive <b>No.SLPT-D5</b>
REQUIRED PACKING	
Domestic Packing <b>No.SLPT/DOM</b>	Export Packing <b>No.SLPT/EX</b>

Selection Guide for each Cylinder/Concave Style	
Cylinder/Concave	Crops
Square-spiked tooth (most aggressive):	Cereals, rice, wheat, oats etc.
Round-spiked tooth:	Sorghum, soybean
Metal raspbar:	Soybeans, sunflower, grasses, field peas
Rubber-coated metal raspbar:	Soybeans, sorghum, field peas

## 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 corn, sunflowers, cereals, small grains, legumes and forages. 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. Dims, standard equipped: 100" L x 50" W x 57" H, Net wt.1250 lbs. Ship wt. Domestic 1600 lbs. Export 1700 lbs. Standard equipped model as follows:

- \* Enclosed cylinder, 14" diam. X 17-5/8" wide, with 8 metal rasp bars
- \* Underslung, open-grated concave with single lever to adjust front & rear clearance
- \* Variable speed v-belt drive for threshing cylinder, speed range 300 – 1500 R.P.M.
- \* Deflector-beater strawpuller
- \* Canvas deflector baffles
- \* Metal shaker pan
- \* Winnowing 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 & radial tires
- \* Taillight assembly with stoplights, turn signals and rear reflectors



Please select a base model and then one each from the following configurations: **A – Power Configurations, B – Threshing Cylinder Feed Configurations, C – Threshing Cylinder Drive Configurations, D – Concave Configuration and E – Sieve Configurations**

BASE MODEL SLPR FOR GAS/ELECTRIC Model No.SLPRGE	BASE MODEL SLPR FOR DIESEL Model No. SLPRD
<b>POWER CONFIGURATIONS</b>	<b>SIEVE CONFIGURATIONS</b>
5HP 220V/60Hz Electric Motor <b>No.SLPR-A1</b>	6mm Graepel Sieve (grass) & Tailrake <b>No.SLPR-E1</b>
5hp 220V/50Hz Electric Motor <b>No.SLPR-A2</b>	10mm Graepel Sieve & Tailrake <b>No.SLPR-E2</b>
8HP Honda Gas Engine <b>No.SLPR-A3</b>	18mm Graepel Sieve & Tailrake <b>No.SLPR-E3</b>
8HP Honda Gas Engine W/Elec.Start <b>No.SLPR-A4</b>	20mm Graepel Sieve & Tailrake <b>No.SLPR-E4</b>
8HP Honda Gas Engine w/Elec.Start w/High Amp Charger (for use w/ electric accessories) <b>NO.SLPR-A5</b>	22mm Graepel Sieve & Tailrake <b>No.SLPR-E5</b>
10HP Yanmar Diesel Engine <b>No.SLPR-A6</b>	Peterson Adjustable Sieve <b>No.SLPR-E6</b>
10HP Yanmar Diesel Engine w/Elec.Start <b>No.SLPR-A7</b>	SN Sieve for Corn <b>No.SLPR-E7</b>
<b>THRESHING CYLINDER FEED CONFIGURATION</b>	<b>THRESHING CYLINDER DRIVE CONFIGURATION</b>
Feed Pan <b>No.SLPR-B1</b>	Standard Variable Speed Drive <b>No.SLPR-C1</b>
Belt Feed Conveyor <b>No.SLPR-B2</b>	Standard Variable Speed Drive & Cylinder Slow Down Drive <b>No.SLPR-C2</b>
<b>CONCAVE CONFIGURATION</b>	Standard Variable Speed Drive & Electric Engagement Clutch <b>No.SLPR-C3</b>
Standard Wire Spacing Concave <b>No.SLPR-D1</b>	Cylinder Slow Down Variable Drive <b>No.SLPR-C4</b>
Grass Wire Spacing Concave <b>No.SLPR-D2</b>	
<b>REQUIRED PACKING</b>	
Domestic Packing <b>No.SLPR/DOM</b>	Export packing <b>NO.SLPR/EX</b>

### 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. Dims, standard equipped: 34" L x 34" W x 54" H. Ship wt. 400 lbs.

#### Standard Equipped Model:

- \* 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



Must select a base model and then one each from the following configurations: A – Power Configurations, B – Threshing Cylinder & Concave Configurations, domestic or export boxing and any additional accessories or spare parts kits.

BASE MODEL SSBT Gas/Elec. No.SSBTGE	BASE MODEL SSBT Diesel Engine No.SSBTD
<b>POWER CONFIGURATIONS</b>	<b>THRESHING CYLINDER &amp; CONCAVE CONFIGURATION</b>
1HP 110/220V 60Hz Electric Motor <b>No.SSBT-A1</b>	Round Spiked <b>No.SSBT-B1</b>
1HP 110/220V 50Hz Electric Motor <b>No.SSBT-A2</b>	Square Spiked <b>No.SSBT-B2</b>
3.5HP Briggs & Stratton Engine <b>No.SSBT-A3</b>	Rubber Coated Steel Raspbars <b>No.SSBT-B4</b>
4HP Honda Engine <b>No.SSBT-A4</b>	Metal Raspbars <b>No.SSBT-B5</b>
4.2HP Yanmar Diesel Engine <b>No. SSBT-A5</b>	Rubber V-Belt Raspbar T.C. & Rubber Coated Steel Raspbar Concave <b>No.SSBT-B3</b>
<b>EXTRA CYLINDER (INCLUDES BEARING SET)</b>	<b>EXTRA CONCAVE</b>
Rubber Raspbar (inverted V-Belt) <b>No.SSBT-C3A</b>	Rubber Coated Metal Raspbars <b>No.SSBT-C4A</b>
Rubber Coated Metal Raspbars <b>No.SSBT-C3B</b>	Square Spiked <b>No.SSBT-C4B</b>
Square Spiked <b>No.SSBT-C3C</b>	Round Spiked <b>No.SSBT-C4C</b>
Round Spiked <b>No.SSBT-C3D</b>	Rubber Raspbar Inverted-V <b>No.SSBT-C4D</b>
Metal Rasp Bars <b>No.SSBT-C3E</b>	Metal Rasp Bars <b>No.SSBT-C4E</b>
<b>OPTIONAL ACCESSORIES</b>	<b>SPARE PARTS KIT</b>
Extra Seed Catch Pan <b>No.SSBT-C1</b>	Gas Model <b>No.SSBT-SPKE</b>
Removable Sacking Chute <b>No.SSBT-C2</b>	Electric Model <b>No.SSBT-SPKG</b>
<b>REQUIRED PACKING</b>	
Domestic Packing <b>No.SSBT/DOM</b>	Export Boxing <b>No.SSBT/EX</b>

Selection Guide for each Cylinder/Concave Style	
Cylinder/Concave	Crops
Square-spiked tooth (most aggressive):	Cereals, rice, wheat, oats etc.
Round-spiked tooth:	Sorghum, soybean
Metal raspbar:	Soybeans, sunflower, grasses, field peas
Rubber-coated metal raspbar:	Soybeans, sorghum, field peas

**SINGLE PLANT BELT THRESHER**

The SSPBT is designed specifically for threshing single plants of soybeans, sugar beets, edible beans 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. Dimensions 48”L x 48”W x 48-1/2”H, Domestic Ship. Wt. 520 lbs., Export 540 lbs.

**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
- \* Quite 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 **A – Power Configuration**, **B – Belt Type**, **C – Frame Type**, **D – Upper Trash Deflector**, and domestic or export required packing

BASE MODEL SSPBT Gas/Elec. No.SSPBTE	BASE MODEL SSPBT Gas/Diesel Engine No.SSPBTG
<b>POWER CONFIGURATIONS</b>	<b>BELT TYPES</b>
3/4HP, 110V/60hZ Electric Motor <b>No.SSPBT-A1</b>	Upper & Lower Chevron <b>No.SSPBT-B1</b>
3/4HP, 220V/60Hz Electric Motor <b>No.SSPBT-A2</b>	Upper & Lower Mini-Cleat Lock <b>No.SSPBT-B2</b>
3/4HP, 220V/50Hz Electric Motor <b>No.SSPBT-A3</b>	Upper & Lower Smooth <b>No.SSPBT-B3</b>
3hp Air Cooled Gas Engine <b>No.SSPBT-A4</b>	Upper Smooth, Lower Chevron <b>No.SSPBT-B4</b>
4.2HP Air Cooled Diesel Engine <b>No. SSPBT-A5</b>	Upper Smooth, Lower Mini-Cleat Lock <b>No.SSPBT-B5</b>
	Upper Chevron, Lower Mini-Cleat Lock <b>No.SSPBT-B6</b>
<b>FRAME TYPE</b>	<b>OPTIONAL ACCESSORIES</b>
Axles with Tongue (Wheel Truck) <b>No.SSPBT-C1</b>	Root Cutter w/Hand Grip on Thresher <b>No.SSPBT-E1</b>
Axle lift Option for above <b>No.SSPBT-C1A</b>	Lighted Seed Chute (Std on Elec Units) <b>No.SSPBT-E2</b>
Stationary Stand (Elec. Models Only) <b>No.SSPBT-C2</b>	Seed Chute Extension for Feeding into Envelopes (One Included) <b>No.SSPBT-E3</b>
Stationary Stand w/Casters (Elec. Models Only) <b>No.SSPBT-C3</b>	Tag Holder <b>No.SSPBT-E4</b>
<b>UPPER TRASH DEFLECTOR</b>	Catch Bucket <b>No.SSPBT-E5</b>
Standard Trash Deflector <b>No.SSPBT-D1</b>	<b>REQUIRED PACKING CHARGES</b>
Trash Deflector with Window & Flipper <b>No.SSPBT-D2</b>	Domestic Packing <b>No.SSPBT/DOM</b>
Threshing Plenum Adaptor with Window & Flipper <b>No.SSPBT-D3</b>	Export Packing Charges <b>No.SSPBT/EX</b>



**ALMACO EAR CORN SHELLER**

The Almaco Ear Corn Sheller, distributed by Seedburo, is a self-cleaning unit suited for seed breeders and similar research operations. It is designed for bulk or single ear shelling and is a powerful and efficient high-volume stationary type sheller – estimated capacity is approximately 2,000 lbs. per hour. Dims. 41”W x 66”L x 75”H, Domestic wt. 850 lbs., Export wt. 950 lbs.

**Standard Equipped:**

- Metal raspbar cylinder
- Underslung, open-grated concave
- Cylinder speed variable by operating one lever
- Concave clearance adjustable by one lever
- Cob metering wheel and seed separation grate
- Metal feeding tray
- Your choice of power type
- V-pulleys and V-belts
- \* Safety cover screens



MACHINE BASE UNIT without power configuration No.SECS	MACHINE BASE CONFIGURATION (select one)
<b>POWER CONFIGURATIONS</b> (select one)	Stationary stand in base <b>No.SECS-D1</b>
	Wheel Truck <b>No.SECS-D2</b>
2HP, 220V/60Hz/1Ph Electric w/o aspirator option <b>No.SECS-A1</b> 2HP, 220V/50Hz/1Ph Electric w/o aspirator option <b>No.SECS-A2</b> 3HP, 220V/60Hz/1Ph Electric w/aspirator option <b>No.SECS-A3</b> 3HP, 220V/50Hz/1Ph Electric w/aspirator option <b>No.SECS-A4</b> 5HP Honda gas engine with or without aspirator <b>No. SECS-A5</b>	<b>TAILRAKE CONFIGURATION</b> (select one)
	Expanded steel grate <b>No.SECS-E1</b>
	Wire grate <b>No.SECS-E2</b>
<b>MACHINE CLEANING CONFIGURATION</b> (select one)	<b>SEED CATCHING ATTACHMENT CONFIGURATION</b> (select one)
Standard cleaning system (no aspirator) <b>No.SECS-B1</b> Aspirator vacuum cleaning system (exhausts into a dust collection bag) <b>No.SECS-B2</b> Aspirator with special machine modifications -Cascade system over aspirator -Speed up aspirator to 2600 RMP -Fill in outer sections of first two rows of concave -Inspection doors in front and left side -Cob dump chute for dumping into 55 gallon drum -Inspection window on left side <b>No.SECS-B3</b>	Seed catch tray with slides installed <b>No.SECS-F1</b>
	Seed chute (allows side bagging) <b>No.SECS-F2</b>
	Seed chute with seed catch tray <b>No.SECS-F3</b>
	<b>ADDITIONAL OPTIONS</b>
	Additional seed catch tray <b>No.SECS-G1</b>
	Rear waste bag attachment (will not work w/aspirator w/ special modifications) <b>No.SECS-G2</b>
	Side inspection door (comes w/aspirator w/special modifications) <b>No.SECS-G3</b>
	<b>SPARE PARTS KITS</b>
	For gas engine <b>No.SECS-SPKG</b>
	For electric motor <b>No. SECS-SPKE</b>
<b>DRIVES FOR ASPIRATOR No.SECS-B3</b> (select one)	<b>REQUIRED PACKING CHARGES</b>
Drives for gasoline and 60Hz electric motor <b>No.SECS-B3A</b>	Domestic <b>No.SECS/DOM</b>
Drives for 50Hz Electric motor models <b>No.SECS-B3B</b>	Export <b>No.SECS/EX</b>

### MAIZER EAR CORN SHELLER

The Almaco Ear Corn Sheller, distributed by Seedburo, is a self-cleaning unit suited for grain breeders and similar research operations. Ship wt. 39"W x 79"L x 67"H, 1270 lbs. **MADE IN USA**

- Small batch sheller for research locations, single ears or bulk samples
- Minimum seed damage, utilizes rubber belt for shelling
- 15 second cycle time for 10-15 ears
- Excellent clean-out capabilities, no carry over between samples
- Modular design allows user to easily add and change options
- Shelling is done horizontal, can discharge seed directly into grader/cleaner or into a seed collection chamber
- Easy to inspect for transgenic cleanout
- Easy to maintain and service
- Available as a stand-alone unit or integrated into the ALMACO Automated Processing Line
- Safety shield for drive belt
- Capacity of 600 cobs per hour – approximately 45 bushels per hour
- Inspection door



Maizer Corn Sheller, 110V/60Hz/1Ph 1.5 Hp Electric Motor .....	No. SMAZIER/B
Maizer Corn Sheller, 220V/50Hz/1Ph, 1.5 HP Electric Motor .....	No. SMAZIER/C
Required Domestic Crating .....	No. SMAZIER/DOM
Required Export Crating .....	No. SMAZIER/EX

### 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. Measure 12" high. Net wt. 17 lbs., Ship Wt. 18 lbs. Ship dims. 13"L x 13"W x 8"H. **MADE IN USA**

Corn Sheller ..... No. 116



### HAND CORN SHELLERS

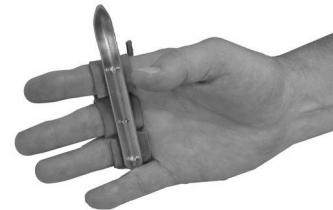
Cast aluminum. Rotary movement of wrist shells samples. Ear corn sheller measures 2-1/2" at large end, 1-7/8" at small end, popcorn sheller measures 2-3/8" at large end and 1-3/4" at small end. **MADE IN USA**

Hand Corn 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. **MADE IN USA**

Husking Peg, ..... No. 114



### CORN HUSKING PIN

Combination 4-3/4", heavy steel plated pin with curved forefinger guard and heavy leather eyelet adjustment at end. **MADE IN USA**

Husking Pin ..... No. 118

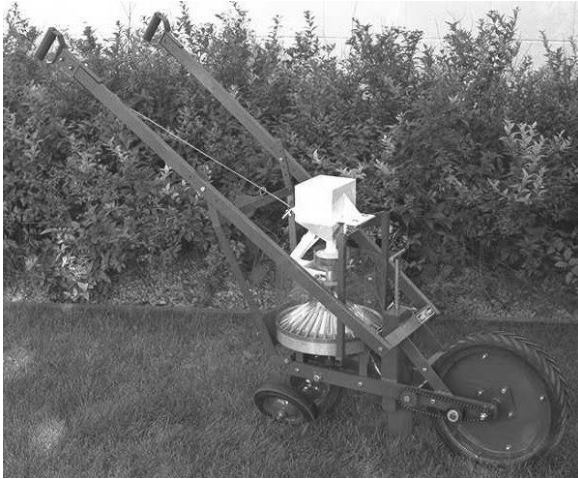


### CORN HUSKING HOOK

Heavy steel curved palm plate with corrugated hook in one piece. Palm pad and wristband, double hand strap. **MADE IN USA**

Husking Hook ..... No. 119  
 Husking Hook; left hand ..... No. 119L





**HAND PUSH CONE SEEDER**

The Almaco Cone Seeder is ideal for sowing numerous seeds and grains. This seeder uses the same reliable seeding mechanism used on Almaco's larger planters. It features a 4" wide front drive wheel, cone type seeder unit with 12" diameter polished aluminum cone and divider funnel, standard 3" diameter seed cup and planter frame with adjustable grasp-type handles and manual seed cup trip. The sprocket and drive assembly allow for row lengths from 3'2" to 22'4". Complete with V-type packing wheels and planter shoe with depth control. Export & Domestic Ship wt. 250 lbs., Ship dims. 53"L x 23"W x 43"H 50". **MADE IN USA**

- Push Type Cone Seeder ..... **No. SHPP-CTS**
- Toolbar Mount ..... **No. SHPP-A1**
- Seed Packet Holder ..... **No. SHPP-A4**
- Row Markers (specify row spacing) ..... **No. SHPP-A5**
- Required Domestic crating ..... **No. SHPPC/DOM**
- Required Export boxing ..... **No. SHPPC/EX**

**HAND PUSH V-BELT PLANTER**

The V-belt Push Planter is a dual-function field implement capable of uniform and accurate dispensing of numerous seed types. It is particularly suited for application where fine seed are to be planted. It may also be used to apply granular type fertilizers or herbicide. Choice of ribbed or smooth style v-belt. Complete with planter frame with adjustable grasp-type handles, 4" wide front drive wheel, 8" diameter running wheels, planter shoe with depth control adjustment and steel packing wheel. The v-belt assembly has shielded sides. Row length is adjusted by sprocket and drive assembly for row lengths from 3'2" to 22'4". Export and Domestic Ship wt. 250 lbs., 53"L X 23"W x 43"H. **MADE IN USA**



- Push Planter with Ribbed V-belt ..... **No. SHPP-RVB**
- Push Planter with Smooth V-belt ..... **No. SHPP-SVB**
- Toolbar Mount..... **No. SHPP-B1**
- Granular Applicator w/5" Band Distributor, Nobel Meter & 1Quart Bottle ..... **No. SHPP-B2**
- Required Domestic crating ..... **No. SHPPV/ DOM**
- Required Export boxing ..... **No. SHPPV/ EX**

**HAND HELD PLANTERS**

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. These are useful for small to medium sized plot planting or for selective replanting of previously seeded plots. User inserts one seed at a time.

Two models are available. The SSHP-NBA, narrow barrel, has an 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 wt. is 4 lbs. Ship wt. 9 lbs. Dims. 12" L x 4" W x 36" H.

The SSHP-SBA is the standard barrel model with a wood back, wood handle and foot lever. The barrel opening is 2 1/2" x 3". Height is 33" and wt. 4 lbs. Ship dims. are 12" L x 4" W x 36" H, Ship wt. 8 lbs.

**MADE IN USA**



No. SSHP-SBA

- Narrow hand held planter ..... **No. SSHP-NBA**
- Standard hand held planter ..... **No. SSHP-SBA**
- Replacement jaw return spring ..... **No. SSP-S**
- Required Domestic packing charge ..... **No. SSHP/DOM**
- Required Export (Plywood Box) ..... **No. SSHP/EX**



No. SSHP-NBA

## HANDHELD PORTABLE SEED STRIPPER



Developed for use in rugged terrain and ecologically sensitive areas, the Hand Held Seed Stripper, HHSS, will let you harvest the seed you need, with little environmental impact. It weighs only 17 lbs. and is carried on a shoulder strap (included), which is light and easy to use.

It is powered by a low maintenance, fuel-efficient 2-cycle gas engine, which makes it portable, durable, and trouble free. Now with a collapsible shaft for easier transportation.

Three different 18" wide interchangeable stripper heads are included. A heavy-duty 'ripper head' cuts off tough, coarse seed heads such as Echinacea, Black-eyed Susan and Sunflower.

The medium reel harvests a variety of warm and cool season grasses, legume and other wildflowers. The light duty reel collects light, fluffy seed into the hopper like Little Bluestem, Asters and Goldenrods. Any species with an open seedhead at the top or outer edges of a plant can be harvest with the HHSS.

Harvest seed quickly and efficiently from nurseries or other small plots, too. If you are still picking wildflower, herbal or medicinal plant seed by hand, increase your efficiency 10-fold with the HHSS. These units are custom designed for efficient collection of local ecotype seed, important for ecological restoration, and collect 50% to 85% of the seed in one pass. Easy to clean as the seed is bagged right from the detachable hopper. Ships in two cartons: carton No.1 – 68"L X 12"W X 10"H, 18 lbs., carton No. 2 – 24"L X 24"W X 14"H, 20 lbs.

Hand Held Portable Stripper.....	<b>No. HHSS</b>
Export Crating.....	<b>No. HHSS/EX</b>

## PULL TYPE SEED STRIPPER

The PTSS was also developed for use in rugged terrain and ecologically sensitive areas and lets you harvest the seeds you need, with little environmental impact. The standard dual-stage brush effectively combs the seed off plants, while the rotation sets up an airflow that pulls the seed into the easy to clean hopper. Or try the new, optional ripper head that is designed for more aggressive harvesting of toughheaded wildflowers such as Echinacea.

An easy to use sliding hitch converts from transport to harvesting mode in a few seconds with no tools needed. Integrated hydraulics allow you to couple with your tractor's hydraulic system for infinitely variable height control. Or use the manual hydraulic pump to raise and lower the PTSS-4 just as easily. Powered by a reliable Briggs & Stratton Intek 6.5 HP OHV gasoline engine (no power take-off required). It consumes about 0.1 gallon of gas per hour. Hydraulic lift allows smooth and easy height adjustments and with minimal training, one person can easily operate the stripper. A small 15 to 25 HP tractor, all terrain vehicle, or draft animal pulls the PTSS4 stripper. A light agricultural tractor is recommended for the PTSS6.

The PTSS is designed for harvesting natural areas; native prairies, wetland edges, alpine meadows and nursery seed plots such as native grasses, wildflowers, forbs, herbal and medicinal plants etc. Rugged design allows access to



areas such as road allowances, rocky pastures, ditches and fencerows. Ideal for larger prairie areas, where due to ecological sensitivity, regular farm machinery cannot be permitted. Available with 4 ft. (1.2m) or 6 ft. (1.8m) wide reversible nylon bristle brush, it sweeps clean seed gently into the hopper, leaving the stalks intact - or you can set the brush to harvest leaves and petals of medicinal, herbal and spice crops. The harvesting height is adjustable from 4 in. (0.1m) to 6 ft. (1.8m) for both units, or with the addition of a height kit, harvesting height is 2.5 to 7 ft. PTSS4H and PTSS6H high lift models harvest from 4 in. (0.1m) to 7 ft. 8 in. (2.3m). (Not designed to be towed on highways at high speed.) Ship Dims. PTSS4 92" L x 74" W x 49" H, Ship Wt. 1200 lbs., PTSS6 Ship Dims. 118" L x 80" W x 49" H, Ship Wt. 1700 lbs.

Pull Type Seed Stripper, 4 ft. wide.....	<b>No. PTSS4</b>
Pull Type Seed Stripper, 6 ft. wide.....	<b>No. PTSS6</b>
Pull Type Seed Stripper, 4 ft. wide, w/height kit installed .....	<b>No. PTSS4H</b>
Pull Type Seed Stripper, 6 ft. wide, w/height kit installed .....	<b>No. PTSS6H</b>
Height Kit for existing strippers.....	<b>No. PTHK-I</b>
Ripper Head for 4 ft. Stripper.....	<b>No. PTRH-4</b>
Ripper Head for 6 ft. Stripper.....	<b>No. PTRH-6</b>
Hydraulic Hand Pump (not available for use with high lift models).....	<b>No. PTSSHHP</b>
Required Domestic Packing for 4 ft. Stripper .....	<b>No. PTSS4/DOM</b>
Required Export Packing for 4 ft. Stripper .....	<b>No. PTSS4/EX</b>
Required Domestic Packing for 6 ft. Stripper .....	<b>No. PTSS6/DOM</b>
Required Export Packing for 6 ft. Stripper .....	<b>No. PTSS6/EX</b>



Front View (Shown w/Casters & Frame)



Back View (Shown w/Casters & Frame)

### 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.

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 ..... **No. A15SB/E**  
 Model with 220V, 50Hz, 3 PH ..... **No. A15SB/C**  
 Adsorption Air Flow of 125 CFM  
 Connected Load: 9.8 KVA  
 Ship dims. 70" L x 47" W x 69" H  
 Net wt. 775 lbs. Gross wt. 850 lbs.

Model with 230V, 60Hz, 3 PH ..... **No. A30SB/E**  
 Model with 220V, 50Hz, 3 PH ..... **No. A30SB/C**  
 Adsorption Air Flow of 250 CFM  
 Connected Load 9.8 KVA  
 Ship dims. 70" L x 50" W x 70" H  
 Net wt. 775 lbs. Gross wt. 900 lbs.

Model with 230V, 60Hz, 3PH ..... **No. A75SB/E**  
 Model with 220V, 50Hz, 3PH ..... **No. A75SB/C**  
 Adsorption Air Flow of 350 CFM  
 Connected Load: 18.0 KVA  
 Ship dims. 73" L x 52" W x 78" H  
 Net wt. 800 lbs. Gross wt. 975 lbs.

#### Other electrical specifications are available.

- Off/On Humistat, Optional (for all Models) ..... **No. AH**
- Replacement Adsorption Filter A15 & A30 ..... **No. AF**
- Replacement Adsorption Filter A75 ..... **No. AF75**
- Replacement Reactivation Filter (All Models) ..... **No. RFA**
- Casters and Frame for A15 & A30 Model ..... **No. A15/30CF**
- Casters and Frame for A75 Model ..... **No. A75CF**
- Replacement Desiccant (200 lb drum minimum) ..... **No. A30-DESICCANT**

#### WE MUST HAVE the following information in order to determine your dehumidifier requirements.

How large is your room? (cu. ft.) \_\_\_\_\_ (Dims: W x L x H) \_\_\_\_\_  
 Is your room  air conditioned or  refrigerated?  
 What temperature do you maintain in the room? F°: \_\_\_\_\_ C°: \_\_\_\_\_  
 What relative humidity do you wish to hold? \_\_\_\_\_ %  
 What is your ambient relative humidity? \_\_\_\_\_ %  
 Ambient temperature? F°: \_\_\_\_\_ C°: \_\_\_\_\_  
 How are your walls, ceiling and floor constructed? (i.e. cement, plaster, wood, gypsum, vapor tight.) \_\_\_\_\_  
 Is the room  completely within a building or  have outside walls?  
 Number of: Doors \_\_\_\_\_ Windows \_\_\_\_\_  
 Can they be weather-stripped and made vapor tight?  Yes  No  
 How many people work in the room? \_\_\_\_\_  
 How often and for how long are the doors opened? \_\_\_\_\_  
 Is the room ventilated? \_\_\_\_\_  
 At what CFM rate? \_\_\_\_\_  
 Voltage Requirements: \_\_\_\_\_ Volts \_\_\_\_\_ Hz

## BAG TYING ACCESSORIES

### 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 With Cutter .....	<b>No. 353-5</b>
6" Straight Spring Eye Needle With Cutter .....	<b>No. 353-6</b>
5" Curved Solid Eye Needle .....	<b>No. 354-C5</b>
6" Curved Solid Eye Needle .....	<b>No. 354-C6</b>



### DIAMOND DEADLOCK TAG FASTENER

Made of heavy gauge copper wire. Available in quantities of 1000 or 5000.

Deadlock Tag Fastener .....	<b>No. 215</b>
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### SEEDBURO LOOP END WIRE TIES

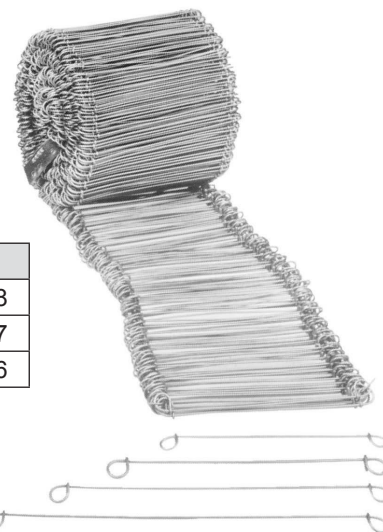
Our Loop End Wire Ties make bag closing simple, quick and economical. They assure speed and neatness with security and uniformity. These wire ties can be furnished in any gauge from 12 to 21, ranging in lengths from 3-1/2" to 48" (Please contact us for prices). Commonly used with our bagging tools No. 219A and No. 220 (shown below). All shipments are made in rolls of 5,000 ties. **MADE IN USA**

#### Galvanized

Gauge	5"	5-1/2"	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"	10"
18 Ga.	5x18	5-1/2x18	6x18	6-1/2x18	7x18	7-1/2x18	8x18	8-1/2x18	9x18	10x18
17 Ga.	5x17	5-1/2x17	6x17	6-1/2x17	7x17	7-1/2x17	8x17	8-1/2x17	9x17	10x17
16 Ga.	5x16	5-1/2x16	6x16	6-1/2x16	7x16	7-1/2x16	8x16	8-1/2x16	9x16	10x16

#### Stainless Steel

Gauge	5"	6"	7"	8"	9"	10"
18 Ga.	5x18SS	6X18SS	7X18SS	8X18SS	9X18SS	10X18SS
16 Ga.	5x16SS	6X16SS	7X16SS	8X16SS	9X16SS	10X16SS



### SPRING RETURN TWISTER

This heavy duty steel twister works great with our Loop End Wire Ties. One pull makes 2-1/2 turn twists. The hook automatically returns to its original position.

Spring Return Twister .....	<b>No. 219A</b>
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### 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 2-1/2 turn twists may be required. Also used for untying wire ties. Unit requires only a simple "cranking" motion.

Pistol Grip Twister .....	<b>No. 220</b>
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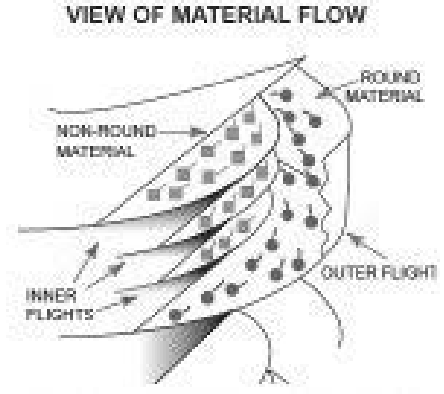




**HEAVY-DUTY SPIRAL SEPARATORS**

Spiral Separators are commonly used to separate good 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 soybeans, corn, canola, mustard, peas, vetch, wheat, rye, barley, oats, flaxseed, 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.



How they work

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.**



Lab Size

**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 (up to) four separating turns to 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**
- Galvanized Lab Spiral Separator, 2.5 Turns ..... **No. LAB25G**



**Heavy-Duty Single & Double Open 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" to 7" in full inch increments), left or right hand discharge. Pitch is determined by application. Single 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 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.



Double Spiral

Single Spiral Separator – left hand discharge		Double Spiral Separator – right hand discharge	
<b>40SHLG</b>	Galv. Single Spiral Separator, 4" Flight	<b>40DHRG</b>	Galv. Double Spiral Separator, 4" Flight
<b>50SHLG</b>	Galv. Single Spiral Separator, 5" Flight	<b>50DHRG</b>	Galv. Double Spiral Separator, 5" Flight
<b>60SHLG</b>	Galv. Single Spiral Separator, 6" Flight	<b>60DHRG</b>	Galv. Double Spiral Separator, 6" Flight
<b>70SHLG</b>	Galv. Single Spiral Separator, 7" Flight	<b>70DHRG</b>	Galv. Double Spiral Separator, 7" Flight

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.

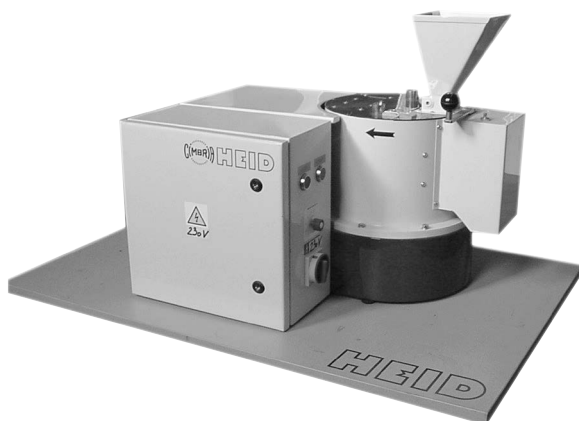
## CIMBRIA HEID CENTRICOATER SEED COATERS

The heart of the Centricoater, offered by Seedburo, is the mixing chamber, which is a stainless steel cylindrical housing with a rotation bottom or internal rotor. The seed is dropped into the chamber and onto the rotor. This rotor moves the seed gently up the stationary chamber side wall causing a folding of seed from outward to inward in the chamber. A spinning disk in the center of the mixing chamber, where the treating material is delivered, atomizes the liquid treatment into the vertical seed layer. Treatment is introduced into the chamber by hand or with a syringe (not provided.) This provides a highly intensive uniform application of seed treatment on each kernel of seed. All kinds of treatments, liquids and powders, can be applied effectively in this system.

### LABORATORY MODEL CC CENTRICOATER

The Model CC is used for coating samples of seed with liquid and powder agents. The unit is equipped with an opening for manual dosing of agents and requires 6 bar (90 PSI) of clean, dry compressed air preventing seed treatment and powders from accumulating beneath the rotor. (Compressor must be obtained locally.)

The Centricoater is shipped complete with the following: horizontal rotating disk, V-belt drive with 2HP TEFC motor, two inlet ports for dosing agents by optional pumps and inlet hopper. There is a manually operated discharge door and frequency inverter for variable speed drive. 230V, 1PH, 50/60Hz motor. The 115V unit will be supplied with a step-up transformer. Please specify Hz when ordering. Ship wt. 275 lbs. Ship dims. 33" L x 24" W x 32" H



Centricoater Seed Coater 230V, 60Hz/1PH .....	No. CC/E
Centricoater Seed Coater 230V, 50Hz/1PH .....	No. CC/C
Centricoater Seed Coater 115V, 60Hz/1PH w/Step-up Transformer .....	No. CC/B
Diaphragm Pump, capacity 13 liters/hour .....	No. CDDP
Powder Dosing Unit, capacity 1.7 to 35 liters/hour .....	No. CDPD
Net Weight Scale w/Manual Dump Door for Weighing incoming product, capacity up to 2Kg .....	No. CCMD

## BATCH LAB TREATER

The Seedburo Batch Lab Treater treats all types of seed ranging in sample size from 4 ounces (113g) to 5 pounds (2.2Kgs). The Seedburo BLT is designed to accurately apply seed treatment products in the laboratory by seed conditioners, seed testing and research personnel.

The treater has a self-contained timer and switches. The timer and on/off switch are interlocked, permitting the timer to automatically stop the treater.

A combination of injection and compressed air provides accurate distribution of chemical on the seed sample through an air nozzle attached to a graduated, disposable syringe. This configuration provides for a uniform, measurable chemical application rate and allows quick treatment changes.

The BLT is supplied with two drums. The first drum is 6" deep by 6" in dia., the second drum is 12" deep by 11" in dia. Drums are interchangeable and made of stainless steel. Unit comes complete with drum drive, self-contained air compressor, timer and hand held application gun with graduated syringe. Ship wt. 72 lbs. Ship dims. 34" L x 21" W x 22" H

Batch lab treater 110V, 60Hz/1PH .....	No. BLT/B
Batch lab treater 220V, 50Hz/1PH .....	No. BLT/C



### 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.

Available in 110 or 220 Volt AC, or 12 Volt DC versions. Unit is supplied with one package of needles, one cone of thread and operator's maintenance manual. Ship wt. 17 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

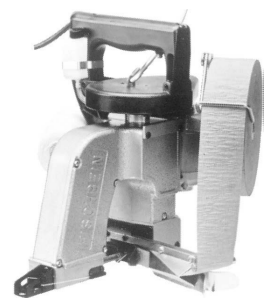


### FISCHBEIN PORTABLE BAG CLOSER WITH TAPE-SEWING ATTACHMENT

The Tape-Sewing Attachment allows the Model F closer to sew "stitch through tape" closures. Attachment uses 2" wide tape, which is available in the colors listed below. Bag Closer with attachment Ship wt. 19 lbs. Ship dims. 15"L x 12"Wx15"H

Bag Closer (with components for tape attachment), 110V 50/60Hz .....	No. MODEL F-T
Bag Closer (with components for tape attachment), 220V 50/60Hz .....	No. MODEL F-T/A
Replacement Tape Sewing Attachment .....	No. 1650

Model F Shown with tape attachment



### 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"Lx13"Wx7"H

Reel-Type Suspension Balance .....	No. 1550
<b>Crepe Paper Tape</b> (Ctn of 10 Rolls - approx. 1800 feet) :	
Natural Kraft .....	No. D311N
White .....	No. D311W
<b>High Quality Thread - 65% Polyester / 35% Cotton Blend:</b>	
8 oz. Cones (for all portable models) .....	No. D305
(Each 8 oz. cone will sew approx. 500 feet. Available in ctns of 10 or 32 cones.)	
2-1/2 lb. Cones .....	No. D310
18 lb Jumbo Cones (for belt conveyor models) .....	No. D318
Needles for D, E, and Model F units (Pkg. of 25) .....	No. DE5



Crepe paper tape, reel-type suspension, lubricating oil and cone of thread.

#### To Insure Maximum Efficiency from Fischbein Bag Closing Equipment, use these Specially Selected Lubricants:

Cleaning Lubricant, 1 Gallon (for cleaning feed mechanism parts) .....	No. D301
<i>Quickly washes out all traces of abrasive and harmful dirt</i>	
Thread Lubricant, 1 Gallon .....	No. D302
<i>Required for closing waterproofed or specially processed, paper or textile bags. Saturates entire cone in seconds.</i>	
Lubricating Oil, 1 Quart (for lubricating all parts) .....	No. D303
<i>Lubricates properly under the most adverse sewing conditions. Flushes out abrasive dust and dirt accumulated on parts.</i>	

## SEEDBURO MODEL 4580F BAG CLOSING CONVEYOR SYSTEM

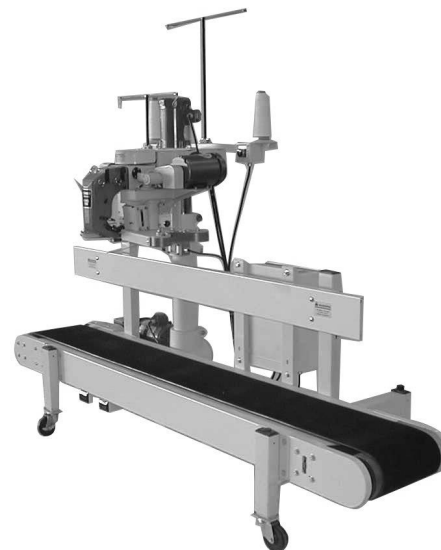
The Seedburo Model 4580F Bag Closing Conveyor includes a 12" wide belt, 8' overall length flat bed conveyor with a 3/4 HP TEFC motor gear reducer drive. The unit features individual, adjustable leg height, attached sewing pedestal (without sewing head), and a sewing head mounting plate to accommodate different types of sewing machines. The system also has a mounting bracket for Power In-Feed and 3/4 HP TEFC drive with sheave for sewing head. Standard belt speed is 30 FPM (35 and 40 FPM speeds are available).

Conveyor system is constructed of mild steel, aluminum and iron casting. System includes magnetic starters with overload protection, transformer for controls in NEMA 12 enclosure, foot switch to operate the conveyor and sewing head, and a limit switch to stop the conveyor.

### SPECIFICATIONS:

Conveyor dims. 96" L x 32" W, Ship dims. 103" L x 39" W x 67" H, Ship wt. 1040 lbs (without sewing head), Ship wt (head only) 65 lbs. (Specify voltage, Phase and Hz for drive and belt speed) —

Includes 8 ft. Conveyor, Pedestal with Casters, Less Sewing Head ..... **No. 4580F**  
 Same as above, 220V, 50/60 Hz ..... **No. 4580F/A**



Seedburo offers the Fischbein Model 100SH Sewing Head for use with the Model 4580F Bag Closing Conveyor System. This rugged, reliable sewing head is constructed from heavy-duty metal components. The head features an integral variable-speed pulley allowing variable sewing speed of 1200 to 2200 RPM. The stitch width can be adjusted from 2 to 4 stitches per inch and uses a Federal Type 401, two thread stitch. The Model 100SH sewing head will handle all types of paper, poly and textile bags and can accommodate 8 oz. to 18 lb. cones of thread (see page 98 for thread and accessories). Ship wt. 65 lbs, Ship dims. 16"x18"x17" **MADE IN USA**

Fischbein Model 100SH Sewing Head ..... **No. 100SH**

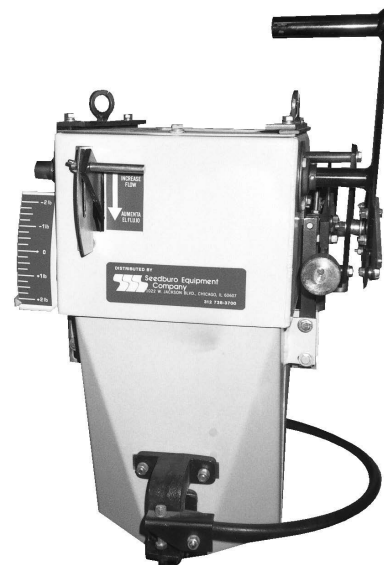


## SEMI-AUTOMATIC GROSS BAGGING SCALE

Seedburo's Semi-Automatic Gross Bagging Scales are designed to weigh free flowing materials. The bagging scales are mechanical in operation and require no air or electricity. The operator simply sets the target weight on the back of the scale, places a bag on the discharge spout, and pulls the load handle. The scale will automatically fill the bag to the desired weight and cut itself off. The operator removes the bag and repeats the process.

The Model 41 Bagging Scales are designed for handling bags between 25 and 150 lbs. at a rate of 4 to 6 bags per minute. The scales are pre-calibrated to a 5 to 1 ratio and require minimal adjustment at installation. Each unit has a 9" x 7" inlet opening and can be mounted directly to a flange on the bin bottom. The model 41 Bagging Scales features sturdy construction an adjustable internal flow regulator and easy bag tare. Actual wt. 175 lbs. Ship wt 230 lbs. Ship dims. 29" L x 26" W x 33" H.

Bagging Scale with 25" Spout, Stainless Steel (pounds) ..... **No. 41-25**  
 Bagging Scale with 25" Spout, Stainless Steel (kilograms) ..... **No. 41-25M**  
 Bagging Scale with 32" Spout, Stainless Steel (pounds) ..... **No. 41-32**  
 Bagging Scale with 32" Spout, Stainless Steel (kilograms) ..... **No. 41-32M**



### UNION SPECIAL SEWING MACHINES

The 3000 Class, portable, single thread bag closing machine, for efficient, fast and easy closing of bags. This bag closer is a portable, light weight, well balanced machine that fits perfectly in an operators hand. It is designed for closing bags made of light weight jute, cotton, linen, paper or plastic. The CE-approved direct drive motor is fan cooled, with a 16 foot power cord. The housing is fiberglass-reinforced and dust-proof. Permanently lubricated ball bearings make the 3000 a sturdy and durable work tool. An optional lock spring balancer (No.90191M1) is available for suspension operation. Sewing speed is 1500-1900 stitches per minute, depending upon the material, with 3 stitches per inch and capacity of 3/16" (12 plies of paper). Net wt 8.4 lbs., Ship wt. 12 lbs. Ship dims. 17" x 9" x 18"



Union Special Portable Bag Closer 110V, 60Hz .....	<b>No. 3000B</b>
Union Special Portable Bag Closer 220V, 50Hz .....	<b>No. 3000A</b>
Top Lock Spring Balancer .....	<b>No. 90191M1</b>
Extra needles, Pkg. of 10 .....	<b>No. 3000NEEDLE</b>

### 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.

**FEATURES:**

- Adjustable stitch length - 3 to 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)

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" x 9" x 18"



Bag sewer, two thread chainstitch, type 401 110V, 50/60Hz .....	<b>No. 2200B</b>	 <b>Made in USA</b>
Bag sewer, two thread chainstitch, type 401 220V, 50/60Hz .....	<b>No. 2200A</b>	
Bag sewer, single thread chainstitch, type 101 110V, 50/60Hz .....	<b>No. 2200BA</b>	
Bag sewer, single thread chainstitch, type 101 220V, 50/60Hz .....	<b>No. 2200AA</b>	
Top lock spring balancer .....	<b>No. 90191M</b>	
Bag feed-in guide and guard .....	<b>No. 2203E (short) No. 2103E (long)</b>	
Pedestal for hands-free operation, foot pedal operated .....	<b>No. H1400FWS</b>	
Extra needles, Pkg. of 50 .....	<b>No. 2200NEEDLE</b>	

### 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 Weight 12 lbs. Ship wt. 16 lbs. Ship dims. 15" x 12" x 16" **MADE IN USA**



Bag sewer, single thread chainstitch, 110/125V, 50/60hz.....	<b>No. 4000B</b>
Bag sewer, single thread chainstitch, 220/240V, 50/60hz .....	<b>No. 4000A</b>
Top lock spring balancer.....	<b>No. 90191M1</b>
Extra needles, Pkg of 10 .....	<b>No. D5</b>

## PALLET TRUCKS

The EZY-TILT Pallet Truck offers versatile, low cost mobility for materials that are moved and stored in stacks. Items, such as bagged feed or fertilizer become much easier to handle when placed on pallets. All units have a 1,000 lb. capacity. The unique double fork is hinged for optimal positioning during both loading and unloading operation. The shoe locks automatically into position and is easily released by tripping a foot lever. The Steel Frames are 14 gauge and are recommended for general use. The Aluminum units are recommended around corrosive materials and where spark resistant equipment is required.

### PALLET TRUCK SPECIFICATIONS:

**HAND BRAKES:** Available on some models. Brakes are recommended for use on ramps, steps and other inclines.

**SOLID RUBBER TIRES:** Recommended for use on hard surfaces. Tire size 10" x 2-1/2".

**AIR TIRES:** With inner tubes. Recommended for rough surfaces. Made of a thick 4-ply rubber and are 12" x 3-1/2".

**TWO WHEEL MODELS:** Feature two heavy-duty forks to allow use with pallets. Models 800SS thru 825AA have forks 11" or 13-3/4"L. Frame size is 48" x 14-1/2".

**DEEP-FRAME MODELS:** 830SS thru 830AS have 13-3/4"L x 4" W forks. These units have deeper skid rails that keep loads from falling back on the operator. The skid rails extend back 19". A longer frame height is also standard 54" H x 14-1/2" W.

**FOUR WHEEL MODELS:** Standard with a 10" x 19" solid shoe for handling boxes which are stacked without any pallets. Forks can be ordered as an option. The skids are the same as the Deep-Frame Models and the frames are the same as the Standard Two-Wheel Models. Two 6" swivel wheels are mounted on the skid rails which allows the entire load weight to be carried on the truck increasing the weight one person can handle. The addition of rear wheels fixes the angle at which the frame is balanced. The truck is best used on flat surfaces.

STANDARD 2-WHEEL MODELS WITH 11" FORKS						
Steel	Aluminum	Brakes	Air Tires	Solid Tires	Load Cap.	Net Wt.
No. 800SS	--	--	--	X	1000 lbs.	72 lbs.
No. 800SA	--	--	X	--	1000 lbs.	76 lbs.
No. 825SS	--	X	--	X	1000 lbs.	78 lbs.
No. 825SA	--	X	X	--	1000 lbs.	82 lbs.
--	No. 800AS	--	--	X	1000 lbs.	65 lbs.
--	No. 800AA	--	X	--	1000 lbs.	60 lbs.
--	No. 825AS	X	--	X	1000 lbs.	60 lbs.
--	No. 825AA	X	X	--	1000 lbs.	64 lbs.
2-WHEEL DEEP FRAME MODELS WITH 15" FORKS						
No. 830SS	--	--	--	X	1000 lbs.	81 lbs.
No. 830SA	--	X	X	--	1000 lbs.	98 lbs.
--	No. 830AS	--	--	X	1000 lbs.	69 lbs.
4-WHEEL MODELS WITH 10" x 19" SOLID SHOE*						
No. 806SS	--	--	--	X	1000 lbs.	95 lbs.
No. 826SS	--	X	--	X	1000 lbs.	106 lbs.
--	No. 806AS	--	--	X	1000 lbs.	80 lbs.
--	No. 826AS	X	--	X	1000 lbs.	82 lbs.

\*Optional forks instead of solid shoe are available.

## PLASTIC PALLETS

Transport and store feeds, seeds, fertilizer, etc. on Seedburo's low cost plastic pallets. The double fork shoe of our Ezy-Tilt truck will accommodate the lighter weight pallets with reinforced center support. Made of a blend of recycled and virgin plastic.

Model No.	Deck Size	Stringer Ht.	Type	Color	Capacity	Wt.
No. 4976	12" x 24"	1-1/2"	Plastic	Black	800 lbs.	1 lb.
No. 4978	15" x 24"	1-1/2"	Plastic	Black	800 lbs.	1-1/4 lb.



Model 825SS



Model 830SA



Model 806SS





### HYTROL MODEL R ALUMINUM PORTABLE "FOLDING" BELT CONVEYOR

The Model "R", besides being extremely convenient (it can be folded in half), is also extremely versatile. Conveying uses include: truck, loft or freight car, floor-to-floor, stairway, or as a portable booster with a wheel or roller conveyor. Suitable for bag handling, bag and carton stacking, and moving cartons, cases, and boxes. Hytrol Conveyors are **MADE IN USA**.

Size to Order	HP	Weight (Lbs.)	Model Number
10'	0.5	175	No. HR10
11.5'	0.5	190	No. HR11
13'	0.5	205	No. HR13
15'	0.5	225	No. HR15
17'	0.5	245	No. HR17
19'	0.5	270	No. HR19
21'	0.5	285	No. HR21

#### CONVEYORS INCLUDE:

- Black Trackmate 447 Roughtop w/PVC Cover - 12" Wide
- 18" Wide Aluminum Bed
- 115/230V, 60 Hz, 1PH Enclosed Motor (specify requirements)
- 65 FPM Constant Belt Speed
- Reversing Drum Switch
- 20' Power Cord with Plug.

#### OPTIONAL EQUIPMENT FOR MODEL R

- Two Rubber Wheels ..... No. HRW
- Stand with Rubber Wheel & Locks ..... No. HRWL
- Undercarriage ..... No. HRUC
- Roller Carriage ..... No. HRRC



### HYTROL MODEL B/BL PORTABLE FOLDING "CLEATED" CONVEYOR

Ideal for stacking, loading, and unloading. Cleats permit use at inclines up to 45°. Complete with portable base. "BL" conveys material from one floor to another or to a balcony area. Long bed extends into a truck, reducing distance for loading the conveyor. Lever control easily adjusts angle. Angle automatically locked by powered screw.

#### CONVEYOR INCLUDES

- Black Trackmate 447 Roughtop w/PVC Cover-14" Wide with Two 1- 1/2" Dia. X 1" Hardwood Cleats Spaced every 60"
- 4" Deep x 20" Wide x 12 Ga. Slider Bed
- Welded Steel Base
- 4" Dia. Steel Swivel Casters (10' to 16' Lengths)
- 6" Dia. Steel Swivel Casters (20' and 22' Lengths)
- Powered Screw Raising Device
- 115/230V, 60 Hz, 1PH - Totally Enclosed Motor (specify requirements)
- 65FPM Constant Belt Speed
- Reversing Drum Switch
- 20' Power Cord With Plug.

Size to Order	H.P.	Weight Lbs.	Model No.
10'	3/4	545	HB10
12'	3/4	590	HB12
14'	3/4	650	HB14
16'	3/4	695	HB16
20'	1	930	HBL20
22'	1	990	HBL22



### HYTROL MODEL BA PORTABLE FOLDING "BOOSTER" BELT CONVEYOR

#### CONVEYOR INCLUDES:

- Black Trackmate 447 Roughtop w/PVC Cover-14" Wide
- 4" Deep x 20" Wide x 12 Ga. Slider Bed
- Welded Steel Base
- 4" Dia. Steel Swivel Casters (10' to 16' Lengths)
- 6" Dia. Steel Swivel Casters (20' and 22' Lengths)
- Powered Screw Raising Device
- 115/230V, 60Hz, 1PH - Enclosed Motor (specify requirements).

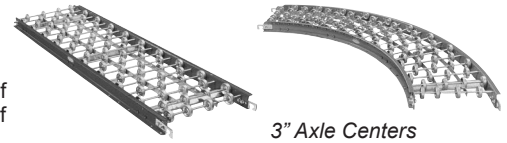
Size to Order	H.P.	Weight Lbs.	Model No.
10'	3/4	560	HBA10
12'	3/4	600	HBA12
14'	3/4	650	HBA14
16'	1	700	HBA16
20'	1	940	HBA20
22'	1	990	HBA22

#### OPTIONAL EQUIPMENT FOR MODEL B, BL & BAL

- 4-6" Dia. Rubber Swivel Casters ..... No. HBRSC
- 2 - Floor Locks ..... No. HBFL
- Guard Rails Both sides per foot..... No. HBGR

### GRAVITY SKATEWHEEL CONVEYOR

Gravity Skatewheel conveyor is ideally used to convey lightweight packages or when operation requires lightweight sections. Useful in setting up temporary conveyor lines in warehousing activities, shipping departments, assembly areas, etc. Skatewheel curves add to the versatility of straight conveyors and provide excellent package orientation because of the differential action of wheels. Curves will convey product with minimum amount of pitch based on weight and size.



Steel Frames	12" Overall Width						15" Overall Width					
	Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)	
			5'	10'			5'	10'			5'	10'
			3SW-12-16	16			43	80			3SW-15-16	16
3SW-12-10	10	37	68	3SW-15-10	10	40	73	3SW-12-8	8	35	65	
3SW-12-6	6	33	63	3SW-15-6	6	37	68	3SW-12-6	6	33	63	

Aluminum Frames	12" Overall Width						15" Overall Width					
	Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)	
			5'	10'			5'	10'			5'	10'
			3AW-12-16	16			23	43			3AW-15-16	16
3AW-12-10	10	20	36	3AW-15-10	10	22	39	3AW-12-8	8	19	35	
3AW-12-6	6	18	33	3AW-15-6	6	20	36	3AW-12-6	6	18	33	

Steel Frames	18" Overall Width						24" Overall Width					
	Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)	
			5'	10'			5'	10'			5'	10'
			3SW-18-20	20			54	98			3SW-24-28	28
3SW-18-18	18	49	92	3SW-24-24	24	62	112	3SW-18-16	16	46	87	
3SW-18-16	16	46	87	3SW-24-20	20	57	103	3SW-18-14	14	44	83	
3SW-18-14	14	44	83	3SW-24-18	18	55	100	3SW-18-12	12	41	77	
3SW-18-12	12	41	77	3SW-24-16	16	52	95					

Aluminum Frames	18" Overall Width						24" Overall Width					
	Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)		Model No.	WPF	Wgts. (Lbs.)	
			5'	10'			5'	10'			5'	10'
			3AW-18-20	20			28	52			3AW-24-28	28
3AW-18-18	18	27	49	3AW-24-24	24	32	59	3AW-18-16	16	25	46	
3AW-18-16	16	25	46	3AW-24-20	20	30	55	3AW-18-14	14	24	44	
3AW-18-14	14	24	44	3AW-24-18	18	29	53	3AW-18-12	12	22	41	
3AW-18-12	12	22	41	3AW-24-16	16	28	51					

### GRAVITY SKATEWHEEL CURVE CONVEYOR Gravity hooks & bolts both ends (45° and 90° curves)

Steel Frames	12" Overall Width (48" Outside Radius)				15" Overall Width (48" Outside Radius)				18" Overall Width (48" Outside Radius)				24" Overall Width (60" Outside Radius)			
	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)
SWC-12-45	45°	30	21	SWC-15-45	45°	40	23	SWC-18-45	45°	45	25	SWC-24-45	45°	78	37	

Aluminum Frames	12" Overall Width (48" Outside Radius)				15" Overall Width (48" Outside Radius)				18" Overall Width (48" Outside Radius)				24" Overall Width (60" Outside Radius)			
	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)	Model No.	Degree	WPC	Wgts. (Lbs.)
AWC-12-45	45°	30	12	AWC-15-45	45°	40	14	AWC-18-45	45°	45	15	AWC-24-45	45°	78	23	

### GRAVITY ROLLER CONVEYOR (1-3/8 in Dia. 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	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)					
			5'	10'			5'	10'			5'	10'			5'	10'			5'	10'				
			SSR-12-11/2	11/2"			55	101			SSR-15-11/2	11/2"			62	112			SSR-18-11/2	11/2"	72	135	SSR-24-11/2	11/2"
SSR-12-3	3"	37	68	SSR-15-3	3"	42	78	SSR-18-3	3"	47	97	SSR-24-3	3"	58	108	SSR-12-41/2	41/2"	32	58					
SSR-12-41/2	41/2"	32	58	SSR-15-41/2	41/2"	33	61	SSR-18-41/2	41/2"	40	73	SSR-24-41/2	41/2"	47	88	SSR-12-6	6"	29	52					
SSR-12-6	6"	29	52	SSR-15-6	6"	30	55	SSR-18-6	6"	32	63	SSR-24-6	6"	42	78	SSR-12-9	9"	26	47					
SSR-12-9	9"	26	47	SSR-15-9	9"	27	50	SSR-18-9	9"	29	57	SSR-24-9	9"	37	69	SSR-12-12	12"	24	44					
SSR-12-12	12"	24	44	SSR-15-12	12"	26	46	SSR-18-12	12"	27	52	SSR-24-12	12"	34	63									

Aluminum Frames	12" Overall Width						15" Overall Width						18" Overall Width						24" Overall Width					
	Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)		Model No.	Roller Centers	Wgts. (Lbs.)					
			5'	10'			5'	10'			5'	10'			5'	10'			5'	10'				
			SAR-12-11/2	11/2"			29	53			SAR-15-11/2	11/2"			33	56			SAR-18-11/2	11/2"	38	70	SAR-24-11/2	11/2"
SAR-12-3	3"	20	36	SAR-15-3	3"	23	41	SAR-18-3	3"	27	51	SAR-24-3	3"	30	56	SAR-12-41/2	41/2"	17	30					
SAR-12-41/2	41/2"	17	30	SAR-15-41/2	41/2"	18	32	SAR-18-41/2	41/2"	20	38	SAR-24-41/2	41/2"	25	46	SAR-12-6	6"	15	27					
SAR-12-6	6"	15	27	SAR-15-6	6"	16	29	SAR-18-6	6"	18	33	SAR-24-6	6"	22	41	SAR-12-9	9"	14	24					
SAR-12-9	9"	14	24	SAR-15-9	9"	14	26	SAR-18-9	9"	16	30	SAR-24-9	9"	19	36	SAR-12-12	12"	12	23					
SAR-12-12	12"	12	23	SAR-15-12	12"	13	24	SAR-18-12	12"	14	27	SAR-24-12	12"	18	33									

### 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)			24" Overall Width (48" Outside Radius)		
	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)
SSRC-12-45	45°	35	SSRC-15-45	45°	40	SSRC-18-45	45°	44	SSRC-24-45	45°	66	

Aluminum Frames	12" Overall Width (36" Outside Radius)			15" Overall Width (39" Outside Radius)			18" Overall Width (42" Outside Radius)			24" Overall Width (48" Outside Radius)		
	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)	Model No.	Degree	Wgts. (Lbs.)
SARC-12-45	45°	12	SARC-15-45	45°	17	SARC-18-45	45°	19	SARC-24-45	45°	26	

## LABORATORY SEED AND GRAIN DRYER



The Grainman® Laboratory Seed & Grain Dryer has been designed to combine flexibility and efficiency and is easy to use. It is used to dry laboratory samples of grain and seed in order to estimate hulling and recovery of various grains. The drying time will vary according to the variety and type of grain to be tested, as well as the percentage of humidity already in the sample. The outer cabinet and control box are made of stainless steel and the optional sieves are made of brass to assure rust free use for many years. Complete with 6-3/4" diameter x 6-1/2" wide fan wheel, energy efficient two-speed centrifugal fan, capacitor, and auto thermal protection. The unit allows for drying of samples at a continuous low temperature.

The No.6612 Dryer has a 1450-watt stainless steel heater assembly with protective guard, spacer and brackets. It is isolated, pre-wired and tested at the factory prior to shipment. The finned stainless steel heating element is 10-1/2" long and is 120V.

The standard control box is 120V, 1PH, 60Hz and includes high temperature limit protection, digital indication of real time temperature and targeted temperature. Also available in 220V/50Hz.

Brass sieves (not included) are 8" in diameter and can be purchased in 2", 4" or 8" heights, depending upon the capacity you require. The 2" sieves hold approximately 85 cubic inches, the 4" holds approximately 175 cubic inches, and the 8" holds about 352 cubic inches of material. Four covers are supplied with the machine for closing off unused positions on the dryer. Net wt. 200 lbs., Ship wt. 290 lbs., Ship dims. 46" L x 30" W x 43" H.



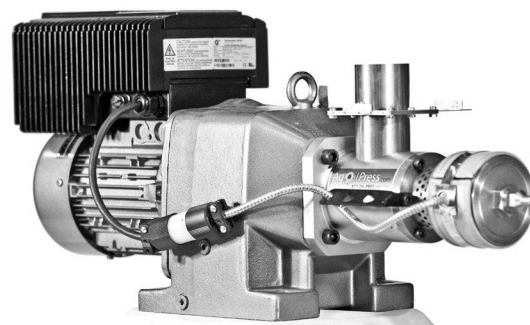
Seed & Grain Dryer, 110V 50/60Hz 1450 Watts.....	<b>No. 6612</b>
Seed & Grain Dryer, 110V 50/60Hz 2175 Watts.....	<b>No. 6613*</b>
Seed & Grain Dryer, 220V 50/60Hz 1450 Watts .....	<b>No. 6622</b>
Seed & Grain Dryer, 220V 50/60Hz 2175 Watts .....	<b>No. 6623*</b>
Sieves, 2" High, 8" Diameter .....	<b>No. 16BS8W2</b>
Sieves, 4" High, 8" Diameter .....	<b>No. 16BS8W4</b>
Sieves, 8" High, 8" Diameter .....	<b>No. 16BS8W8</b>
Optional Set (4) of Caster Wheels.....	<b>No. 60SOC</b>
Required Crating Charge (Domestic/Export).....	<b>No. 66BOX</b>

\*Models 6613 and 6623 require a 30 Amp line and are supplied without an electric cord.



## AgOil PRESS

The AgOil Press is a precision cold screw press. It is engineered to mechanically extract from seeds, beans and nuts the maximum amount of oil without producing high temperatures. The oil and meal under normal operation does not exceed 130°F (54°C). Typical oil extraction efficiencies run 82% to as high as 90% oil extraction. Because of the low temperature extraction, the nutrition in the oil and press meal is perfectly preserved. Even though this is a cold press system, there is a higher degree of efficiency when the feed stock has been pre-heated, particularly in cold regions when the feed stock is below room temperature. The optional commodity heater provides the pre-heating of the feed stock before the pressing process. **MADE IN USA**



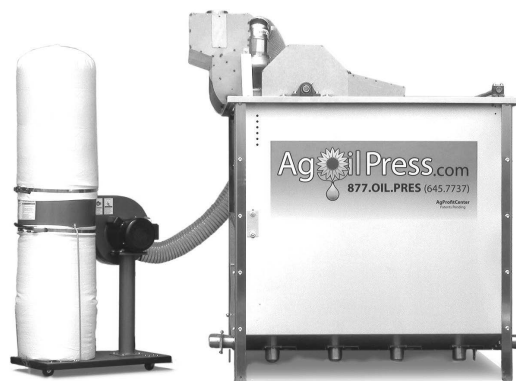
M70 w/ VFD2

The AgOil Press is mounted onto the gear box, with the VFD (Variable Frequency Drive) mounted to the back of the gear box, making the Oil Press powerful and easy to use. The AgOil Press is engineered to be set up and run continuously 24 hours a day without any other intervention. The press draws only 4-6 amps under normal operation. The press motor has a variable speed controller to accurately set the rate at which the press runs. The slower you run the machine, the more oil will be extracted. The press can run continuously - 24 hours a day - for months on end, and because our custom made parts are Rockwell 62-64 hardness (as hard as steel can get), our oil press will produce **50 - 70 gallons** of oil a day; **1,500 - 2,100 gallons** a month on most crops. Shipping dims: 36" W x 15" L x 18" H Shipping wt: 195 lbs.

AgOil Press without VFD, 240V 60Hz 1 ph .....	<b>No. M70/C</b>
AgOil Press with remote or on board VFD2, 240 V 60 Hz 1 ph.....	<b>No. M70-VFD2</b>
Commodity Heater, fits into oil press inlet .....	<b>No. M70-CH</b>

## Commodity Cleaner

Successful oil extraction begins with clean commodity. Foreign matter (FM) causes less oil extraction and premature wear of the oil press parts. The commodity cleaner separates husks, hulls, chaff, twigs, rocks, and other foreign matter from your commodity. The stainless steel vacuum hood with a dust collector removes most light foreign material before the commodity flows through a large scalping screen collecting foreign material larger than the commodity. Next the commodity flows onto a smaller sieve screen where foreign material smaller than the commodity flows through the screen to a tray below. The commodity flows out of the bottom of the cleaner into the hopper, which contains four ports to feed up to four oil presses. The commodity could also be hooked up to an auger system using one of the two side ports. The entire Commodity Cleaner is constructed with food grade stainless steel that will last many generations. To change commodity, simply change the size of the scalping screen and the sieve screen. Shipping dims: 48"L x 60"W x 70"H Shipping wt: 515 lbs. **MADE IN USA**



Commodity Cleaner, 110V 60Hz 1 ph w/ 1Hp dust collector .....	<b>No. SC2-01</b>
Additional Screen for Commodity Cleaner (specify seed or grain).....	<b>No. SC2-02</b>

## Centrifuge Oil Cleaner

The Centrifuge spins the oil in a stainless steel bowl, removing contaminants and water from the oil - cleaning the oil down to 1 micron. The unit is easy to use and easy to clean due to the stainless steel, food grade quality construction. Heated oils release the captured dirt quicker than cold oils. Vegetable oils may load up the machine with shortening if unheated. The debris remains captured in the centrifuge bowl and is held in place by gravitational force. Also, there is an inner wall that prevents contamination upon draining. The machine isn't a separator. It is used to de-water and remove any trace particles from the oil or biodiesel after washing. The biodiesel in this state isn't (or shouldn't be) any more caustic than when you put it in the tank. Shipping dims: 22"L x 22"W x 26"H Shipping wt: 75 lbs.



Centrifuge Oil Cleaner, 115 V 60 Hz 1 ph.....	<b>No. CF01-01</b>
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## 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 more gentle handling. **MADE IN USA**

### 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

Model	B3-75ED	B3-200	B3-300	C3-175ED	C3-500	C3-700
Capacity - Free flowing Material @	75 bph 94 cfh	200 bph 250 cfh	300 bph 375 cfh	175 bph 220 cfh	500 bph 630 cfh	700 bph 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	5.0	15.0	21.0
TPH @ 75 lbs/ft3	3.5	9.3	14.0	8.0	23.0	32.0
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	3 - 1/4"			4 - 1/4"		
Head Casing	14 gauge			12 gauge		
Headshaft Dia.	1-3/16" diameter			1-3/16" dia to 60', 1-7/16" dia over 60'		
Headshaft Bearing	Ball Bearing Pillow Block					
Head Pulley	4-1/4" dia. with vulcanized rubber lagging			5-1/4" dia with vulcanized rubber lagging		
Buckets	3-3/4" x 3" plastic or 18 gauge steel			6" x 4" plastic or 18 gauge steel		
Belting	4" wide PVC, rubber optional			61/2" wide PVC, rubber optional		
Legging	16 gauge twin box columns					
Boot Casing	12 gauge					
Bootshaft	1-3/16" dia					
Bootshaft Bearing	1-3/16" two bolt flange					
Boot Pulley	Slatted, self cleaning style					
Construction	Carbon steel (galvanized, 304 stainless steel optional)					
Drive Package	Optional					
Motor	Optional					



Model B3



Model C3-Shown with  
Optional #4 Drive Package  
NOTE: Guards Removed  
for Photos Only

#### Drive Packages for B3 & C3 Elevators (Motor not included):

- #1 Drive Package: includes V-belts, sheaves, bushings, motor mount and drive guards .....No. DP1
  - #1 Backstop (the factory recommends the use of a backstop with drive package).....No. BS1
  - #2 Drive Package : includes shaft mounted gear reducer, V-belts, sheaves, bushings, motor mount and drive guard.....No. DP2
  - #2 Backstop (the factory recommends the use of a backstop with drive package).....No. BS2
  - #4 Drive Package - Shaft mount wormgear with 3 HP, TEFC motor (specify voltage).....No. DP4
- (Contact us for assistance or for current price and delivery information)*

## 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

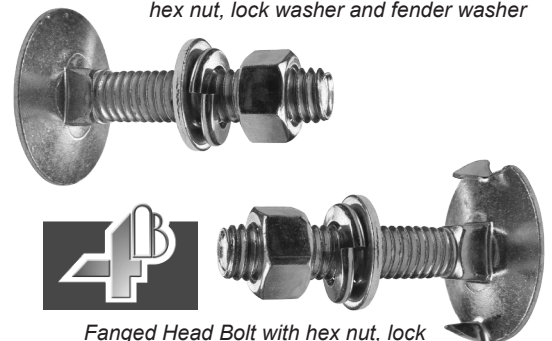
Nominal Size	Part #	Dimensions				Standard Bolt Holes				Weights and Packaging			
		Length	Projection	Front Depth	Back Depth	Thickness	No. of Holes	Bolt Size	Hole Center	Dist. Down	Weight Lbs.	Pkg. Qty.	Pkg. Wt
3x2	CC-SP032	3-5/16	2-1/2	1-3/8	2-1/16	3/16	2	1/4	1-3/4	7/8	.20	48	11
4x3	CC-SP043	4-5/16	3-1/2	2-1/8	3-1/16	3/16	2	1/4	2-1/2	7/8	.25	48	14
5x4	CC-SP054	5-1/4	4-1/2	2-7/8	4-1/16	1/4	2	1/4	3-3/16	1-1/4	.45	36	18
6x4	CC-SP064	6-1/4	4-1/2	2-7/8	4-1/16	1/4	2	1/4	4-3/8	1-1/4	.52	36	20
7x4	CC-SP074	7-1/4	4-1/2	2-7/8	4-1/16	1/4	3	1/4	2-11/16	1-1/4	.58	36	22
6x5	CC-SP065	6-3/8	5-1/2	3-11/16	5-5/32	1/4	2	1/4	4-3/8	1-7/8	.82	14	13
7x5	CC-SP075	7-3/8	5-1/2	3-11/16	5-5/32	1/4	3	1/4	2-11/16	1-7/8	.91	14	14
8x5	CC-SP085	8-3/8	5-1/2	3-11/16	5-5/32	1/4	3	1/4	3-1/16	1-7/8	.99	14	15
9x5	CC-SP095	9-3/8	5-1/2	3-11/16	5-5/32	1/4	3	1/4	3-5/8	1-7/8	1.10	14	16
10x5	CC-SP105	10-3/8	5-1/2	3-11/16	5-5/32	1/4	3	1/4	4-1/8	1-7/8	1.20	14	18
11x5	CC-SP115	11-3/8	5-1/2	3-11/16	5-5/32	1/4	4	1/4	3	1-7/8	1.30	14	20
12x5	CC-SP125	12-3/8	5-1/2	3-11/16	5-5/32	1/4	4	1/4	3-3/8	1-7/8	1.37	14	21
8x6	CC-SP086	8-3/8	6-5/8	4-5/16	6-1/16	9/32	3	1/4	3-1/16	2	1.24	16	21
9x6	CC-SP096	9-3/8	6-5/8	4-5/16	6-1/16	9/32	3	1/4	3-5/8	2	1.37	16	23
10x6	CC-SP106	10-3/8	6-5/8	4-5/16	6-1/16	9/32	3	1/4	4-1/8	2	1.50	16	25
11x6	CC-SP116	11-3/8	6-5/8	4-5/16	6-1/16	9/32	4	1/4	3	2	1.58	16	27
12x6	CC-SP126	12-3/8	6-5/8	4-5/16	6-1/16	9/32	4	1/4	3-3/8	2	1.72	16	29
13x6	CC-SP136	13-3/8	6-5/8	4-5/16	6-1/16	9/32	4	1/4	3-5/8	2	1.85	16	31
14x6	CC-SP146	14-3/8	6-5/8	4-5/16	6-1/16	9/32	5	1/4	3	2	1.96	16	33
12x7	CC-SP127	12-3/4	7-7/8	5	7-1/16	5/16	4	5/16	3-3/8	2	2.65	12	33
14x7	CC-SP147	14-3/4	7-7/8	5	7-1/16	5/16	5	5/16	3	2	3.02	12	37
10x8	CC-SP108	10-13/16	8-15/16	5-7/8	8-1/4	13/32	3	5/16	4-1/8	2-3/8	3.17	9	30
11x8	CC-SP118	11-13/16	8-15/16	5-7/8	8-1/4	13/32	4	5/16	3	2-3/8	3.42	9	32
12x8	CC-SP128	12-13/16	8-15/16	5-7/8	8-1/4	13/32	4	5/16	3-3/8	2-3/8	3.65	9	34
14x8	CC-SP148	14-13/16	8-15/16	5-7/8	8-1/4	13/32	5	5/16	3	2-3/8	4.15	9	39

### STEEL ELEVATOR BOLTS INCLUDE FINISHED HEX NUTS, SPLIT RING LOCK WASHER AND FENDER WASHER.

(Packaged per 100 pcs.)

Length	Norway 1/4"	Norway 5/16"	Fanged 1/4"	Fanged 5/16"
1"	EB141	EB5161	FB141	FB5161
1-1/4"	EB14114	EB516114	FB14114	FB516114
1-1/2"	EB14112	EB516112	FB14112	FB516112

No. 1 Norway Flat Countersunk Head with hex nut, lock washer and fender washer



Fanged Head Bolt with hex nut, lock washer and fender washer



**T500 ELITE – HOTBUS™**

Plant Wide Monitoring System for Bucket Elevators & Conveyors that combines belt alignment, belt speed, continuous bearing temperature, pulley alignment, level and plug condition monitor for bucket elevators and conveyors. With automatic machine shutdown capability and PLC / PC compatibility, this advanced microprocessor based system offers low cost installation, versatility and easy system expansion. Logging and trending software is also available for historic data analysis and preventative and predictive machine maintenance.

The Hotbus system is a serial communication system specially designed to monitor up to 256 sensors, with the addition of HotBus Nodes that accept 4 inputs. The Hotbus system will accept up to 64 nodes. Sensors include continuous bearing temperature, belt alignment, plug switches and speed switches. The Hotbus has a 1-second scan time, local ambient temperature comparison, RS485 serial communications, alarm and shutdown features and LCD screen message center. Approvals: US – Class II Div. 2, Groups F & G Canadian – Class II Div. 1, Groups E, F & G. (NEMA 4 enclosures available for nodes, contact for quotation.) See following page for compatible sensors. Actual dims. 9.7”H x 7.4”W x 4”D

T500 Elite Control Unit 110/240V/24 VDC .....	<b>No. T5004V46C</b>
Hotbus Node (4 sensor inputs) Non-Approved Version.....	<b>No. HOTBUS-TN4</b>
Hotbus Node (4 sensor inputs) Approved Version - Class II Div. 1 (Can) Div. 2 (US) .....	<b>No. HOTBOXTN4C</b>
Class 2 Div. 1 (US & Canada) enclosure for a single node .....	<b>No. EXPENC1</b>



**WATCHDOG “ELITE” HAZARD MONITOR SYSTEM**

The Watchdog™ Elite will monitor belt alignment, belt speed, continuous bearing temperature, pulley alignment and plug condition for bucket elevators and conveyors. The system incorporates dual microprocessor control, using the latest PIC microprocessors and non-volatile (EEPROM) memory chips. An LCD displays 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 to 240 VAC or 24 VDC. Actual dims. 11.75”H x 9.5” W x 5.25” D. See following page for compatible sensors.

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 .....	<b>No. WDC3NV46C</b>
PLC Interface Board Class II Div. 1/2 .....	<b>No. WDPLCB2V4C</b>



**ALARM MONITORING**

The X400 ELITE is a microprocessor controlled unit which is able to accept signals from different sources in 8 zones, and is able to cause alarm and shutdown of the machine when alarm conditions are detected. The control unit is housed in a self-contained wall mounting enclosure. A test push button on the lid of the control unit provides for full system verification. Alarm and status LEDs provide quick location of the alarm condition, and voltage free relay contacts provide separate alarm and shutdown control. An alarm mute push button is provided on the lid of the control unit and additional connections are provided for an external alarm mute push button. Actual dims. 9.7”H x 7.4”W x 7”D.

“Elite” Alarm Switch 8 Point 110/220V 24 VDC.....	<b>No. X4004V46C</b>
“Elite” PLC Interface Board.....	<b>No. TX400PLCB</b>
External Vibratone Alarm Horn 120V .....	<b>No. H350120</b>
External Vibratone Alarm Horn 240V .....	<b>No. H350240</b>
External Vibratone Alarm Horn 24 VDC .....	<b>No. H450V4</b>
Alarm Horn 120V Class II Div. 1 .....	<b>No. H31X120-3</b>
External Mute Push Button w/Steel Box .....	<b>No. PB1V10</b>

### M800 SWITCH

The most popular underspeed/slowdown switches in the industry. One bracket for all applications. Requires no engineering or fabrication. An inductive sensing device located in the nose of the M800 enclosure detects a metal target. It can be an existing bolt head or device attached to a shaft. A signal is generated by this target on each revolution of the shaft. The M800 is then set to the normal machine RPM by calibrating with the magnet provided. If the shaft speed falls to 10% or 20% below normal RPM, the M800 provides output signals via relays for control purposes such as alarm and/or shutdown. Speedswitch moves with the shaft. Shaft end float and vibration will not cause any nuisance alarms as the target and Speedswitch move together in unison. FM and CSA approved Class II, Div. 1, Group E, F, G and CE approved. The "Whirligig®" is a bolt on three-in-one universal shaft sensor mount. Your 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.



M800 Speedswitch, 24 to 240 VAC/DC Class II Div. 1... No. **M8001V10C**  
 "Whirligig®" Combined Target/Bracket/Guard ..... No. **WG1-4B-4**

Mag-Con. Magnetic Connector 2" Diameter ..... No. **MAG2000**  
 Tachometer Speed Display Unit, 110/240 VAC ..... No. **TACH3V5**

### WDA MOTION ALIGNMENT SENSOR

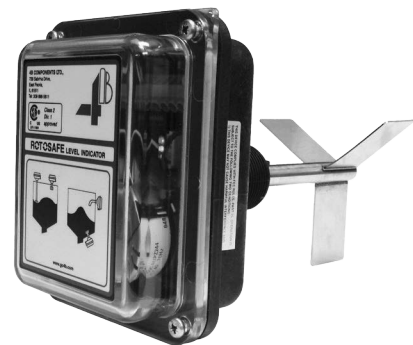
Non-contacting extended range magnetic proximity sensor, not affected by dust or material build up, used to detect moving ferrous material up to 3 inches away from the sensor. The WDA sensor is designed for use with bucket elevators and conveyors to detect the buckets in order to measure speed and alignment. It can also detect screw conveyor flights, and ferrous bolts when attached to non-ferrous buckets. A more specialized use of the WDA sensor is for broken/slack chain detection. The sensor is used in conjunction with a PLC or with 4B's Watchdog™ Elite control unit. Two output signals are provided: one signal is a pulse output, representing each bucket detected; the second signal is a continuous output when moving buckets are detected. The WDA features an adjustable sensing range of 1" to 3", LED indication, 1/2" conduit entry, 9 ft. cable, and stainless steel construction (mounting bracket included).



WDA 12 to 24 VDC Standard Sensor (-14°F to +160°F)..... No. **WDA3V34C**  
 WDA 12 to 24 VDC, High Temperature Sensor (-14°F to 302°F Continuous, 356° max.)..... No. **HTAS1V34**

### RTOSAFE LEVEL INDICATOR

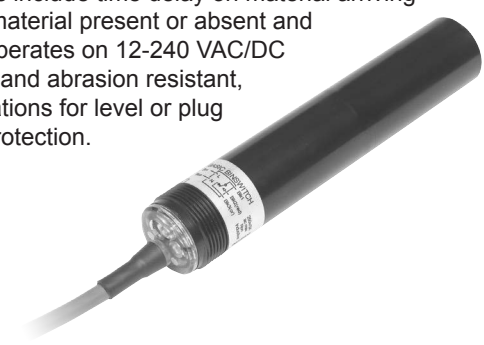
Rotary style level indicator with failsafe motor rotation circuit for safe and accurate material detection. Class II, Div.1, groups E, F, and G approved for US and Canada. Weather and corrosion proof heavy-duty nylon enclosure. Glass fiber reinforced nylon housing; vertical extensions to 14 feet are available. Internal sensitivity adjustment, adjustable timer, power fail alarm, auto power shut-off, and dust hazard approved.



RotoSafe Power Pack 110/240V 24VDC (universal supply) ..... No. **RTS1V0C**  
 Standard 3-Vane 5-1/2" Diameter Paddle ..... No. **RLISP3**  
 Single-Vane SS Insertable Scimitar Paddle ..... No. **RLISP2**  
 Top Mounting Plate ..... No. **TMP**  
 Extension Inner, per foot ..... No. **RLIEXI**  
 Extension Outer, per foot ..... No. **RLIEXO**  
 Shaft Coupler ..... No. **RLISC**  
 Side Mounting Plate (No Extension) ..... No. **SMP**

### BINSWITCH CAPACITANCE POINT LEVEL SWITCH

The Binswitch 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. Programmable features include time delay on material arriving or leaving, and failsafe relay settings for high and low levels. A two color LED shows material present or absent and flashes red or green to show the time delay is operating. The programmable sensor operates on 12-240 VAC/DC and gives a changeover relay contact output. The polycarbonate housing is corrosion and abrasion resistant, dust-tight, and waterproof. Features totally sealed construction (submersible), applications for level or plug sensing, adjustable sensitivity, CSA Class II Div. 1 Groups E, F & G approved, IP67 protection.



Standard Binswitch 12 VDC ..... No. **BS1V3FC**  
 Standard Binswitch 24 VDC ..... No. **BS1V4FC**  
 Programmable Binswitch ..... No. **BP1V10FC**  
 Standard Binswitch 110-240 VAC..... No. **BS1V6FC**  
 Mounting Plate..... No. **SMP**  
 NPT Conduit Adapter 3/4" ..... No. **A34NPT**  
 NPT Mount, 1-1/4" ..... No. **BMPA**  
 Abrasion Shield 1-1/4" NPT Mount..... No. **BAS**



**BIN-MASTER ROTARY AUTOMATIC LEVEL INDICATOR**

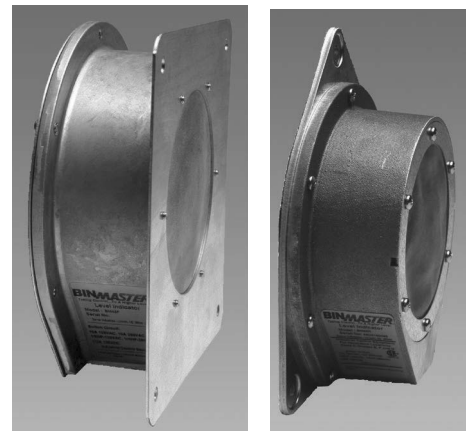
The Seedburo Rotary Level Indicator operation is based on a low torque, slow speed synchronous motor. The motor rotates a paddle which senses the presence of material at the level of the unit. As a high level indicator, the paddle will rotate constantly until interrupted by material stalling its motion. 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. **MADE IN USA**

**To order, select one each: Power Pak, Shaft Coupler, Mounting Plate and Paddle.**

Power Pak, Expl. Proof-Class II, Group G, (CSA), 110V .....	No. BMRX
Power Pak, Expl. Proof-Class II, Group G, (CSA), 220V .....	No. BMRX/A
Solid Shaft Coupler, Stainless Steel .....	No. GRSS
Flexible Shaft Coupler, Stainless Steel .....	No. GRFC
Side Mounting Plate, Mild Carbon Steel .....	No. GRSMF
Top Mounting Plate, Mild Carbon Steel .....	No. GRTMP
1 1/2" Nylon Paddle .....	No. GRNP
1 1/2" Stainless Steel Paddle .....	No. GRSP

**BIN-MASTER DIAPHRAGM SWITCH**

This sensitive automatic indicator is your answer to controlling granular, free-flowing materials. 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 to 60 lbs. per bushel. BM45 series actual dims. 6 5/8" W x 7" H x 2 5/8" D. Net wt. 2-1/2" lbs. Ship wt. 3 lbs. Ship Dims. 8" L x 7" W x 3" H. BM65 series actual dims. 8" W x 6 3/4" H x 5" D. Net wt. 3 lbs. Ship wt. 4 lbs. Ship Dims. 8" L x 7" W x 3" H. **MADE IN USA**



General Purpose Switch, Heavy Duty, Mount Inside Bin, 15-60 .....	No. BM45RH
General Purpose Switch, Heavy Duty, Mounts Externally 15-60 .....	No. BM45FH
Expl. Proof (Class II, Group G) Switch, Std., Back Mount (Mounts Inside Bin) .....	No. BM65R
Expl. Proof (Class II, Group G) Switch, Std., Front Mount (Mounts Externally) .....	No. BM65F



**BINATROL® DIAPHRAGM BIN MONITOR**

A pressure-operated electrical device for controlling material levels, signal systems and equipment motor switches. May be installed in single or multiple units. Can be installed in any position without counterweighting the switch. Easily adjustable for maximum sensitivity to various material weight conditions. Switch has a neoprene diaphragm and operates on 125, 250V or 460V A.C. MGX is approved for Div. 1 & 2, Groups F & G. Model GX-SS is a dust-ignition proof version of the Model G with a type 321 stainless steel diaphragm, which is used with corrosive materials or for added protection in abrasive applications. Net wt. 5 lbs. Ship wt. 7 lbs. Ship Dims. 6" L x 6" W x 4"H.



General Purpose Switch, CSA .....	No. MG
Expl. Proof Switch, UL & CSA Class II .....	No. MGX
Stainless Steel General Purpose, UL & CSA Class II .....	No. GX-SS

### SEEDBURO TAPE MEASURES & PLUMB BOBS

Seedburo Fiberglass Bin Tapes are designed to resist extreme weather conditions. Ideal for measuring 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.



Graduated in Inches by 1/8ths		1/10ths of a Foot by 1/100ths	
Length	Model No.	Length	Model No.
50' Tape	No. 508	50' Tape	No. 5010
50' Refill	No. 508R	50' Refill	No. 5010R
100' Tape	No. 1008	100' Tape	No. 10010
100' Refill	No. 1008R	100' Refill	No. 10010R
200' Tape	No. 2008	200' Tape	No. 20010
200' Refill	No. 2008R	200' Refill	No. 20010R
50 Meter x 2mm	No. OTR50M	100 Meter x 2mm	No. OTR100M
50 Meter Refill	No. RF50M	100 Meter Refill	No. RF100M

#### Plumb and Sample Bobs

- 8 oz. Sparkproof Brass Plumb Bob ..... No. 939
- Weighted, Sparkproof 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 inches. Easy-read magnified 5-digit counter measures 9,999 feet, 11 inches. The metric unit measures a total of 9999.9 meters. TM3 features 12-1/2" wheel diameter and 3' wheel circumference. The TM3-M has a .318m wheel diameter with a 1 meter wheel circumference. The TM4 series features a 15-1/2" wheel diameter with a 4' wheel circumference – all are ideal for rough terrain. 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

### 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 600 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 feet. 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.

Length	Weight	Model No.
7 ft	20 lbs	No. C7
10 ft	30 lbs	No. C10
12 ft	35 lbs	No. C12
15 ft	44 lbs	No. C15
Safety Feet - No. SF		

MODEL C STANDARD



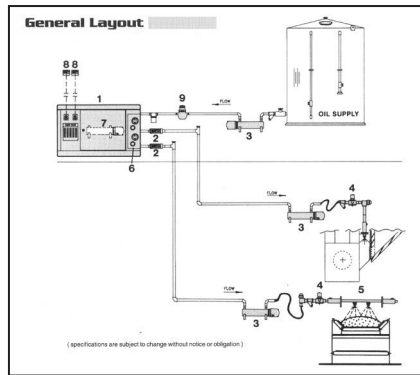
## DUSTOP DUST SUPPRESSION SYSTEM

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 is 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 1-1/2 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 to 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'. **MADE IN USA**

**Basic Unit Includes:** Painted, lockable heavy-gauge steel enclosure, 1/2HP motor, 110V, 6A, TEFC, 2.8 GPM gear pump, system pressure relief valve, system pressure gauge, nozzle pressure regulator, nozzle pressure gauge, 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 spray point heaters are installed near the spray points to ensure proper spray pattern in cold weather (50°F or below). 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. Main unit: Ship wt. 175 lbs, Ship dims. 36"x20"x24". Accessories Ship wt. 25 lbs, 12"x15"x12"

1. Dustop Basic System  
**OPTIONAL ACCESSORIES:**

- Mechanical Flow Meter
- In-Line Heater
- Solenoids
- Spray Assemblies
- Second Point:  
Nozzle Pressure Regulator  
• Nozzle Pressure Gauge  
• Spray Nozzle Assembly  
• Factory Mounting
- Internal Tank Heaters
- Auto Control Switches

Dustop System, single spray point 115V, 60Hz .....	No. DSS/B
Dustop System, single spray point 115V, 50Hz .....	No. DSS/C
Dustop System, double spray point 115V, 60Hz .....	No. DSS2/B
Dustop System, double spray point 115V, 50Hz .....	No. DSS2/C
Internal Heater .....	No. DSS1
Mechanical Flow Meter .....	No. DSS2
Spray Point Heater .....	No. DSS3
Solenoid - Class II G .....	No. DSS4
Spray Lance Assembly .....	No. DSS5
Ammeter Control .....	No. DSS8
Accumulating Meter .....	No. DSS9
Booster Pump with 1/2HP TEFC Motor 60Hz, 110V/ 220V .....	No. DSS10
Booster Pump with 1/2HP TEFC Motor 50Hz, 110V/220V .....	No. DSS10/C
Export Crating.....	No. DSS/EX

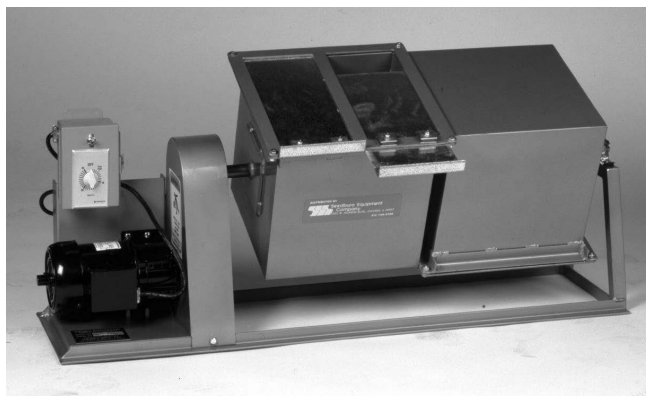
### PELLET DURABILITY TESTER

Seedburo's Pellet Durability Tester utilizes a test 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 pellets for 10 minutes.
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.

The unit features a 1/6 HP, 115/230V, 50/60Hz, Single Phase, TEFC Motor. Net wt. 115 lbs. Ship wt. 155 lbs. Actual dims. 14" L x 45" W x 19" H. Ship dims. 48" L x 17" W x 25" H.



Four Compartment Pellet Durability Tester, 115V, 60Hz.....	No. PDT
Four Compartment Pellet Durability Tester, 230V, 50Hz .....	No. PDT/A

### RECOMMENDED ACCESORIES

Riffle Type Divider (see page 35 for other sizes) .....	No. R66
Polyethylene Sample Bags, 8 1/2" W x 18" L x .003" Thick (see page 53 for other sizes) (Sold in lots of 1000) .....	No. 622

\*See pages 46-50 for Scales and Balances. See page 39 for U.S. Sieves.

### OHAUS SCOUT PRO PORTABLE ELECTRONIC BALANCE

Designed for use in laboratory, industrial or education applications, the Ohaus Scout Pro features easy-to-use two-button operation, a high-contrast LCD display, multiple weighing units, four application modes, and the option of either RS232 or USB connectivity. Net wt. 4 lbs. Ship wt. 5 lbs. Actual dims. 12" L x 10" W x 4" H. Ship dims. 15" x 15" x 5" H.

Scout Pro Scale, 600g x 0.1g with square platform..... **No. SP601**



### SEEDBURO 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 for Testing and Materials). Sieves are available in 8" dia. or 12" dia. 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 39 for a complete list.

SCREEN SIZES FOR DURABILITY TESTS			
Pellet or Crumble Size		Required Screen Size	
Fraction	Decimal Equiv.	U.S. Std. Sieve No.*	Decimal Equiv.
3/32"	0.0938	12	0.0661
1/8"	0.1250	10	0.0787
9/64"	0.1406	7	0.1110
5/32"	0.1563	6	0.1320
3/16"	0.1875	5	0.1570
13/64"	0.2031	4	0.1870
1/4"	0.2500	3.5"	0.2230
5/16"	0.3125	0.265	0.2650
3/8"	0.3750	5/16"	0.3125
1/2"	0.5000	7/16"	0.4375
5/8"	0.6250	0.530	0.5300
3/4"	0.7500	5/8"	0.6250
7/8"	0.8750	3/4"	0.7500
1"	1.000	7/8"	0.8750



# Tornado®

## WET/DRY EXPLOSION-PROOF AIR VACS

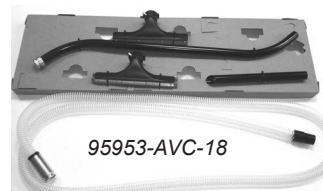
**Tornado Expro 18** – 18 gallon portable wet/dry air operated vacuum cleaner complete with Venturi powerhead (compressed air required: 90 psi @ 40CFM) PSI gauge, grounded gore-tex filter bag rated for 1 micron @ 99% efficiency, 18 gallon “tip & pour” stainless steel tank with ground chain, wheel carrier and tool basket. Uses 1-1/2” hose & attachments. Ship wt 115 lbs. Ship dims 40”L x 24”W x 50”H. **MADE IN USA**

Tornado Expro 18 Portable Explosion Proof Air Vac ..... **No. 95953-AVC-18**

**Tornado Expro 55** – Pre-assembled system includes: air operated vacuum lid assembly, one Venturi powerhead (82 CFM), liquid shut-off device, one grounded Gore-Tex filter bag (rated for 1 micron & 99% efficiency), 55 gallon adapter ring, 55 gallon painted steel drum, dolly cart with pull handle & ground chain. Unit requires compressed air at 90 PSI @40 CFM. Uses 1-1/2” hose & attachments. Ship wt 165 lbs. Ship dims 36”L x 36”W x 64”H.

Tornado Expro 55 Explosion Proof Air Vac ..... **No. 95962-AVC-55**

**Hose/Tool Kit for 95962-Expro and Expro 55.** Kit includes: 1-1/2” grounded hose & tool cleaning kit consisting of 1-1/2” x 15’ (or 25’) grounded urethane vacuum hose, 1-1/2” floor rod, 14” fiber floor tool, 6” brush hand tool and 24” crevice tool. Ship wt 12 lbs. Ship dims 55”L x 17”W x 5”H.



95953-AVC-18

Hose/Tool Kit for Explosion-Proof Vacs, with 15’ Grounded Urethane Hose ..... **No. 90637-15-AVC**

Hose/Tool Kit for Explosion-Proof Vacs, with 25’ Grounded Urethane Hose ..... **No. 90637-25-AVC**

*\*The above vacs are Tornado® brand modified for explosion-proof applications by Milestone Equipment & Supplies.*



95637-15-AVC

## JUMBO WET/DRY EXTERNAL ELECTRIC VACS FOR GENERAL USE (Head Assemblies)

**Single Head Jumbo Electric Vac assembly.** Pre-assembled system includes, 2-1/4 HP powerhead, large poly external filter bag, support rod, jumbo cover, deflector and 1-1/2” hose adapter. Net wt. 145 lbs. Ship wt 150 lbs. Ship dims. 26”L x 26”W x 52”H. **MADE IN USA**  
**See page 117 for 1-1/2” attachments.**

Single Head Assembly, 110V, 60Hz, 2-1/4 HP ..... **No. 95954** (Not available in 230V).

**Dual Head Jumbo Electric Vac assembly.** Pre-assembled system includes two 2-1/4 HP powerheads, two large poly external filter bags, two support rods, jumbo cover, deflector and 2” hose adapter. Net wt. 170 lbs. Ship wt 180 lbs. Ship dims. 30”L x 30”W x 52”H.  
**See page 117 for 2” attachments.**

Dual Head Assembly, 110V, 60Hz, 2-1/4 HP ..... **No. 95960** (Not available in 230V).



No. 95960

No. 95954

### ACCESSORIES:

- |                                 |                  |   |                  |
|---------------------------------|------------------|---|------------------|
| 55 Gallon Drum with Valve ..... | <b>No. 95942</b> | 1-1/2” Wet/Dry Attachment/Tool Set (See page 117) ..... | <b>No. 90660</b> |
| 4-Wheel Dolly .....             | <b>No. 98088</b> | 2” Wet/Dry Attachment/Tool Set (See page 117) .....     | <b>No. 90633</b> |

## Taskforce T-Lite® External Vac

Detachable 2-1/4 HP powerhead, 16 gallon T-Lite thermo-plastic tank (wet/ dry capacity: 12 gal/1.3 bushel), large external poly filter bag, tip & pour steel carrier, 50 ft. cord and ride-along tool caddy. Net wt. 85 lbs. Ship wt. 100 lbs. Ship dims. 33”L x 23”W x 50”H.  
**See page 117 for 1-1/2” attachments.**



Taskforce T-Lite Vac, 110V, 50/60Hz, 2-1/4 HP ..... **No. 98995**  
(Not available in 230V).

### ACCESSORIES:

- 1-1/2” Wet/Dry Attachment/Tool Set (See page 117) ..... **No. 90660**



### POWERHEAD / HANDHELD BLOWER

These detachable powerheads are powerful hand-held blowers. As a vacuum powerhead, used on our vac systems on the previous page, they draw 155 CFM (184 CFM on 2-1/4 HP models). As a blower they put 325 MPH of cleaning power at your fingertips. Ideal for cleaning around machinery, bins, warehouses and hard to reach areas. High-efficiency 1-1/2 HP and 2-1/4 HP bypass electric motors are air-cleaned and permanently lubricated. 1-1/2 HP unit: Net wt. 20 lbs. Ship wt. 22 lbs. Ship dims. 14"L x 14"W x 14"H. 2-1/4 HP unit: Net wt. 24 lbs. Ship wt. 26 lbs. Ship dims. 14"L x 14"W x 14"H.

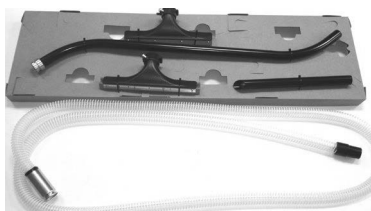


Powerhead / Blower 115V, 50/60Hz, 1-1/2 HP .....	<b>No. 98800</b>
Powerhead / Blower 230V, 50/60Hz, 1-1/2 HP .....	<b>No. 98801</b>
Powerhead / Blower 115V, 50/60Hz, 2-1/4 HP (2-1/4 HP Model not available in 230V) .....	<b>No. 98900</b>
Optional Blower Nozzle .....	<b>No. 90010</b>

### 1-1/2" VACUUM ATTACHMENTS

<b>90002 - EXHAUST CONNECTOR</b> Connects 1 1/2" hose to exhaust of 98800 or 98900 motor.	
<b>90004 - 15" FLAT CREVICE TOOL</b> Plastic. 15" x 1 1/2"	<b>90286 - DOUBLE-CURVED 1 1/2" WAND</b> Lightweight aluminum 4' x 1 1/2".
<b>90010 - BLOWING NOZZLE</b> Rubber. 11" x 1 1/2". For blower motors	<b>90693 - CARPET TOOLS</b> 14" x 1 1/2". Nylon Shoes.
<b>90020 - HAND TOOL</b> Aluminum. 5 1/2" x 1 1/2". Wide throat for faster pick-up.	
	<b>90314 - 5' x 1 1/2" EXTENSION HANDLE</b> Aluminum. With 90274 Angle Fitting to attach overhead tools.
<b>*90033 - 28" FLAT CREVICE TOOL</b> Steel. 28" x 1 1/2". For boiler cleaning.	<b>90315 - 18" FLAT CREVICE TOOL</b> Aluminum. 18" x 1 1/2".
<b>90062 - CONNECTOR NIPPLE</b> To connect two lengths of 1 1/2" hose. 6" x 1 1/2"	<b>*90321 - HAND GULPER TOOL</b> Aluminum. For bulk pick-up with 1 1/2" hose.
<b>90275 - SWIVEL FITTING</b> Attach wall and overhead tool to extension handles.	<b>90331 - HOSE ADAPTER</b> Connects 1 1/2" hoses to Jumbo Cover.
<b>90640 - SQUEEGEE FLOOR TOOLS</b> For wet pick-up. 14" x 1 1/2" Gum Rubber blades.	<b>90394 - FLEXIBLE NOZZLE</b> Neoprene. Need 90062 Nipple for use with 1 1/2" hose.
<b>90641 - NYLON BRUSH FLOOR TOOLS</b> 14" x 1 1/2". For rough surfaces.	<b>90380 - 3" ROUND DUSTING TOOL</b> Aluminum. 3" x 1 1/2". With nylon brush.
<b>90642 - FIBRE FLOOR TOOLS</b> 14" x 1 1/2". For concrete floors.	
<b>90248 - GUM RUBBER SQUEEGEE BLADES</b> Set of replacement blades for 90240 Squeegee Floor Tool.	<b>90414 - 18" ROUND NOZZLE</b> Aluminum. 18" x 1 1/2".
<b>90272 - EXTENSION CONNECTOR</b> Connects 90273, 90314, 90308, or 90310 handles for greater reach.	<b>90449 - SWIVEL HOSE SLEEVE</b> For 1 1/2" hoses used with all Tank Vacs.
<b>90273 - 5' x 1 1/2" EXTENSION HANDLE</b> Connects 1 1/2" hose to intake of 98800 or 98900 motor.	<b>90483 - INTAKE CONNECTOR</b> Aluminum. For overhead cleaning.
<b>90274 - ANGLE FITTING</b> To attach overhead tools to extension handles.	<b>90276 - WALL/CEILING TOOL</b> Aluminum 10" x 1 1/2" With nylon brush.
*Recommended tools for boiler and furnace cleaning. Recommend External Filter Vacs for boiler cleaning.	

### 1-1/2" WET/DRY ATTACHMENT/TOOL SET



For Jumbo Vacs and Taskforce® External Vac. Includes wand, 15' urethane hose with sleeve, 14" squeegee tool, 14" fiber tool, 5" dusting tool, and 18" round nozzle.

1-1/2" Wet/Dry Attachment Set ..... **No. 90660**

### 1-1/2" VACUUM ATTACHMENTS (Not Shown)

15' x 1-1/2" Neoprene Hose, w/molded-in Cuff, No Sleeve .....	<b>No. 90191</b>
10' x 1-1/2" Neoprene Hose W/Sleeve .....	<b>No. 90192</b>
15' x 1-1/2" Urethane "Static" Hose W/Sleeve .....	<b>No. 90684</b>
15' x 1-1/2" Urethane "Static" Hose, No Sleeve .....	<b>No. 90688</b>
Medium Size Filter Bag for Std. Cleaner .....	<b>No. 90377</b>
Support Rod for Medium Filter Bag .....	<b>No. 98051</b>

### 2" WET/DRY ATTACHMENT/TOOL SET

For Jumbo Vacs: Wand, 10' Poly Hose, Hose Connector, 22" Squeegee Floor Tool, 12" Floor Gulper and 18" Round Nozzle. 2" Wet/Dry Attachment Set ..... **No. 90633**

### 2" JUMBO VAC ATTACHMENTS

15' x 2" Neoprene Hose, No Sleeve .....	<b>No. 90311</b>
10' x 2" Poly Hose, No Sleeve .....	<b>No. 90312</b>
Hose Connector (For Use W/90311 Hose) .....	<b>No. 90313</b>
2" Hose Adapter To Tank Intake .....	<b>No. 90316</b>
22" Squeegee Floor Tool .....	<b>No. 90317</b>
22" Nylon Brush Floor Tool .....	<b>No. 90318</b>
22" Fiber Shoe Floor Tool .....	<b>No. 90319</b>
12" Floor Gulper w/Brass Shoe .....	<b>No. 90320</b>
Hand Gulper Tool, Aluminum .....	<b>No. 90322</b>
Squeegee Replacement Blades (6) .....	<b>No. 90323</b>
4-1/2" x 2" Aluminum Wand .....	<b>No. 90327</b>
2" Jumbo Hose Adapter .....	<b>No. 90332</b>
15" Crevice Tool, Aluminum .....	<b>No. 90360</b>
22" Flexible Nozzle .....	<b>No. 90394</b>
18" Round Nozzle, Aluminum .....	<b>No. 90444</b>
2" Jumbo Swivel Hose Adapter .....	<b>No. 90526</b>
4-1/2' x 2" Two-Piece Steel Wand .....	<b>No. 90683</b>
Large Size Filter Bag for Jumbo Vac .....	<b>No. 90378</b>
Support Rod For Large Filter Bag .....	<b>No. 98049</b>

### BADGER RAIL CAR MOVERS



No. 221B

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.

**MADE IN USA**

Badger Power-King Car Mover..... **No. 221B**



No. 249

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:

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 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**



No. 422



### "NINE LIVES" WHEEL WEDGE

The "Nine Lives" Wheel Wedge replaces oak blocks for chocking idle rail cars on storage tracks where cars are not subject to vibration. Molded in a special grade of urethane, the wedge is 10" long x 2-1/2" high x 3-1/4" wide. Rail car must be stationary before using wedge. After setting care brake, worker slips wedge under wheel. The wedge blocks the wheel and when the wedge needs to be moved, the worker does not have to stoop down and try to free it from the wheel. Instead, the rail car can be run over the edge with no damage to the wedge and no risk of derailling the car. Do not use wheel wedge for cars being loaded or unloaded - use steel wheel chocks instead. Use on exposed rail (rail above ground level). Ship wt. 3 lbs. **MADE IN USA**

"Nine Lives" Wheel Wedge, each.....**No. 4011-18**



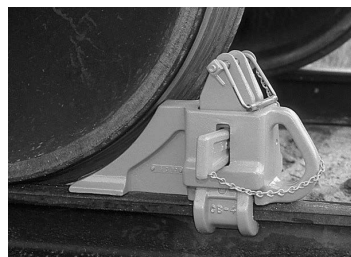
### SEEDBURO "SUPER CHOCK"

An extra durable rail clamp designed to effectively block cranes, railcars and mine cars during loading and unloading operations. Made to fit rails from 40 lbs to 175 lbs and all wheel diameters. 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. **MADE IN USA**

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.**

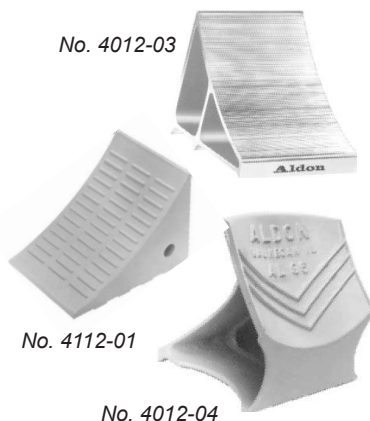


### SEEDBURO WHEEL BLOCKS

Seedburo Wheel Blocks help keep trucks and trailers secure while parked. Wheel Blocks should always be used when loading and unloading trailers, to prevent accidental movement of the trailer, which might upset dockboards and forklifts.

The Wheel Blocks referenced below are recommended for use on trailers while loading or unloading. Designed to meet O.S.H.A. regulations 1910.178(K)(1), and 1910.178(M)(7).

Model No.	Weight	Dimensions WxLxH (In.)	Material
4012-03	7 lbs	7 x 10-3/4 x 8	Aluminum
4112-01	4 lbs	7-3/4 x 11x 8	Urethane
4012-04	27 lbs	10 x 10-1/2 x 10-3/4	Ductile Iron



No. 4012-03

No. 4112-01

No. 4012-04

## ALDON WHEEL CHOCKS

Provide safe and effective blocking of all rolling stock with Seedburo's Wheel Chocks. These chocks are used by railroads, industry, and shippers and receivers of carload freight. No tools required, chocks instantly attach and are quickly removed. Units come complete with rail biting steel spurs. Standard finish in railroad maintenance-of-way yellow. Complete with indicator flag. OSHA-mandated wheel chocks help keep freight car from moving during loading and unloading. Wheel chocks fit railroad T-rail from 75-141 lbs./yd. and wheels 28" to 44" dia. **MADE IN USA**

### Basic Wheel Chock Rules:

1. Do not use a chock to stop a moving car.
2. Apply car hand brake before installing chocks under wheels (chock alone will not hold car steady).
3. Use two chocks per car - one at each end.
4. In a line of cars, chock the car being worked on. Be sure brake is applied beforehand.
5. Do not use chocks on sloped track. Chock will not hold car on a grade.

### ALDON SINGLE WHEEL CHOCK (28" Handles)

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)

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**

### SEVERE DUTY "WHACK 'EM" WHEEL CHOCKS

Idling locomotives and tank cars can lock a wheel chock under their wheel due to excess vibration. The "Whack 'Em" chocks have reinforced steel handles that will not bend from hammer blows or extreme handle pressure. These cast steel chocks feature an exclusive replaceable rail-biting steel spurs for excellent gripping power. Handles and legs are painted red to indicate they are for severe duty. 28" Handles.

### ALDON SINGLE "WHACK EM" WHEEL CHOCK

Single "Whack Em" Wheel Chock with Flag (Exposed Rail), Ship wt. 16 lbs ..... **No. 4011-32**  
 Single "Whack Em" Wheel Chock with Flag (Flush Rail), Ship wt. 16 lbs ..... **No. 4011-33**

### ALDON DOUBLE "WHACK EM" WHEEL CHOCK

Double "Whack Em" Wheel Chock with Flag (Exposed Rail), Ship wt. 18 lbs ..... **No. 4011-34**  
 Double "Whack Em" Wheel Chock with Flag (Flush Rail), Ship wt. 18 lbs ..... **No. 4011-35**  
 Replacement Chock Spurs, sold individually ..... **No. 6008**

### SAFETY LIGHTS FOR WHEEL CHOCKS

An illuminated wheel chock makes it easy for worker to determine if the rail car has been chocked. Switchmen can quickly determine if the wheels are clear to move. OSHA's Blue Flag policy requires that spur track warning signs be equipped with flashing lights at night.

7" diameter Lexan lens uses two 6-volt batteries. On-off switch and photo-electric cell flashes 60 times a minute. Battery case bolts to any sign holder or Chock Light Bracket.

Flashing Red Light (Battery Operated), Ship wt. 5 lbs ..... **No. 4115-17**  
 Flashing Blue Light (Battery Operated), Ship wt. 5 lbs ..... **No. 4115-01**  
 Carrying Bracket for Light on Wheel Chock, Ship wt. 3 lbs ..... **No. 4011-21**

*(Bracket bolts to any 1" diameter chock handle. Drill 1/4" hole at bottom of handle. Chock Safety Light bolts to bracket)*



Single Wheel Chock w/Flag



Double Wheel Chock w/Flag



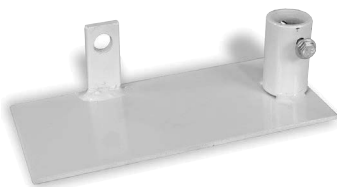
Single "Whack Em" Wheel Chock w/Flag



Double "Whack Em" Wheel Chock w/Flag



Flashing Blue Light



Carrying Bracket

## 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). **MADE IN USA**

### 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.

Sign Holder, Portable Clamping, Exposed Rail, Ship wt. 7 lbs ..... **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.

Sign Holder, Hinged Spiked-Down, Exposed Rail, Ship wt. 16 lbs ..... **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.

Sign Holder, Permanent Hinged, Exposed Rail, Ship wt. 15 lbs ..... **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.

Sign Holder, Magnetic Base, Ship wt. 7 lbs ..... **No. 4015-54**

### SIGN PLATES

These aluminum 12" x 15" 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.



**4015-18-B**



**6STOP-B**



**6SAFE-B**



**6SCC-B**



**STCC-B**



**6SCAW-B**



**6SMAW-B**



**6DERAIL-B**

- Safety Sign, 12" x 15", BLANK ..... **No. 4015-18**
  - Safety Sign, 12" x 15", "STOP" ..... **No. 6STOP**
  - Safety Sign, 12" x 15", "SAFETY FIRST" ..... **No. 6SAFE**
  - Safety Sign, 12" x 15", "STOP - CAR CONNECTED" ..... **No. 6SCC**
  - Safety Sign, 12" x 15", "STOP - TANK CAR CONNECTED" ..... **No. STCC**
  - Safety Sign, 12" x 15", "STOP - CREW AT WORK" ..... **No. 6SCAW**
  - Safety Sign, 12" x 15", "STOP - MEN AT WORK" ..... **No. 6SMAW**
  - Safety Sign, 12" x 15", "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)

## SAFETY LIGHTS FOR DERAILS, WHEEL CHOCKS, AND SIGN HOLDERS



#### Clip-On Flashing Light

CLIP-ON FLASHING LIGHTS FOR SIGN PLATES: OSHA requires that a blue light be displayed at night on rail sidings to indicate the presence of parked railroad cars. The color blue means 'stop' to all railroad workers. This battery-powered light clips to the edge of the sign

plate. The battery case with 12 ft. power cord bolts to the sign holder. Photo electric cell in light conserves battery. Note: sign plate and holder are not included.

Clip-On Flashing Light, Blue, Ship wt 3 lbs ..... **No. 4115-21**  
Clip-On Flashing Light, Red, Ship wt 3 lbs ..... **No. 4115-22**



#### Bolt-On Flashing Light

7" diameter Lexan lens uses two 6-volt batteries. On-off switch and photo-electric cell flashes 60 times a minute. Battery case bolts to any sign holder or Chock Light Bracket.



- Flashing Amber Light (Battery Operated), Blue, Ship wt 3 lbs ..... **No. 4115-01**
- Flashing Amber Light (Battery Operated), Red, Ship wt 3 lbs ..... **No. 4115-17**
- Flashing Amber Light (Battery Operated), Amber, Ship wt 3 lbs ..... **No. 4115-94**
- Flashing Amber Light (Battery Operated), Clear, Ship wt 3 lbs ..... **No. 4115-95**

## ALDON DERAILS

Derails are emergency car stopping devices to prevent unauthorized movement of a locomotive or railcar. The derail lifts the flange of the car wheel and drops it clear of the rail impeding forward movement. OSHA, FRA, and DOT regulations require derail protection for all active rail siding. Derails help prevent these railroad accidents: 1. Railcars rolling into each other. 2. Unauthorized or premature removal of cars by locomotive. 3. Rollaway car escaping out onto mainline. **MADE IN USA**

### Permanently Installed Hinged Derails

For permanent derailing capability use these Hinged Derails on exposed rail track and wooden ties. Derail "shoe" swings on or off the rail and can be padlocked in either position. Derail blue flag and holder (manually-operated) are included.

#### To Order:

1. Specify one-way (left throw or right throw) or two-way model
2. Specify height of rail as measured from top of tie to top of rail (including thickness of tie plate) or request our derail sizing form.

Hinged derails are made in four sizes. Please request a derail sizing form. We will furnish the derail size nearest to your rail size and provide an illustrated, easy-to-follow installation guide directly from the factory.

Permanent Hinged Derail, One-Way Left Throw, Ship wt 156 lbs .....	<b>No. 4014-01</b>
Permanent Hinged Derail, One-Way Right Throw, Ship wt 156 lbs .....	<b>No. 4014-02</b>
Permanent Hinged Derail, Two-Way, Ship wt 165 lbs .....	<b>No. 4014-03</b>



4014-01 One-Way Left



4014-02 One-Way Right



4014-03 Two-Way

## 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.

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 .....	<b>No. 4014-06-S</b>
Portable Derail, One-Way Right Throw, Ship wt 35 lbs .....	<b>No. 4014-07-S</b>
Portable Derail, Two-Way, Ship wt 50 lbs .....	<b>No. 4014-09-S</b>



4014-09-S Two-Way



4014-06-S Left Throw



4014-07-S Right Throw

#### 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) .....	<b>No. 4014-25</b>
Derail Padlock (for portable or hinged derails) .....	<b>No. 4124-97</b>

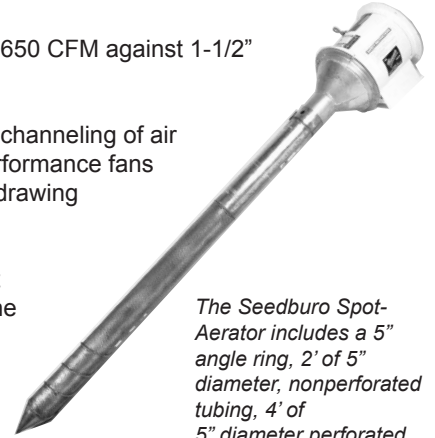


**SEEDBURO SPOT-AERATOR**

This is the only Spot-Aerator that offers such a high pressure tubeaxial fan. Fan will deliver 650 CFM against 1-1/2" static pressure (water gauge) or 1300CFM against 1/2" 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 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. Ship wt. (fan) 65 lbs. Ship dims. 15"x15"x20", Connector, ducts & apron, Ship wt. 20 lbs. Ship dims. 21"x21"x16". Tube Ship wt. 21 lbs. Ship dims. 80"x4"6" **MADE IN USA**



*The Seedburo Spot-Aerator includes a 5" angle ring, 2' of 5" diameter, nonperforated tubing, 4' of 5" diameter perforated tubing and a 6" long closed point.*

Spot-Aerator, 3/4 HP, 115V, 1PH, TEAO High Pressure Tubeaxial Type Motor, 3600 RPM ..... **No. SA1**

**SEEDBURO FLASHLIGHTS**

Dropping a flashlight in hazardous areas can result in broken or cracked bulbs that remain glowing long enough to ignite an explosion. Bright Star Safety Approved Flashlights are equipped with circuit breakers that are activated when a bulb is damaged. The bulb instantly separates from the battery source to prevent any possible explosion. This unit also features a spare bulb holder and ring hanger.

The 2124 Flashlight has a Class II, Group G Rating. The 2206 lantern has a Class I, Group D rating and meets OSHA requirements. The 2124 uses 3 "D" cell batteries and the 2206 uses a single 6V battery. The 2206 lantern will float in the event it is dropped in water. Batteries are not included. Ship wt. 2 lbs. Ship dims. Model 2124, 12"x10"x3". Ship dims. Model, 2206 13"x13"x7".



Flashlight, Class II, Group G ..... **No. 2124**  
 Lantern, Class I, Group D ..... **No. 2206**



**KC GRAIN ENGLUFMENT RESCUE WALL**

The KC grain engulfment rescue wall is designed to assist rescuers when a worker needs to be removed from an engulfment in a storage bin, vessel or other confined space. Each wall 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. The KC Rescue Wall is made of lightweight, yet durable, aluminum so it can withstand rugged and repeated usage (great for frequent training).

The Rescue Wall is available in two different models – a 4-section or a 6-section unit. We offer these different sizes to accommodate different entry ports. However, the size of the rescuers (ie shoulder width) and rescue equipment will also determine how the

rescue will be conducted. Rescuers do not want to be hampered by restricted openings so they will either find a large opening or create one. Ship wt. 190 lbs. Ship dims. 40" x 48" x 64". **MADE IN USA**

The optional rescue wall platform provides a more stable footing for rescuers on loose grain.

Aluminum Rescue Wall, 4-Section, Clamp-Down with Bag..... **No.RWALL4**  
 Aluminum Rescue Wall, 6-Section, Clamp-Down with Bag..... **No.RWALL6**  
 Rescue Wall Platform, 18" x 18"..... **No.RWALLP**

### SEEDBURO HAND SCOOPS

This scoop is made of heavy gauge galvanized steel and has a 4 qt. capacity. The wooden handle is centered to evenly distribute weight and make materials handling easier and faster. Dims 11-1/2" L (Tapered) x 6-1/2" Dia. Ship wt. 3 lbs. Ship dims. 13"x13"x13"



4 Qt. Handled Scoop ..... **No. 1731**

Our **Plastic Scoop** is made of specially formulated material to prevent brittleness at low temperatures. Dims 15" L x 6" D x 3-1/2" W. Ship wt. 2 lbs. Ship dims. 15"x15"x5"



Seedburo Plastic Scoop ..... **No. 830**

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.



#### Cast Aluminum Scoop Options

- 8" L Overall x 3-1/8" W, Handle 3" ..... **No. 0S**
- 10" L Overall x 4" W, Handle 3-1/4" ..... **No. 1S**
- 12-1/4" L Overall x 5" W, Handle 4" ..... **No. 2S**
- 14" L Overall x 5-1/2" W, Handle 4-1/4" ..... **No. 3S**

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.



#### Flat Bottom Scoop

- 8-3/4" L Overall x 3-1/2" W, Handle 3" ..... **No. 122S**
- 9-3/4" L Overall x 4-1/4" W, Handle 3-1/4" ..... **No. 123S**

### SMART DIGITAL SCOOPS

#### Scale features

- 3 weighing modes: grams, pounds & ounces, ounces
- Auto shut off
- 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.
- 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. 9V battery included.



#### Dimensions & Capacities For Smart Scoop 750

**Capacity:** 750 grams 26 oz. 1 lb.  
**Graduation:** 2 grams .1oz. 1/8 oz.  
**Display:** .6"LCD display with 4 active digits  
**Operating temp:** 50 F to 104F/10C to 40C  
**Ship wt. 4 lbs. Ship dims. (LxWxH):** 20"x8"x8"  
**Accuracy:** 1%

#### Dimensions & Capacities For Smart Scoop 1350

**Capacity:** 1350 grams 48 oz. 3 lbs.  
**Graduation:** 2 grams .1oz. 1/8 oz.  
**Display:** .6"LCD display with 4 active digits  
**Operating temp:** 50 F to 104F/10C to 40C  
**Ship wt. 4 lbs. Ship dims. (LxWxH):** 20"x8"x8"  
**Accuracy:** 1%

- Smart Scoop ..... **No. SS750**
- Smart Scoop 1350 ..... **No. SS1350**

### SEEDBURO BRUSHES AND MALLETS

The **Seedburo Counter and Bench Brush** is made of blended horsehair with a hard, molded plastic handle. Ideal for cleaning up counters and benches, around machinery and hard to reach spaces. Overall length (w/ handle) 13". Brush size is 8" L x 2-1/2" D. Ship wt. 2 lbs. Ship dims. 12"x10"x3"

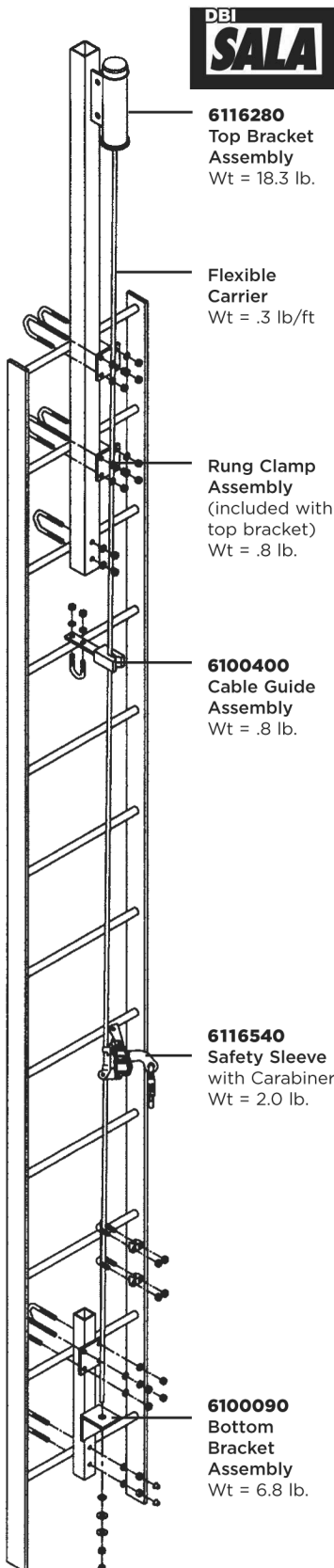


Counter and Bench Brush ..... **No. 6308**

These durable **Rubber Mallets** can be used for tapping spouts, bins, feeders, sifters and many other applications. Finest quality black rubber securely fastened with a hard hickory handle.



Model	Diameter of Face	Length of Head	Handle Length	Weight
<b>No. 320</b>	2-1/4"	3-3/4"	11"	20 oz.
<b>No. 328</b>	2-1/2"	4-1/2"	13-3/4"	28 oz.
<b>No. 334</b>	2-1/2"	5"	12-3/4"	34 oz.



## LAD-SAF™ FLEXIBLE CABLE LADDER SAFETY SYSTEM

Our Ladder Safety System offers complete safety and security to workers who climb fixed ladders on grain bins, towers, etc. The popular LAD-SAF™ flexible cable type system consists of a tensioned galvanized steel cable running the length of the climbing area, which is attached to the ladder structure by a top and bottom mounting brackets with cable guides. An easy to use detachable safety sleeve (No. 6116540) is connected to the worker's body support (safety belt or full body harness) and attached to the cable, the worker then may ascend or descend without attending to the safety sleeve. Should the worker slip or fall, the safety sleeve locks onto the cable and prevents further movement until footing can be regained. The body support must be ordered separately. Meets or exceeds industry standards: ANSI A14.3-1992, OSHA 1910.27, FAA RR-S-001301. CSA certified models available (Ref. Z259.2-M1979). **MADE IN USA**



No. 6116540

Flex Top Bracket (system up to 499 ft), Galvanized Std., 1-1/8" Rung, Tri-Rung (23 lbs)	No. 6116280
Flex Top Bracket (system 500 ft +) Galvanized Std., 1-1/8" Rung, Tri-Rung (28 lbs)	No. 6116410
Flex Bottom Bracket, Galvanized (8 lbs)	No. 6100090
Flex Cable Guide Assy (system up to 199 ft), Galvanized, 1-1/8" Rung (1 every 25 ft) (.5 lbs)	No. 6100400
Flex Cable Guide Assy (system 200 ft +), Galvanized, 1-1/8" Rung (1 every 25 ft) (.5 lbs)	No. 6100515
Flex Cable, 3/8" 1x7 Galvanized (last 3 digits in part number designate length – priced per ft)	No. 6110000
Lad-Saf™ Flexible Cable Sleeve for 3/8" 1x7 cable, with 2000112 Carabiner (2.2 lbs)	No. 6116540
ExoFit™ Full Body Harness, Front & Back D-Rings, Loops for Belt, Quick-Connect Buckles, X-large (4 lbs)	No. 1108532
(1108525=SM, 1108526=MED, 1108527=LG)	
Single Back D-Ring Safety Belt with 3" Body Pad, Tongue Buckle Belt, X-large (1.5 lbs)	No. 1000005
(1000002=SM 32"-40", 1000003=MED 36"-44", 1000004=LG 40"-48", XL=44"-52")	
Same as above with Floating D-Ring & no Body Pad, X-large (1.1 lbs)	No. 1000165
(1000162=SM 32"-40", 1000163=MED 36"-44", 1000164=LG 40"-48", XL=44"-52")	
SAFLOK™ Steel Carabiner, Self Closing & Self Locking - 11/16" Opening (.6 lbs)	No. 2000112
Same with 1-3/16" Opening (1.5 lbs)	No. 2000113
Same with 2-3/16" Opening (1.9 lbs)	No. 2000114

(Additional Harnesses and Lanyards can be found on the next page)

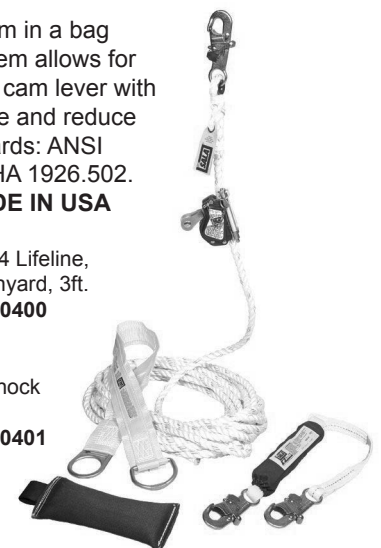
## LAD-SAF™ ROPE GRAB KIT

Seedburo offers the LAD-SAF™ complete rope grab system in a bag for convenient compliance and safety on the job. This system allows for freedom of movement and hands free operation. Utilizes a cam lever with friction sensitive brake to lock the rope grab onto the lifeline and reduce the forces (shock absorbing) of a fall. Meet industry standards: ANSI A10.14-1991, ANSI Z359.1-1992, OSHA 1910.66 and OSHA 1926.502. CSA certified models available (Ref. Z259.2-M1979). **MADE IN USA**

50' complete system includes: 5000335 Rope Grab, 50 ft. 1202794 Lifeline, flexible 5901583 counter-weight, 3ft. 1240007 shock absorbing lanyard, 3ft. 1003000 tie-off adaptor and 9511597 carrying bag.....**No. 5000400**

100' complete system includes: 5000335 Rope Grab, 100 ft. 1202844 Lifeline, flexible 5901583 counter-weight, 3ft. 1240007 shock absorbing lanyard, 3ft. 1003000 tie-off adaptor and 9503806 carrying bag. ....**No. 5000401**

(Harnesses can be found on the next page)





**EXOFIT™ XP FULL BODY HARNESSES**

Exofit™ XP harnesses are designed to be the industries most comfortable harness. Incorporating a single piece of material that wraps around you in the shape of an X, for the ultimate in no-tangle donning and comfortable security. The padding can be removed for easy cleaning. XP materials are soft and lightweight, yet extremely durable. Features include: quick connect buckles, 3-D mesh and breathable lining, cushioned shoulder pads and leg and hip straps, reflective piping, 420 lb. capacity, and a stand-up dorsal D-ring. Full Body Harnesses meet or exceed industry standards: ANSI A10.14-1991, ANSI Z359.1-1992, OSHA 1910.66, OSHA 1926.502. CSA certified models are available (Ref. Z259.10-m90).

**Vest Style Harnesses: Removeable Padding & Stand-Up “D”**

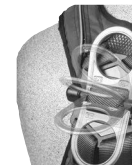
- Back D-Ring, Loops for Belt, Quick-Connect Buckles, size XL (4 lbs) ..... **No. 1110103**  
(1110100 = SM, 1110101 = MED, 1110102 = LG)
- Back & Shoulder D-Rings, Loops for Belt, Quick-Connect Buckles, size XL (5 lbs) ..... **No. 1110378**  
(1110375 = SM, 1110376 = MED, 1110377 = LG)
- Front & Back D-Rings, Loops for Belt, Quick-Connect Buckles, size XL (5 lbs) ..... **No. 1109728**  
(1109725 = SM, 1109726 = MED, 1109727 = LG)



1110103



1109803



D Ring

**Cross-Over Harnesses: Removeable Padding & Stand-Up “D”**

- Front & Back D-Rings, Loops for Belt, Quick-Connect Buckles, size XL (5 lbs) ..... **No. 1109803**  
(1109800 = SM, 1109801 = MED, 1109802 = LG)

**DELTA™ FULL BODY HARNESSES**

New, improved Delta™ harnesses combine “industry-first” advancements with popular features that have made Delta™ the workhorse of the industry. These harnesses are durable and comfortable and have a shape of their own so you can don them quickly and easily. Features no-tangle design, Revolver™ vertical torso adjustment with 420 lb. capacity. Full Body Harnesses meet or exceed industry standards: ANSI A10.14-1991, ANSI Z359.1-1992, OSHA 1910.66, OSHA 1926.502. CSA certified models are available (Ref. Z259.10-m90).

**Vest Style Harnesses: With Stand-Up “D”**

- Back D-Ring, Tongue Buckle Leg Straps, Univ. size (4 lbs) ..... **No. 1102000**  
(1101252 = XL)
- Back & Shoulder D-Rings, Tongue Buckle Leg Straps, Univ. size (5 lbs) ..... **No. 1101254**  
(1101257 = XL)
- Front & Back D-Rings, Tongue Buckle Leg Straps, Loops for Belt, Size XL (4 lbs) ..... **No. 1107803**  
(1107806 = SM, 1107807 = MED, 1107800 = LG)



1102000



1102950

**Cross-Over Harnesses: With Stand-Up “D”**

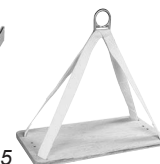
- Front & Back D-Rings, Tongue Buckle Leg Straps, Univ. size (4 lbs) ..... **No. 1102950**  
(1102952 = XL)
- Front, Back & Side D-Rings, Tongue Buckle Leg Straps, Univ. size (5 lbs) ..... **No. 1103375**  
(1103376 = XL)

**BELTS & CHAIRS**

- Tongue Buckle Belt, Back D-Ring, 3” Pad, Size XL 44”-52”(2 lbs) ..... **No. 1000005**  
(1000001 = XS 28”-36”, 1000002 = SM 32-40”, 1000003 = MED 36”-44”, 1000004 = LG 40”-48”)
- Tongue Buckle Belt, Floating D-Ring, No Pad, Size XL 44”-52”(1 lbs) ..... **No. 1000165**  
(1000161 = XS 28”-36”, 1000162 = SM 32-40”, 1000163 = MED 36”-44”, 1000164 = LG 40”-48”)
- Boatswain’s Chair (12” x 24” x 1” Board) with Belt and Floating D-Ring, Size XL (10 lbs) ..... **No. 1001135**  
(1001131 = XS, 1001132 = SM, 1001133 = MED, 1001134 = LG)



1000005



1001135

**EZ STOP® SHOCK ABSORBING LANYARDS**

DBI/SALA’s EZ STOP® Series Shock Absorbing Lanyards are specifically designed to limit the forces imposed on a worker during a fall (to 900 lbs or less) to reduce the possibility of injury or death. All lanyards feature a patented one-hand operated self-locking snap hooks (SLSH). Meets or exceeds industry standards: ANSI Z359.1-1992, ANSI A10.14-1991, OSHA 1910.66, and OSHA 1926.502. CSA certified models available (Ref. Z259.11-M92).



1244306



1240256

**EZ STOP® II SHOCK ABSORBING LANYARDS**

SHOCK WAVE2™ Expands to 6 ft when taut and contracts to 4.5 ft keeping out of the workers way.

- SLSH at each end ..... **No. 1244306**
- 1” Polyester Web, SLSH at each end x 6’ ..... **No. 1240006**
- Adjustable 1” Polyester Web, SLSH at each end x 6’ ..... **No. 1240256**
- 100% Tie-Off, 1”, SLSH at end and leg ends x 6’ ..... **No. 1240406**



1240006



1232354

**LANYARDS - ROPE AND WEB**

Meets or exceeds industry standards: ANSI A10.14-1991 and OSHA requirements. CSA certified models available (Ref. Z259.1-1976).

- Rope Lanyard, 1/2”, Nylon, SLSH at each end x 6’ ..... **No. 1232354**
- Rope Lanyard, same as above with adjustable length ..... **No. 1232209**
- Web Lanyard, 1” poly, SLSH at each end x 6’ ..... **No. 1231106**
- Y-Lanyard, 1-3/4” Poly Web, SLSH both ends and D-Ring Center (Y-Line) x 2’ ..... **No. 1231470**
- Same as 1231470 except with Spreader Bar (as shown) ..... **No. 1231460**



1240406



1231460



1231106

**DBI SALA**® **CONFINED SPACE RETRIEVAL SYSTEM**



Our Confined Space Rescue and Retrieval System features a lightweight, aluminum 7' tripod and Salalift™ II winch and cable system that provides safety and versatility when raising, lowering or supporting personnel. The gear drive system allows for two-speed input. Raising and lowering is quick and easy. The Salalift's™ II three independent braking systems offer added safety. The sturdy aluminum tripod is portable and easy to set-up. Cable is available in 1/4" and 3/16" diameter, galvanized or stainless steel (call for quote), in 60ft., 90ft., and 120ft. lengths. Meets or exceeds industry standards: ANSI Z117.1-1989, OSHA 1910.146, OSHA 1910.28(l)(1), and OSHA 1926.451(k)(l). **MADE IN USA**

Salalift™ II Winch with 60 ft of 1/4" Galvanized Cable, Winch Bag, 7 ft Tripod (81 lbs) .....	<b>No. 8300030</b>
Salalift™ II Winch with 90 ft of 3/16" Galvanized Cable, Winch Bag, 7 ft Tripod (78 lbs).....	<b>No. 8300032</b>
Salalift™ II Winch with 120 ft of 3/16" Galvanized Cable, Winch Bag, 7 ft Tripod (81 lbs).....	<b>No. 8300034</b>
Y-Lanyard, 13/4" web with self locking snap hooks (SLSH) at each end,	
D-ring center x 2 ft., used with 1101254 harness (2.2 lbs) .....	<b>No. 1231470</b>
Same as 1231470 except with Spreader Bar (3 lbs) .....	<b>No. 1231460</b>
Vest style harness with back/shoulder retrieval D-rings (4.2 lbs) .....	<b>No. 1101254</b>
Optional Carrying Bag for 7' tripod (1.5 lbs) .....	<b>No. 9503094</b>

**ULTRA-LOK™ SELF RETRACTING LIFELINE (SRL)**



DBI/SALA's Ultra-Lok™ Self-Retracting Lifelines extend and retract automatically enabling the worker to move about within a recommended working area at normal speeds. Should a fall occur, a speed sensing brake system (4.5 ft/sec) will activate, stopping the fall and reducing the forces imposed on the user to 900 lbs. (4kN) or less. Meets or exceeds industry standards: ANSI Z359.1-1992, ANSI A10.14-1991, OSHA 1910.66 and OSHA 1926.502. CSA certified models available (Ref. Z259.2- M1979).

Ultra-Lok® SRL with 20 ft of 3/16" Galvanized Steel Wire Rope, Swivel SLSH (9 lbs) .....	<b>No. 3504433</b>
Same - 30 ft (11 lbs) .....	<b>No. 3504430</b>
Same - 50 ft (15 lbs) .....	<b>No. 3504450</b>
Same - 85 ft (33 lbs) .....	<b>No. 3504485</b>

**ULTRA-LOK™ RSQ™ DUAL-MODE SELF RETRACTING LIFELINE (SRL)**

No other brand has the exclusive DBI-SALA™ dual-mode descent operation. The RSQ™ feature allows the user, prior to connection, to choose their mode of operation. This allows for built-in rescue operation.

**Fall arrest mode** allows for assisted rescue and can be made by additional personnel by hand if SRL is within reach or by using the First-Man-Up™ Pole when user is out of reach. The RSQ™ SRL features a speed-sensing brake that stops the fall, reduces the forces imposed upon the user to safe levels of 900 lbs. or less and allows for assisted rescue.

**Automatic descent mode** also features a speed-sensing brake that stops the fall, then instantly a centrifugal brake activates, lowering the user at a controlled speed to the next level or ground. Meets or exceeds industry standards: ANSI Z359.1-1992, ANSI A10.14-1991, OSHA 1910.66 and OSHA 1926.502. CSA certified models available (Ref. Z259.2- M1979).



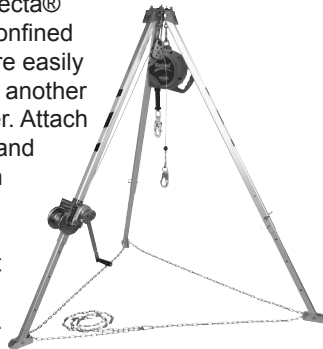
Ultra-Lok™ RSQ™ SRL with 50 ft of 3/16" Galvanized Steel Wire Rope, Swivel SLSH (19 lbs).....	<b>No. 3504550</b>
6-12 ft. First-Man-Up Pole™ with Assisted Rescue Tool (9 lbs) .....	<b>No. 3500101</b>
8-16 ft. First-Man-Up Pole™ with Assisted Rescue Tool (10 lbs) .....	<b>No. 3500102</b>



# PROTECTA ECONOMY FALL PROTECTION AND RESCUE EQUIPMENT

## CONFINED SPACE ENTRY/RETRIEVAL SYSTEM

These lightweight, portable Protecta® aluminum tripods are ideal for confined space entry and retrieval. They're easily transported from one location to another and can be set-up by one worker. Attach one or two mechanical devices and you're ready to go. Each system includes an 8' tripod, winch (or 3-way SRL), Rebel SRL and 50 ft. galvanized SRL. Built to meet OSHA and ANSI standards, including stringent ANSI Z359.1.



### Confined Space Systems:

- AK105A Tripod, AK205AG Winch, 3590550
  - Rebel™ 50' (15m) Galvanized SRL (81 lbs)..... **No. AA805AG**
  - AK105A Tripod, AK205AG Winch, 3590550
  - Rebel™ 50' (15m) Galvanized SRL, AK067A
  - Tripod Bag (86 lbs)..... **No. AA805AG2**
  - AK105A Tripod, AD515AG 3-Way 50' (15m)
  - Galvanized SRL, AK020A1 Pulley, AK055A
  - Mounting Bracket for SRL (67 lbs)..... **No. AA815AG**
- (Available in other lengths: 30', 60', 75', 110')

## REBEL™ SELF RETRACTING LIFELINE (SRL)

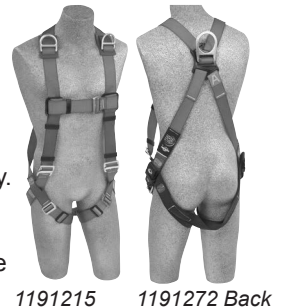
The Rebel™ SRL offered by Protecta® is built to last providing an economical fall protection solution without compromising performance or safety! These durable SRL's feature heavy-duty (aluminum or thermoplastic) housing, high strength lifeline options, side cable exit, ergonomic carrying handleswivel hook, and top swivel. Meets OSHA and ANSI safety standards.



- Rebel™ SRL, 33', 5mm Galvanized Cable, Thermoplastic Housing, Carabiner (14 lbs)..... **No. 3590500**
- Rebel™ SRL, 33', 5mm Galvanized Cable, Aluminum Housing, Carabiner (17 lbs)..... **No. 3590510**
- Rebel™ SRL, 50', 5mm Galvanized Cable, Thermoplastic Housing, Carabiner (18 lbs)..... **No. 3590550**
- Rebel™ SRL, 50', 5mm Galvanized Cable, Aluminum Housing, Carabiner (21 lbs)..... **No. 3590560**
- Rebel™ SRL, 66', 5mm Galvanized Cable, Thermoplastic Housing, Carabiner (22 lbs)..... **No. 3590590**
- Rebel™ SRL, 66', 5mm Galvanized Cable, Aluminum Housing, Carabiner (28 lbs)..... **No. 3590600**
- Rebel™ SRL, 85', 5mm Galvanized Cable, Thermoplastic Housing, Carabiner (29 lbs)..... **No. 3590630**
- Rebel™ SRL, 85', 5mm Galvanized Cable, Aluminum Housing, Carabiner (34 lbs)..... **No. 3590640**
- Rebel™ SRL, 100', 5mm Galvanized Cable, Thermoplastic Housing, Carabiner (30 lbs)..... **No. 3590670**
- Rebel™ SRL, 100', 5mm Galvanized Cable, Aluminum Housing, Carabiner (35 lbs)..... **No. 3590680**

## PROTECTA® PRO™ FULL BODY HARNESSES

The Protecta® PRO™ Series of harnesses provides the right fit for the right value. These harnesses feature a comfortable fit and lightweight hardware and padding providing greater comfort and added safety, which means reduced worker fatigue and increased productivity. Each harness also features a built-in lanyard keeper. PRO™ harnesses meet OSHA and ANSI standards, including the stringent ANSI Z359.1.



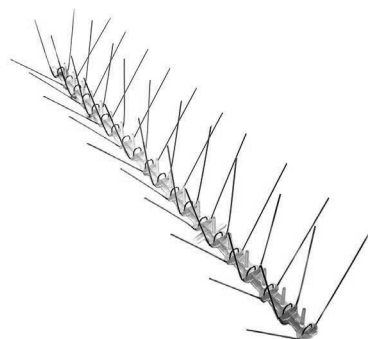
- PRO™ Full Body Harness, Back & Front D-rings, Tongue Buckle Legs, Small (4 lbs)..... **No. 1191272**
- (Medium/Large No. 1191273, X-Large... No. 1191274)
- PRO™ Full Body Harness, Back & Front D-rings, Pass-Thru Buckle Legs, Small (4 lbs)..... **No. 1191233**
- (Medium/Large No. 1191234, X-Large... No. 1191235)
- PRO™ Full Body Harness, Back & Shoulder D-rings, Tongue Buckle Legs, Small (4 lbs)..... **No. 1191240**
- (Medium/Large No. 1191241, X-Large... No. 1191242)
- PRO™ Full Body Harness, Back & Shoulder D-rings, Pass-Thru Buckle Legs, Small (4 lbs)..... **No. 1191215**
- (Medium/Large No. 1191216, X-Large... No. 1191217)
- PRO™ Body Belt, Tongue Buckle Belt with Hip Pad and side D-Rings, Small (3 lbs)..... **No. 1091013**
- (Medium/Large... No. 1091014, X-Large... No. 1091015)

## PROTECTA® PRO™ PACK SHOCK ABSORBING LANYARDS

The economical Protecta® PRO™ Pack lanyards provide high quality compliance and trust among users. These shock absorbing (S/A) lanyards feature 3,600 lb. gated hooks, durable lanyard material construction and plated alloy steel hardware for strength and corrosion resistance. Available in single-leg or Tie-off (double-leg). All PRO™ Pack shock absorbing lanyards limit the average fall arresting forces to 900 lbs. (4kN) and meet OSHA and ANSI standards, including the stringent ANSI Z359.1.



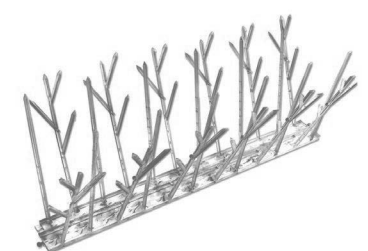
- PRO™ S/A Lanyard, 6' with Standard Snaps on End (3 lbs)..... **No. 1341001**
- PRO™ S/A Lanyard, 4' with Standard Snaps on End (3 lbs)..... **No. 1341004**
- PRO™ S/A 100% Tie-off Lanyard, 6' with Standard Snaps on Ends (4 lbs)..... **No. 1342001**
- PRO™ Adjustable S/A Lanyard, 6' with Standard Snaps on Ends (3 lbs)..... **No. 1341050**
- PRO™ Adjustable S/A 100% Tie-off Lanyard, 6' with Standard Snaps on Ends (4 lbs)..... **No. 1342250**
- PRO™ Cable S/A Lanyard, 6' with Standard Snaps on Ends (3 lbs)..... **No. 1340401**
- PRO™ Cable S/A 100% Tie-off Lanyard, 6' with Standard Snaps on Ends (5 lbs)..... **No. 1340451**
- PRO™ Elastic Leg S/A Lanyard, 6' with Standard Snaps on Ends (3 lbs)..... **No. 1341101**
- PRO™ Elastic Leg S/A 100% Tie-off Lanyard, 6' with Standard Snaps on Ends (4 lbs)..... **No. 1342101**



### BIRD-X STAINLESS STEEL SPIKES

Bird-X Spikes have been used on buildings and structures worldwide to eliminate the roosting and nesting surfaces of birds. Spikes are available in quantities of 24', 50' and 100' (in 2' strips) and in 3 different widths: Standard of 5", Slim 1.5" or Extra wide 8".

100' Slim stainless steel bird spikes .....	<b>BIRDLS100</b>
50' Slim stainless steel bird spikes .....	<b>BIRDLS50</b>
24' Slim stainless steel bird spikes .....	<b>BIRDLS24</b>
100' Standard stainless steel bird spikes.....	<b>BIRDSTS100</b>
50' Standard stainless steel bird spikes.....	<b>BIRDSTS50</b>
24' Standard stainless steel bird spikes.....	<b>BIRDSTS24</b>
100' Extra wide stainless steel bird spikes .....	<b>BIRDEWS100</b>
50' Extra wide stainless steel bird spikes .....	<b>BIRDEWS50</b>
24' Extra wide stainless steel bird spikes .....	<b>BIRDEWS24</b>



### BIRD-X PLASTIC BIRD SPIKES

Prevent birds from landing

- Eliminate roosting surfaces
- Tough, long-lasting polycarbonate provides decades of maintenance-free protection
- Transparent material doesn't mar the look of the building
- Dense spikes are branched from the vertical shafts to offer impenetrable coverage
- Flexible spikes mount on flat or curved surfaces and are easy to install with adhesive, nails screws, wire ties, etc.

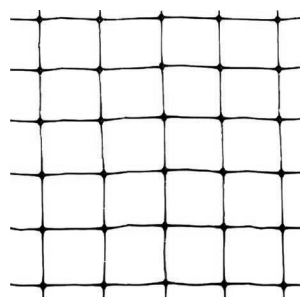
Stackable 12" sections make it easy to carry a quantity of spikes, and help minimize waste. Ideal for use on ledges, signs, windowsills, gutters, roof perimeters, air conditioners, chimneys, support structure, awnings, poles, lights, statues, beams, building projections and anywhere else birds roost.

Effective against pigeons, sparrows, starlings, swallows, crows, blackbirds, grackles, many other birds, bats and more. Standard Spikes are used for most applications. Dims. 4-1/2"Lx1"Wx4-1/2H". Narrow are used on ledges 2" deep or less. Dims. 4-1/2"Lx1/2"Wx2-1/4H".

10' Narrow Plastic bird spikes .....	<b>BIRDSP10N</b>	10' Standard Plastic bird spikes .....	<b>BIRDSP10</b>
25' Narrow Plastic bird spikes .....	<b>BIRDSP25N</b>	25' Standard Plastic bird spikes .....	<b>BIRDSP25</b>
50' Narrow Plastic bird spikes .....	<b>BIRDSP50N</b>	50' Standard Plastic bird spikes .....	<b>BIRDSP50</b>
100' Narrow Plastic bird spikes .....	<b>BIRDSP100N</b>	100' Standard Plastic bird spikes .....	<b>BIRDSP100</b>

### BIRD-X BIRDNET

Tough plastic netting seals off all structural openings and other possible roosting sites. Lightweight, pliable, UV stabilized netting won't deteriorate with age or lose strength when exposed to the elements.



Standard black mesh is 3/4". Structural black mesh is 1/2" Made from tough polypropylene, Bird Net seals entries and blocks access to roosting sites. It prevents birds from roosting and nesting in undesirable areas or from eating grains, crops, fruit or foodstuffs.

Coverage: each piece of netting covers an area its own size -100' x 14' or 200' x 14' - or it can be cut to size for a smaller application. Deters Pests: birds (pigeons, sparrows, starlings, crows, blackbirds, grackles, seagulls, swallows), bats, most critters and larger rodents. Uses: edges, beams, rafters, railings, air conditioners, signs, windowsills, gutters, roof perimeters, chimneys, support structures, awnings, poles, lights, statues, trusses, building projections and anywhere else birds roost. Mounting clips holds BirdNet securely with heavy-duty plastic clips that snaps around net.

BIRDNET Standard 100 feet x 14 feet .....	<b>BIRDVIS-11/100</b>
BIRDNET Standard 200 feet x 14 feet .....	<b>BIRDVIS-11/200</b>
BIRDNET Structural 100 feet x 14 feet.....	<b>BIRDVIS-11S/100</b>
BIRDNET Structural 200 feet x 14 feet.....	<b>BIRDVIS-11S/200</b>
BIRDNET Clips, 250 Clips.....	<b>BIRDVIS-12</b>

- Easy Installation • Lasts for decades • Nearly invisible • Deters birds permanently

**BIRD-X BALCONY GUARD**

Designed for residential & small area use, this low-profile electronic bird repeller uses quiet ultrasonic sounds to evict annoying birds from your deck, patio, balcony, or any other outdoor area around the home. The Balcony Guard is a cost-effective, easy solution to your pest bird problem.



Balcony Guard utilizes ultrasonic sound waves to efficiently and effectively frighten, annoy, and intimidate birds and other wildlife within its 900 sq. ft. range. Birds don't like this at all and will stay away. Ultrasonic means that it is virtually "silent to humans", so you can effectively get rid of birds while maintaining a comfortable, enjoyable, bird-free environment for yourself.

- Ship wt. 3 lbs. Ship dims. 10"x8"x4"
- Power Req's: 110 or 220vAC or 12vDC
- Sound Pressure: 90 db @ 1 Meter
- Frequency: 15,000-25,000 Hz
- Motion Sensor Range: 35 ft. x 70 ft.
- Working Current: <200 mA
- Power Supply: 4 x 1.5v "C" batteries or included 120v AC adapter
- Compliance: UL and CE listed.
- EPA EST: 075310-OR-001

Balcony Guard.....**No. BIRDBG**

**BIRD-X TRANSONIC PRO**

This low-profile electronic pest repeller uses quiet ultrasonic sounds to evict mice, bats, spiders, cockroaches and crawling insects. Works well in your kitchen, garage, basement, workshop, shed or attic. The Transonic PRO is a cost-effective, easy solution to your pest problem. Ship wt. 2 lbs. Ship dims. 9"x4"x4"



Transonic Pro.....**No. BIRDTXPRO**

**BIRD-X REPELLER PRO**

The "BirdXPeller Pro" electronic bird repeller expels birds by blasting them with sound waves. This bird deterring unit automatically broadcasts a variety of naturally recorded bird distress signals and predator calls to frighten, confuse, and disorient birds within its effective range. These high definition digital recordings are played on loud speakers to ensure that the message gets across to pest birds: "Keep Out!" Ship wt. 3 lbs. Ship dims. 12"x7"6"

- Power Req's: 110 or 220vAC or 12vDC
- Sound Pressure: 105-110 db @ 1 Meter
- Frequency: 3-5 kHz
- Compliance: UL and CE listed

QB4 Bird Repellers.....**No. BIRDQB4**  
 Ultrason X.....**No. BIRDUSX**  
 BIRD-X Repeller Pro.....**No. BIRDBXPPRO**



**BIRD-X BROADBAND PRO**

The Broadband Pro® is a full-featured bird control system that gets rid of pigeons, sparrows, starlings and other stubborn bird infestations with a comprehensive, multi-faceted audio attack.



This automated sound unit operates in ultrasonic and sonic modes, using four loud speakers to emit natural predator calls and bird distress & alarm signals. The sounds confuse, disorient, and intimidate pest birds to quickly scare them away from the effective area of over 10,000 sq. ft. Ship wt. 10 lbs. Ship dims. 19"x13"x8"

Broadband Pro.....**No. BIRDBBPRO**

**BIRD-X CRITTER BLASTER**

Drive Away Pest Animals and Birds with Digital Sonic Harassments.

- Programmable electronic animal and bird repeller
- Control box plus four separate directional speakers, each with 100 feet of wire
- Offers convenience and flexibility
- Weatherproof
- Choose from any or all of 8 harassment sounds



Ship wt. 12 lbs. Ship dims. 19"x13"x17"

Critter Blaster Pro.....**No. BIRDCBPRO**

**BIRD-X GOOSEBUSTER**

The GooseBuster® is a full-featured sonic goose control system that gets rid of geese and other waterfowl with an audio attack. This automated sound system uses four speakers to broadcast sound waves and audio signals. The sounds confuse and disorient the birds to quickly scare them away from the effective area up to 7 Acres. Ship wt. 20 lbs. Ship dims. 25"x19"x7"



Goosebuster.....**No. BIRDGB**

### BIRD-X SUPER BIRD EXPELLER PRO

The Super BirdXPeller Pro broadcasts scientifically documented distress & alarm calls that birds easily understand. These sounds are played at a natural level in order to accurately emulate the calls of other birds and bird predators. The targeted pest birds interpret these signals as: "EMERGENCY: STAY AWAY" and avoid the affected area out of instinctual fear. Ship wt. 12 lbs. Ship dims. 13"x13"x7"



#### Features

- 4-Speaker System: System includes 4 independent speakers with 100 ft of wire each
- Customizable: Adjustable volume, Programmable Sound Delays, and modifiable hours of operation
- Coverage: 6 Acres of repelling power
- Installs Easily: The unit and extension speakers are portable and mountable
- Natural Sounds: Super BirdXPeller Pro uses naturally recorded bird distress signals, bird alarm calls, and natural predator cries.
- High-Quality Digital Playback : The sounds are broadcast at the highest quality and digital clarity.
- Solar Power Option: Save on power costs by going green: use our large solar panel to charge your unit's battery.
- Dimensions: Control Unit- 9" x 9" x 5.25" Speakers- 4"x4"x6"
- Speakers: 8 ohms, 30 watts
- Coverage: 6 Acres
- Power Requirements: 110 or 220vAC or 12vDC
- Sound Pressure (sonic): 105-110 db @ 1 meter (per speaker)
- Frequency: 3-5 khz
- EPA Est. 075130-OR-001

Extension Speaker ..... No. BIRDEXPES

### BIRD-X TERROR EYES

The "3D" structure is visible from every angle. The "eyes" are made from holographic materials, which create the illusion that the large eyes are following the bird to attack. Inflatable with built in hook, 26" in diameter.

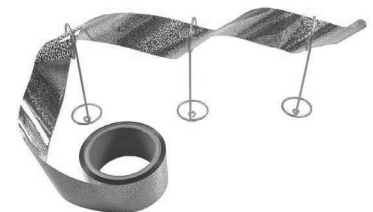


Terror Eyes ..... No. BIRDTEYES

### BIRD-X IIRI-TAPE

Irri-Tape® is designed to utilize sight and sound to scare birds away from an effected area. The iridescent material shimmers and shines in the sunlight, disorienting and confusing any bird that catches a glimpse. Irri-Tape also creates a metallic noise as it flaps in the wind, adding an additional threatening sound to keep pest birds away.

IIRI-Tape trial, 100ft., Ship wt. 2 lbs. Ship dims. 6"x4"x3" ..... No. BIRDTAPE100  
IIRI-Tape Standard, 500ft., Ship wt. 5 lbs. Ship dims. 8"x8"x4" ..... No. BIRDTAPE500



### BIRD-X GATOR GARD

GatorGard decoy frightens birds and animals. GatorGard features realistic alligator head, 25 threatening inches long that moves and bobs with the wind and water. Life-like eyes flash in the light effectively scares geese and waterbirds. Effective worldwide - even where alligators don't live - as this fear is instinctive not learned. Ship wt. 3 lbs. Ship dims. 13"x11"7"



Actual Dimensions: 25" long x 11" wide x 7" tall. Weight: 4 pounds. Coverage: to 1 acre (0.4 hectares) depending on size, shape and surroundings of area. Material: Durable, weather-proofed urethane foam with UV protected coating.

Gator Gard..... No. BIRDGG

### BIRD-X PROWLER OWL

The Prowler Owl® decoy resembles the ultimate, most-feared aerial predator; the Great Horned Owl, which catches and eats almost anything that moves. Ship wt. 3 lbs. Ship dims. 12"x14"x9"



Wingspan: 44", total head-to-tail 28", head diameter 7".  
Materials: Replica owl Head is hard resin plastic, body is strong-weave iron hide fabric supported by woven flexible cables and riveted plastic struts. Includes: Head, Wings, Body

Prowler Owl ..... No. BIRDOWL

### BIRD-X BIRD STROBE

This flashing Strobe light casts shadows and disorients birds. Ship wt. 4 lbs. Ship dims. 11"x11"x13"  
1 millino candlepower, 75 flashes per minute



Bird Strobe Lite..... No. BIRDBSLQB4

### BIRD-X FOX REPLICA

Two-dimensional, realistic photo silhouettes are portable and easy to set-up or take down. The Replica is 28"L x 5"W x 12"H. Ship wt. 3 lbs. Ship dims. 14" x 9" x 6"



Fox Replica..... No. BIRDFOX



### BIRD-X DEER GARD

Electronic Deer Repellent

- \* Built-in infrared motion sensor activates when pests move into the repellent's coverage zone
- \* Adjustable frequency for other pests
- \* Ultrasonic (silent to humans)

Ship wt. 3 lbs. Ship dims. 12" x 7" x 5"

Deer Guard.....**No. BIRDDG**



### BIRD-X YARD CONTROL

Yard Gard Repellent deters dogs, cats, deer and other small animals. Built-in infrared motion detector activates when pests move into its coverage zone. Continuous or motion-sensor operation modes. Ship wt. 3 lbs. Ship dims. 12" x 7" x 5"

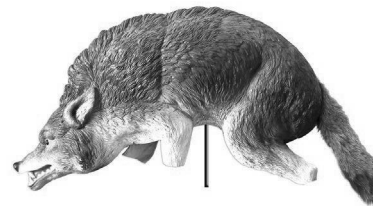
YardGard .....**No. BIRDYG**

### BIRD-X COYOTE REPLICA

**3D** Coyote replica, repels geese, birds and other small animals.

Coyote 3-D Replica. Ship wt. 3 lbs. Ship dims. 24"x9"x6 ..... **No. BIRDCOYOTE3D**

Coyote 2-D Replica. Ship wt. 2 lbs. Ship dims. 24"x20"x1 ..... **No. BIRDCOYOTE2D**



### NATURE'S DEFENSE: ALL PURPOSE ANIMAL REPELLENT

Nature's Defense All-Purpose Animal Repellent effectively deters 22 different pest species. These 100% organic granules can be sprinkled anywhere to create an irritant scent barrier that keeps pests away. Made from all-natural ingredients, Nature's Defense is safe to use around children, pets, plants and food crops. Extremely resistant to rain and snow. Repels: deer, rabbits, squirrels, mice, rats, moles, voles, shrews, chipmunks, woodchucks, gophers and more.

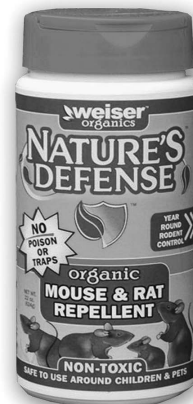
Apply as needed: 22 oz. covers upto 3,500 sq.ft./ 50 lbs covers up to 3 acres.

Recommended for use outdoors, to protect areas or foundations:

- Home & Garages
- Sheds & Storage units
- Basements, cellars & window wells
- Gardens & Plantings
- Comercial buildings

Nature's Defense All Purpose Animal Repellent.....**No. BIRDN10012C**

Nature's Defense Mouse & Rat Repellent.....**No. BIRDND1012MR**





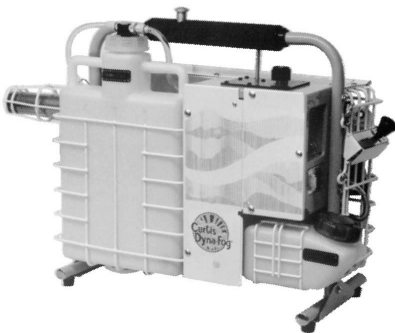
**BIRD-X BIRD PROOF REPELLENT**

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 1 whole year or longer!

Simply applied with a household type 10" caulking gun and you're 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. Ship wt. 10 lbs. Ship dims. 12" x 7" x 5"

Bird Proof cartridges 12 tube/case ..... **No. BIRDVIS-07**

**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 a 1 gallon (3.8) liter 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 ..... **No. TRLB**



**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: 6.85 amps, 50/60Hz cycle, 20,000 RPM. Tank Capacity: 1 gal. (3.8 liters). Ship wt. 8 lbs. Ship dims. 15" L x 10" W x 18" H.

DC-3 Sprayer, 110V ..... **No. DF**

**SEEDBURO INSECT TRAP**



Our insect trap early warning system lets you monitor insect activity in stored grain. Trap is made of tough, long lasting perforated plastic and is 17" long. The tip is the reservoir for insect collection. The Seedburo Trap can be used with or without pheromones or food attractants. For best results in 20 ft. dia. 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. Dims. 17" L x 1-1/4" dia. Net wt. 8 oz., Ship wt. per carton 1 lb. Ship dims. 20"Lx8"Wx8"H.

Insect Trap, ctn. of 3 ..... **No. TRAP1**

### SEEDBURO WEED SEED BOOKLET

Ideal for lab or classroom, the Seedburo Weed Seed Booklet is completely illustrated with all of the common noxious and poisonous weeds and weed seeds with commonly used crop seeds.

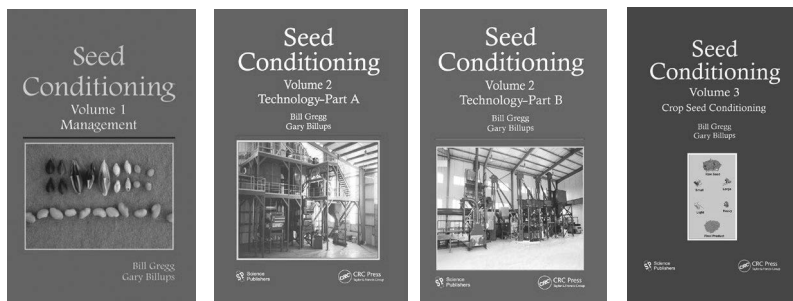
Seedburo Weed Seed Booklet ..... **No. WSB**



### SEED CONDITIONING BOOKS

A practical advanced-level guide  
 Authors: Bill R Gregg: Seed Industry Development & Conditioning Specialist  
 Gary L. Billups: Seed Conditioning Specialist & President Crippen International, Inc.

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 efforts of many conditioners were compiled and distilled into a brief, easy-to-understand form.

Seed Conditioning is in three 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.

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.

Seed Conditioning, Volume I: Management ..... **No. SEEDBOOK-I**  
 Seed Conditioning, Volume II: Technology ..... **No. SEEDBOOK-II**  
 Seed Conditioning, Volume III: Crop Seed Conditioning ..... **No. SEEDBOOK-III**

### SEED INSPECTORS DUFFEL BAG

This handy duffel 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 removeable shoulder strap. Actual wt 1 lb., Actual dims (when extended) 20"L x 11 1/2"W x 10 1/2"H.



Seedburo Inspectors Duffel Bag (Black Only) ..... **No. SEC-DUFFEL**

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