

# Damaged Starch Analyzer SD-A

- Erkaya "SD-Analyzer" is ideal for Damaged Starch analysis in flour
- It is used to determine amount of damaged starch in flour
- Amperometric method
- Unique design and Multifunctional Touch Screen provide ease of us.
- Color 7" Touch Screen Function
- 3 screen themes
- Working princible is based on iodine absorbtion in a diluted flour suspension.
- The more Starch Damage, the faster iodine is absorbed
- Enzyme free application
- The device provides simple, fast and reliable results only with 1 grams of flour sample and in less than 10 minutes
- Possibility to access device screen from mobile phone with a mobile application
- Easy calibration
- Results screen in UCD, AACC, Farrand, Audidier methods

#### Uses For

- Checking the conditions of the rolls
- Optimizing the volume, color and shelf life of the final product
- Adjusting water absorption and dough stickiness











# Hammer Type Laboratory Mill **HM 210**

- CE certified.
- A hammer type laboratory mill which is used for sample preparation for Gluten washing and Falling.
- Number, Protein and NIR applications.
- Grinds grains, pellets, meals, spices, oilseeds, feeds and forages.
- Reduced clogging by high performance motor.
- Reduces sampling error.
- Long mill life.
- Convenient and rapid sample preparation.
- It is built on a metal construction.
- A steel hammer rotates at high speed and forces the sample through a stainless steel sieve.
- An adjustable vacuum feed control regulates feed rate of the sample into the metallic grinding chamber. It provides possibility to grind samples up to 25 % moisture content.
- **300** gr in 30-50 seconds depending on sample type and the moisture content.
- The sample is collected in a filter bag after passing through the sieve.
- Standart sieve is 0.8 mm for Falling Number, Gluten washing system and NIR analyses. Other sieves are also available upon request. (0.5-1-2 mm)
- By selecting different sieves the particle size distribution in the sample can be varied.
- Provides high sample homogeneity and repetability.
- Robust construction.
- Perfect durability.











### Hammer Type Laboratory Mill **HM 310**

- CE certified.
- A hammer type laboratory mill which is used for sample preparation for Gluten washing, Falling Number, Protein and NIR applications.
- Grinds grains, pellets, meals, spices, oilseeds, feeds and forages.
- Reduced clogging by high performance motor.
- Reduces sampling error.
- Motor is inside the box, thus low noise level.
- Long lasting.
- Durable.
- Cyclone outlet with filter bag to minimize dust.
- Airfl ow feeder regulates feeding and facilitates grinding of large samples .
- Spesific production for corn.
- Cyclone design minimizes cleaning between samples.
- Door switch provides safe operation.
- Long mill life.
- Convenient and rapid sample preparation.
- It is built on a metal construction.
- A steel hammer rotates at high speed and forces the sample through a stainless steel sieve.
- An adjustable vacuum feed control regulates feed rate of the sample into the metallic grinding chamber. It provides possibility to grind samples up to 25% moisture content.
- 300 gr in 30-50 seconds depending on sample type and the moisture content.
- Standart sieve is 0.8 mm for Falling Number, Gluten washing system and NIR analyses. Other sieves are also available upon request. (0.5-1-2 mm)
- By selecting diff erent sieves the particle size distribution in the sample can be varied.
- Provides high sample homogeneity and repetability.
- Robust construction.













# Gluten Washer GW 2400





- CE Certified.
- Conforms to Official World Standards (AACC No:38-52, ICC No: 155&158, 137/1).
- Automatic Dual Chamber System.
- Stainless steel box. No corrosion!
- Measures wet gluten quantity of the wheat meal, wheat flour, durum, semolina and wheat gluten.
- Measures both ground grain and flour at breeders, grain traders, flour mills, flour users, wheat gluten manufacturers, pasta manufacturers and bakeries.
- Two different test methods in the same system.
- Rapid analysis. A complete test takes less than 7 minutes.
- Adjustable mixing and washing time by means of dip-switches
- Possibility to adjust mixing time from 5 up to 75 seconds and washing time from 60 to 900 seconds.
- Robust Design. For use in difficult grain intake environments.
- Specially designed holes at the bottom panel enabling device to discharge the water, in case of water pump tubes deterioration.
- Easy of Use. Non technical operators can use the system confidently. No chemicals required.
- Segregation of grain and flour in terms of quality.
- Complete with all accessories.













# Touch Screen Gluten Washer GW 3200

- CE Certified.
- New design, Touch Screen Gluten Washer. First ever in the World.
- New Desigh with no buttons.
- All commands can be given on screen.
- Conforms to Official World Standards (AACC No:38-52, ICC No: 155&158, 137/1).
- Automatic Dual Chamber System.
- Ease of Use.
- Stainless steel box. No corrosion!
- Measures wet gluten quantity of the wheat meal, wheat flour, durum, semolina and wheat gluten.
- Measures both ground grain and flour at breeders, grain traders, flour mills, flour users, wheat gluten manufacturers, pasta manufacturers and bakeries.
- Two different test methods in the same system.
- Rapid analysis. A complete test takes less than 7 minutes.
- Adjustable mixing and washing time by setting menu on Touch Screen Display.
- Possibility to adjust mixing time from 5 up to 75 seconds and washing time from 60 to 900 seconds.
- Robust Design.
- Specially designed holes at the bottom panel enabling device to discharge the water, in case of water pump tubes deterioration.
- Segregation of grain and flour in terms of wet gluten amount.
- Complete with all accessories.













- CE certified.
- Heater and control units are separate.
- Possibility to see the test time on digital display.
- Dries gluten of wheat and flour samples.
- Operating temperature is 150°C.
- Temperature is kept stable by means of a thermostat.
- Teflon coating provides effective drying and easy removal of sample being tested.
- Stops automatically warning with a beep signal.
- 220 V 50 Hz electricity.



















ERKAYA

- Large Color Touch Screen Display.
- All function buttons are one touch away. Easy to use.
- Measures FN conforming to international standarts (ICC and AACC Standard methods).
- Single Analysis System.
- Segregation of sound and sprouted grain to save money and ensure quality.
- Possibility to perform;
  - Classical Falling Number Test in wheat flour and meal,
  - Falling Number Test in wheat flour with Altitude Correction,
  - Falling Number Test in meal of wheat, durum, rye and barley with Altitude Correction,
  - Fungal Falling Number Test to detect alpha amylase enzyme activity which is added to flour.
- Automatic altitude correction and automatic recalculation of FN results.
- Moisture FN, Moisture GR, Mean Value, Liquefaction Number.
- Calculation of Blends, Sample ID.
- LAN connection.
- Print Out.
- Arshive.















## Falling Number FN 8100

- CE certified
- New design Falling Number, 7 inch Touch Screen Display on the side.
- 3 different themes of display
- All function buttons are one touch away. Easy to use.
- Measures FN conforming to international standarts (ICC and AACC Standard methods).
- Single Analysis System
- Segregation of sound and sprouted grain to save money and ensure quality
- Possibility to perform;
  - Classical Falling Number Test in wheat flour and meal.
  - Falling Number Test in wheat flour with Altitude Correction,
  - Falling Number Test in meal of wheat, durum, rye and barley with Altitude Correction,
  - Fungal Falling Number Test to detect alpha amylase enzyme activity which is added to flour
- Automatic altitude correction and automatic recalculation of FN results
- Correction of sample weight both for 15 % and 14 % moisture basis and FFN test.
- Moisture FN, Moisture GR, Mean Value, Liquefaction Number
- Calculation of Blends, Sample ID
- LAN connection
- Optional Print Out
- Arshive

















# Falling Number FN 7200

- CE certified.
- Large Color Touch Screen Display.
- All function buttons are one touch away. Easy to use.
- Measures FN conforming to international standarts (ICC and AACC Standard methods).
- Dual Analysis System.
- Segregation of sound and sprouted grain to save money and ensure quality
- Possibility to perform;
  - Classical Falling Number Test in wheat flour and meal,
  - Falling Number Test in wheat flour with Altitude Correction,
  - Falling Number Test in meal of wheat, durum, rye and barley with Altitude Correction,
  - Fungal Falling Number Test to detect alpha amylase enzyme activity which is added to flour.
- $\blacksquare$  Automatic altitude correction and automatic recalculation of FN results.
- Moisture FN, Moisture GR, Mean Value, Liquefaction Number.
- Calculation of Blends, Sample ID.
- LAN connection.
- Print Out.
- Arshive.











## Falling Number FN 8200

- CE certified
- New design Falling Number, 7 inch Touch Screen Display on the side.
- 3 different themes of display.
- All function buttons are one touch away. Easy to use.
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- Calculation of Blends, Sample ID.
- LAN connection.
- Optional Print Out.
- Arshive.















## Moisture Meter **HE 50**

- **Easy handling.**
- Measures wheat, wheat flour, barley, corn, rye, sunflower, as well as other grains.
- Exact measuring results.
- Automatic temperature correction.
- High measuring range up to 30 % moisture.
- 14 calibrations
- Four of the fourteen product programs can be selected from over 180 available products for your HE 50,
   e.g. cargo, peanuts, milo corn, green coffee etc.
- This allows a universal application of the HE 50 for grain, grass, vegetable and flower seeds, etc.

### Hectoliter H1

- Hectoliter is the weight of a one liter of kernel such as wheat, corn, etc.
- A very important quality parameter at purchasing points.
- The result depends on the particle size, density and the kernel quality.
- The system is composed of a digital balance, a knife and a float.
- Conforms to standarts having an exact 1 literof volume.
- Short analysis time.











- CE certified.
- Rolls are to grind the wheat, a specially designed sieve to separate the standard flour and the bran.
- 2 different collectors stocking flour and the bran separately.
- Performs the test with the flour efficiency of 55-70 % depending on the wheat variety and the moisture content.
- Possibility to grind dampened wheat up to 16-17 % moisture content.
- Possibility to see grinding by the glass front panel.
- Possibility to adjust the feeding rate according the moisture content or particle size of the wheat.
- 380 Volt 50 Hz. Electricity















## Sedimentation Device **ZL 120**

- The system is used for determining gluten quality and hazardous insects damage.
- LCD display with 6 lines.
- 6 timers
- 40 rpm induced motor enables system to perform the tests with standard 40 rpm rate, regardless of the load on the device.
- Every timer has a led being active when it is operated.
- The device enables operator to run only the timer without operating the motor.
- It stops automatically warning with a signal.
- It operates the test with standard angle.
- Possibility to measure both sedimentation and modified sedimentation value.















- Used for screening and classifying grain
- Providing 1 test sieve frame and 1 collecting container followed.
- Frames have 20-30 cm diameter.
- The sieves are tightened by this part from one side and other side is tightened by a spring-like system.
- The sieving motion is horizontal.
- The amplitude of the motion stroke is between 25 and 35 cm.
- 0-60 seconds timer.
- Number of strokes are displayed on LCD Screen.
- Speed controlled/frequency adjustment.























### Furnace PLF 100-3

- Temperature range is up to 1000 °C.
- 3 liters of inner volume
- Easy operation and double skin construction to maintain a cooler outer case.
- Low thermal mass insulation leads to a very impressive heat up rate as well as efficient insulation.
- Temperature control provided either by PID or Programmable controls depending on customer requirements.
- Chamber exhaust vent
- A vertical counter balanced door, keeps the hot insulation away from operator, while opening
- There is always a safety switch which isolates power when door is opened.

















- Completely Stainless Steel Body.
- Protects food hygiene.
- Suitable for dosing enzymes, ascorbic acid, wheat gluten, soy flour and other ingredients added in large quantities.
- 1,70-270 dm3/h accurate dosing capacity.
- High performance induced motor.
- ABB-ACS150 Speed Control Device.
- 60 kg capacity of dosing cell.
- 2 carrier screws for each machine.
- Level control window.

Models	Min.Dosing Capacity	Max. Dosing Capacity
ED 110	1.70 kg/hr	47.71 kg/hr
ED 120	3.40 kg/hr	91.45 kg/hr
ED 130	6.44 kg/hr	168.65 kg/hr
ED 140	9.60 kg/hr	270 kg/hr
ED 102	0.68 kg/hr	19.86 kg/hr
ES 102	2.28 kg/hr	11.40 kg/hr
ES 103	3.65 kg/hr	18.24 kg/hr
ES 104	9.45 kg/hr	46.02 kg/hr



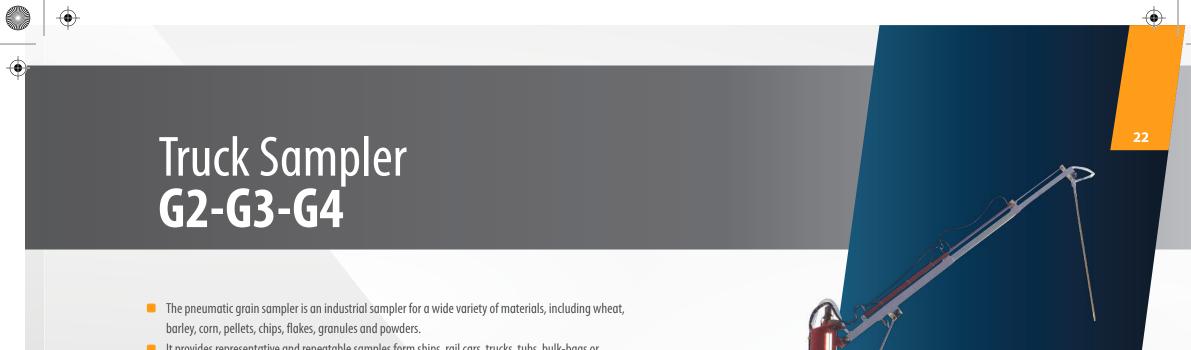












- lt provides representative and repeatable samples form ships, rail cars, trucks, tubs, bulk-bags or
- Sample probe is mounted on the swivel stand and boom which are powdered in three axes.
- The system can operate in 2 different modes which are automatic and manual mode.
- Pressure sensor adjustment at bottom of the truck . Vacuum is provided by a very functional blower (3 kw)
- Telemechanique PLC provides ease of use.
- Remote control is optional.
- In the manual mode, it is possible to choose the depth where you can start sampling.
- The grain amount which system takes depend on density and the moisture.
- The system can move 120° right to left and 120° left to right (totally 240°.
- It can move upwards and downwards.
- The probe strand has 240 cm length and by means of telescopic arms it is possible to extend the probe strand up to 500 cm.
- The probe has 220 cm length.
- High performance vacuum systems can take sample from different depths and transfers to the collector in laboratory.



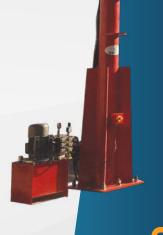
Remote Control



Control Panel



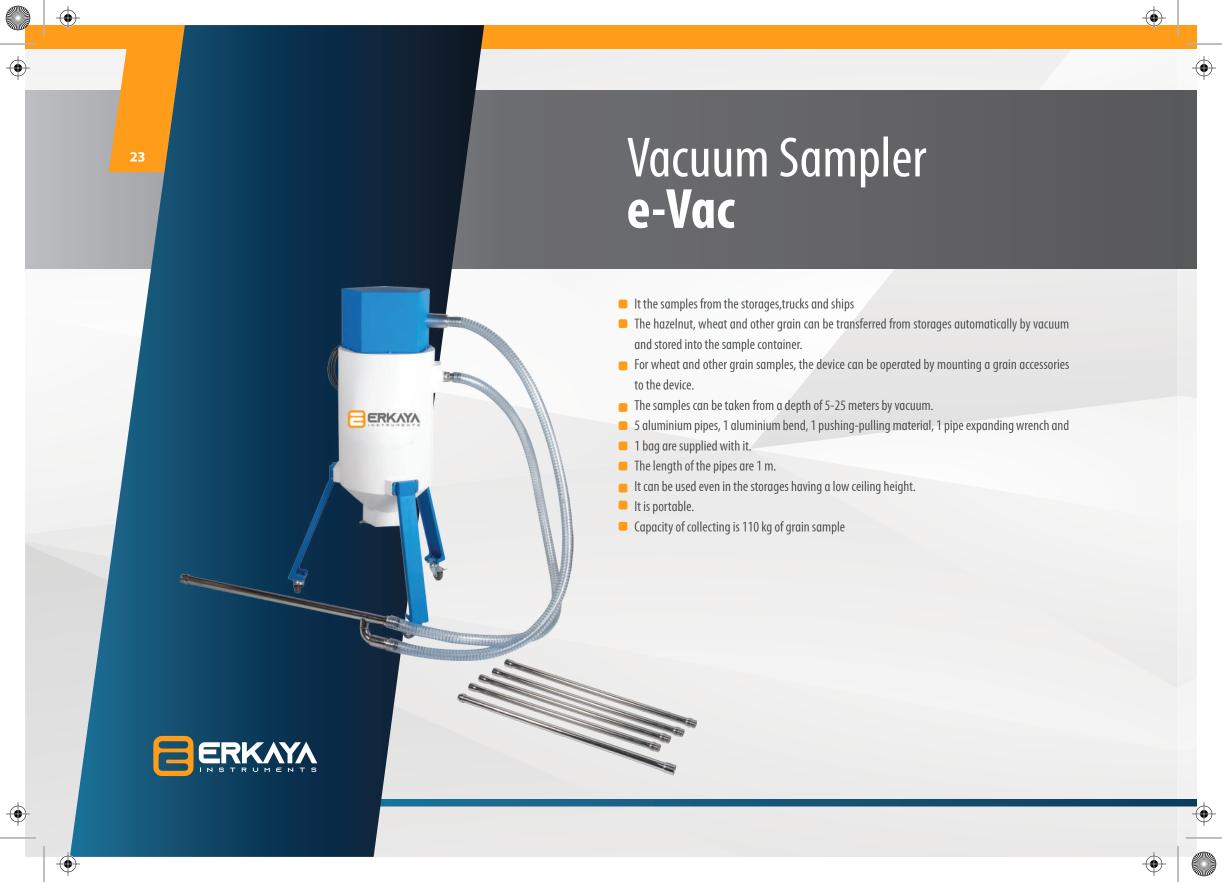
Cyclone











# Riffle Type Divider RF 1

- Rifle-type sample divider can be used to divide or halve samples of grain-type crops, agricultural seeds, granules, flours and powders into representative subsamples
- The sample is divided 1:1 in each pass
- Exit into two different collection conginers
- Suitable for granulates, flour and powder
- Portable
- Completely electrostatic painting is supplied with 2 identical collection containers.

# Sample Divider DV2

- Made up of brass and copper.
- No corrosion.
- The sample to be analyzed is placed in the hopper.
- It is dispersed over the cone.
- It divides the grain into two equal parts homogeneously















## Phosmatic - Fumigator **E01**



- Possibility to adjust the rate as 1 tablet per (1-999) seconds.
- The cell contains 3000 gr of fumigant which is 1000 tablets.
- Larger cells are available upon request.
- The running time and the waiting time can be adjusted by speed controller.
- Tablet outlet diameter can be produced accordingly.
- Tablets are isolated from external environment.
- The device can be placed on the line from purchasing point to the silo, grain band or somewhere between silos.
- Power requirement is 220 V-50Hz



# ERKAYA









## NIT Whole Grain Analyser **3000B**

- CropScan 3000B Near Infrared Transmission Analyser is designed to measure protein, moisture, starch, fiber vand oil in whole grains of wheat, barley, canola, sorghum, oats, triticale, soybean, corn, rice, peas, beans etc.
- The built in Touch Screen PC provides a means of measuring a wide range of grain samples but also adding storage and quality information about the grains, including; Test Weight, Screening, Retention,
- Variety, Grade, Tonnage, Storage Location.
- The CropScan 3000B uses a pour through measuring cell that has an automatic pathlength selection for each grain type.
- Once the product has been selected, the CropScan 3000B adjusts the pathlength of the measurement cell to provide an optimum scan.
- The CropScan 3000B can be connected to a second screen where the CropNet Grain Data Management software runs in parallel to the Cr3000B operating software.
- A weighbridge monitor can be connected to the Cr3000B via a USB port and cable, so that load weights can be taken automatically.
- Alternatively, a Bar Code Reader and a Scale can be connected to the Cr3000B USB ports for recording bag weight and ample ID as used in field trial testing.
- The CropNet software posts the data to the internet where it can be viewed remotely using a Smart Phone, Tablet or PC.













# NIT Flour Analyser 3000F

- The CropScan 3000F is a bench top NIR analyzer designed for rapid measurement of protein and moisture in wheat, barley and other cereal grains and powders including flour, semolina, lupin meal, soybean meal, soybean flour, corn flour and meals can be measured in a 5mm deep rotating dish that is simple to load and empty. Up to 30 sub scans can be collected for either grains or powders and averaged to provide excellent accuracy and precision.
- Protein and Moisture in Wheat
- Protein, Moisture, Ash, Water Absorption and Starch Damage in Flour and Semolina
- Specks in Flour and Semolina.
- Protein and Moisture in Meals.
- Protein, Moisture, Oil and Starch in Soybeans, Corn, Rice and other grains and oil seeds.
- Protein, Moisture and Oil in Corn Flour, Rice Flour, Soybean Meal and other processed grain products.
- Touch Screen Operation.
- Once the NIR analyser has predicted the required parameters, the software prompts a set of customised data fields. The operator enters the following information: Sample ID, Test Weight and Screening Weight, Storage
- Location, Variety, Grade, Source (Farm, Paddock or Supplier), Truck ID
- Once the data fields are completed, the information is stored in the on-board memory. Reports are available at the press of a button for; Tabulated results, Spectra, Trends Plots, Bin Averages for each silo, bunker or shed...







### **R&D** Activities

R&D activities are shaped in parallel with Erkaya's strategy and growing objectives. Within this framework, the products of target markets are supported with competitive technologies, optimized design and environmentalist approaches. Erkaya make use of the advantages provided by export support projects of public institutions to perform them.

Developing its own technology and maintaining the advantages of international competition, Erkaya on R&D as a part of its strategy. The company's vision "Respects the Globe, Respected Globally" forms the essence of its R&D strategy.





















Vitalzyme EMX

Vitalzyme FH

Gives better machinability Prolongs shelf life

Increases volume of baked product

Arranges pore structure

Optimizes alpha amylase activity Makes doughs with good elasticity

Enhances browning

5-10 gr / 50 kg

#### Flour Improvers – Oxidizing Agents

Vitalex C 10

Increases the dough resistance

10-25 gr / 50 kg

Vitalex C 25

Enhances fermentation stability and dough tolerance Gives better machinability Increases volume of baked product

4-10 gr / 50 kg

Vitalex G

Arranges pore structure **Enhances browning** 

1-3 gr/50 kg

### Flour Improvers – Enzymes – The Amylase

Vitalzyme F1000

Standardized fungal alpha amylase enzymes

10-20 gr / 50 kg

Vitalzyme F5000

Arranges alpha amylase activity Shortens kneading time

1-5 gr / 50 kg

Vitalzyme F3

Gives fine texture Increases volume yield Prolongs shelf life

0.5 - 3 gr / 50 kg

Vitalzyme F4

Delays stailing Fine crumb structure

0.1 -0.5 / 50 kg





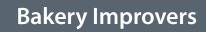


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ERKAYA





VITBULL 100	Enhances fermentation stability and dough tolerance Gives better machinability	0.1 %
VITBULL 200	Makes doughs with good elasticity Makes dough drier	0.2 %
VITBULL 500	Optimizes alpha amylase activity Gives thinner and better bread crust structure	0.33 %
VITBULL 20	Decreases dryness of bread crust and prolongs shelf life Increases volume of baked product Arranges pore structure Enhances browning	1 %

### Pasta Improvers

VITALEX PST	Gives excellent bread crust flavor Minimizes the dough loss during pasta production Enables to use soft wheat flour and semolina Enables drying at high temperatures Prevents the over rising during cooking and provides a healthy structure Prevents softening and adhesion during cooking Provides a desirable color and shine Does not blur the cooking water, reduced strch release during cooking Cooking time extension	10 gr / 50 kg











Special enzyme for waffle and biscuit production Provides an excellent change in gluten structure Cracking and Crumbing prevention Balance good color Homogeneous structure High performance protease enzyme VITALEX PB10 Good relaxation VITALEX PB20 Reduced water absorption and stability Enhanced flavour and browning Balanced pore structure

20 - 50 gr / 100 kg

Aroma

VITALZYME BCS

Gives fine flavour Prevents bad odour.

Shelf life extension

Fine natural bread crust flavour and aroma

20 - 50 gr / 100 kg

#### **Bleaching Agents**

VITALEX B27 VITALEX B44

Good bleaching effect on flour Strengthens gluten structure

Possibility to see the final effect within 48 hours

20 - 30 gr / 100 kg











