



A WORLD OF BETTER IDEAS

**FOR GRAIN & SEED
PROCESSING**

**FROM
GRAINTECH**



Product Catalogue 2010

GRAIN TECH ENGINEERING LIMITED

Better
ideas for
**SEED
& GRAIN**



Barley



Millet



Red
Clover



Timothy
Grass



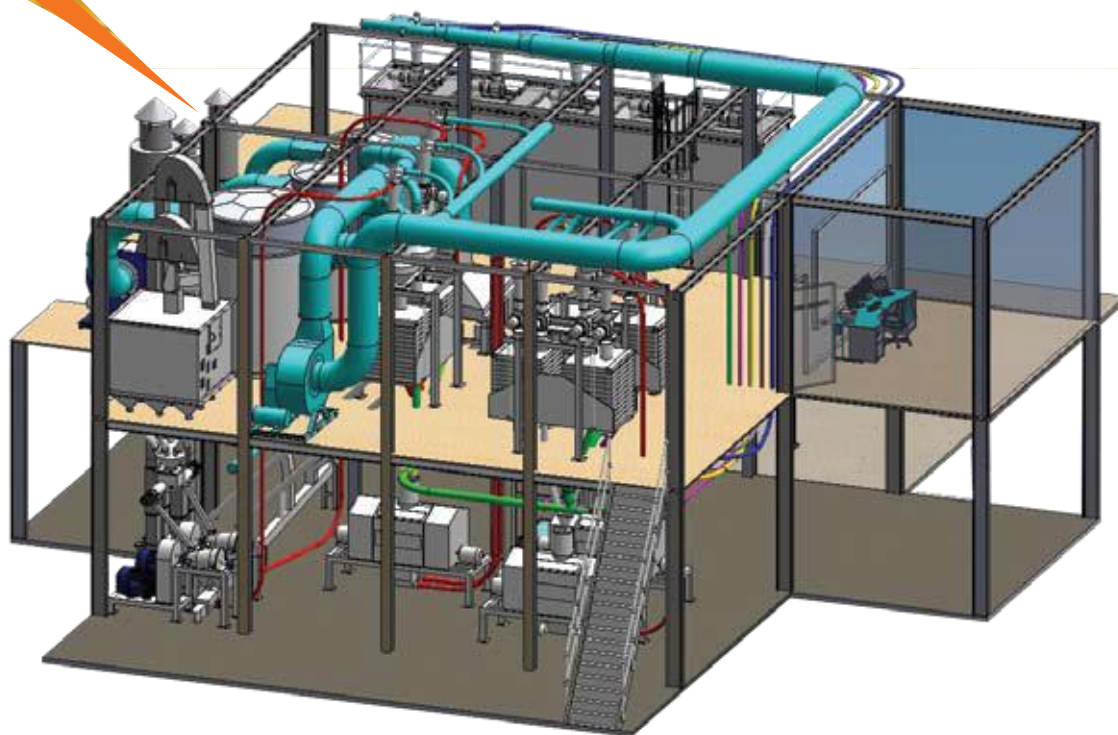
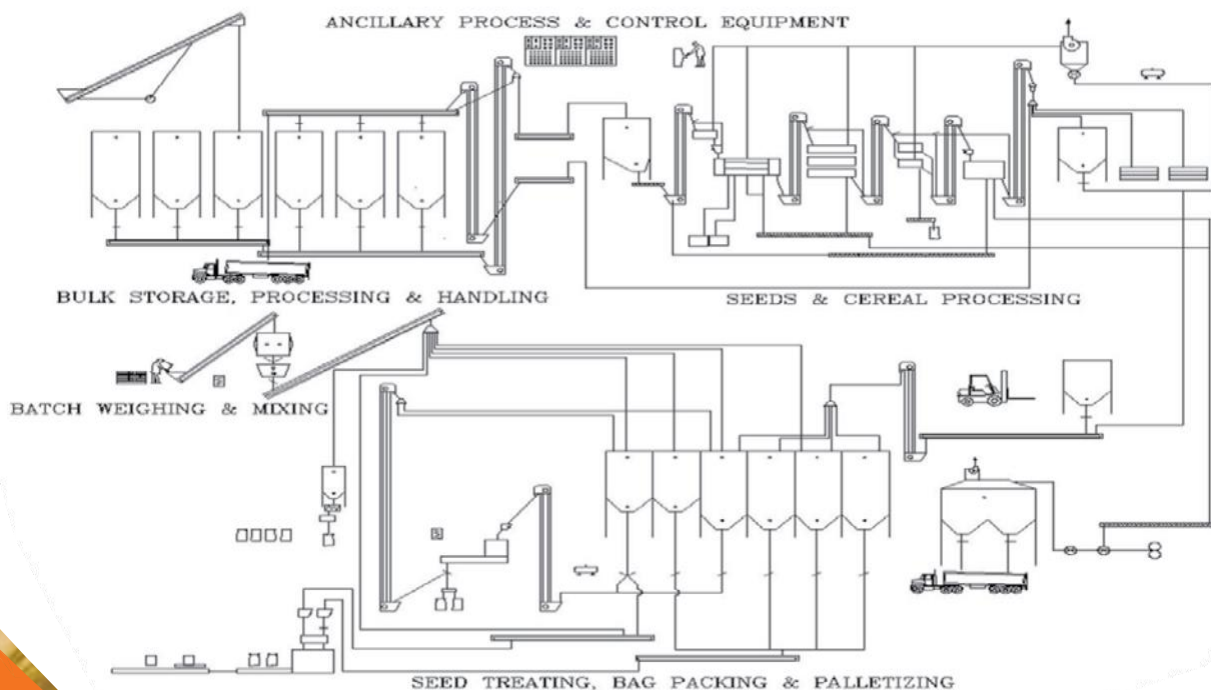
Cocksfoot



Italian
Ryegrass



Maize



Grain Tech Engineering are established specialists in designing processes and installation of equipment for the grain and seed industry. From designing, draughting and engineering services for our clients through to equipment sales we have everything that is required for the grain and seed industry.

Serving the Grain, Seed and Related Industries for 25 years.



**GRAIN TECH
ENGINEERING LTD**

For further information contact Grain Tech

on: grain@ihug.co.nz

or: project@graintech.co.nz



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Oats



Meadow Fescue



Rape Seed



Rye



Sorghum



Mung Bean



Soya Bean



Better ideas for SEED & GRAIN



BETTER GRAIN & SEED PROCESSING EQUIPMENT

Pre Cleaning Drum Separator Type TCQY

Typically the TQLY separator is installed in grain receiving lines. It serves to separate coarse impurities contained in cereals during the pre-cleaning phase, such as straw particles, string, paper, pieces of wood, maize leaves and cobs, etc. Using this machine can relieve downstream machines and conveyers, therefore protect them from operating faults and damage. Feed material enters the drum via an internal area of the perforated metal screen where the sound grain discharges to a separate outlet while the coarse separated impurities over tail to a second receiving hopper – provision is made for a separate exhaust connection.

Available in: capacity sizes from 5 to 120TPH



Vibratory Separator Type TQLZ

TQLZ Vibratory separator sifts the coarse and fine impurities from cereals and similar granular products. When equipped with the TFDZ tail end aspiration channel or the TFXH air-recycling aspirator, the combined function also enables the removal of the low-density particle impurities. The separator incorporates two screen decks each with two separate screen frames fitted with the correct screen material for the application. Ball cleaners are fitted to the screen frames. The drive is via two out of balance vibratory motors and the vibro-separator had a wide range of adjustments to enable precise separations to be made.

Available in: Four capacity sizes from 5 – 200 TPH



Rotary Separator Type TQLH

The type TQLH Rotary Separator is used to separate foreign impurities of various dimensions from a wide range of seed, cereal, pulses and similar granular products. The machine is made up of a freely oscillating metallic assembly joined to the base structure by flexible suspensions. Two dismountable and easily inspected wooden screen frames are fixed inside the body section, the upper screens separate the product from the large impurities and the lower screens separate the smaller screenings. The separator is suitable for all product cleaning through simply changing the screen frame apertures. Generally the machine is coupled to an aspirator channel or TFXH air recycle aspirator to achieve further elimination of the lighter particles present in the product.

Available in: Four Capacity sizes from 3 – 150 TPH





BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...



Gravity Selector Type TQSF

The TQSF Gravity selector performs continuous separation of stone and similar heavy impurities from a stream of grain and grades the cereal grains into light and heavy fractions. This machine has a work surface with two sieves: the first divides the flow of grain into light and heavy fractions; the second separates the foreign bodies with specific weights higher than that of the grain, such as stone and bits of glass and metal. The drive is from two out of balance vibratory motors allowing for a wide range of adjustments. A separate air exhaust is necessary to ensure that the fluidising effect is maintained across the vibratory screens.

Available in: Two capacity sizes from 3 – 20 TPH



Gravity Selector with Air-Recycling System Type TQSXH

This type of gravity selector with air-recycling system works for continuous separation of stones and heavy impurities from a stream of grain, and grades the cereal grains into light and heavy parts. It is supplied complete with a closed circuit air recycling system that allows the installation to be placed in any plant without the necessity of connections to the main exhaust system to ensure both initial capital and continuous operating cost savings.

Available in: Two capacity sizes from 3 – 20 TPH



Gravity De Stoner Type TQS

The Type TQS Dry Stoner is used to continuously eliminate stones and heavy fragments from a flow of granular product. The feed inlet with valve-controlled dosage regulates the flow of the granular product into the machine. The product is uniformly distributed by the vibration of the inclined selection table and is carried in suspension by an ascending air current, generated by an external aspirator, which allows it to flow towards the lower end. The heavier particles under the influence of the particular configuration of the selection surface, move towards the outlet placed at the upper end of the machine, while the lighter particles are aspirated by the ascending current and thus carried on to the exhaust system and filter collector.

Available in: Two capacity sizes from 3 – 20 TPH



BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...

Combi-cleaner Type FQLSD

The FQLSD Combi-cleaner unit performs four operations in a single machine:

- separates grains according to the particle size
- sorts grains according to the specific gravity
- as a de-stoner to remove the stone, glass bits, etc
- removes lightweight impurities via aspiration

This machine features a space-saving design with a single housing for the four process operations. The central aspiration connection can combine with this machine to separate the low-density particles such as dust, hulls, chaff and shrivelled kernels. Experience gained in this field confirms that this machine achieves outstanding performance characteristics and ease of operation.

The Combi-cleaner is suited to modern processing applications where space saving and optimized performance is called for.

Available in: Two capacity sizes from 3 – 20 TPH



Air-Screen Cleaner Type 5X-5

The Type 5X-5 Air Screen cleaner is an extremely versatile air screen cleaner. Specifically designed for effective cleaning and classifying of all cereals, malting barley, seed grain and all other seed varieties, i.e. grass seed, legumes, pulses, clovers, garden seeds, etc. within a wide range of processing applications. The design incorporating five separate screen decks, which may be arranged in various combinations enabling easy change over for different cleaning programmes for either scalping, classification or grading.

Feed into the machine is via both an agitator and a feeding roller controlled from a variable speed drive to ensure an even feed across the full screen area. An effective pre and after suction system ensures an efficient aspiration for the removal of lightweight impurities and immature product.

The Air-Screen cleaner may be supplied complete with control panel for easy installation.

Capacity 3 – 10 TPH (wheat)



Air Screen Cleaner Type 5XS-5.0

European designed high capacity air screen cleaner incorporating features for continuous high throughput, impurity of cleaning separations and operation reliability. This model may be set up for use as a pre-cleaner for processing fine seeds including grass seeds, legume fodder seeds, vegetable seeds, beet seeds and other easy or less easy flowing seeds. The machine settings including screen frequency and screen slope angle may be altered. Three screen decks are fitted with each being cleaned via a reliable brush mechanism.

Deflectors underneath the top and middle screens ensure that the through are returned to the top end of the screen deck for the most effective utilization of the screen surface area. Two exhaust chambers are incorporated for both feed end and discharge final product aspiration. All controls are easily accessed and the precise adjustments mean that finished cleaned quality standards are readily maintained.

Capacity is 3 – 5 MTPH (Wheat)





BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...

Air Screen Cleaner Type 5XQ-5.0



Single screen boat designed unit incorporating three screen decks which may be arranged to suit a wide variety of differing separation, grading and classifying requirements. The screens are fitted with ball cleaners and both pre and after aspiration is fitted to ensure that light weight impurities are effectively removed and the final cleaned product is given a through air wash. This model is suited for incorporation as either a pre-cleaner, industrial cleaner or optionally as a fine cleaner according to the application requirements as the flow arrangement may be adapted to meet specific needs. The frequency for the screening amplitude is adjustable.

Capacity is 5 MTPH (Wheat)



Air Screen Cleaner Type 5XD-12.0



A high capacity combined multi-purpose air screen cleaning machine of a new and modern machine concept, suitable for the pre, intensive and final cleaning of cereals, maize, beans and fine seeds to the highest standards of quality. The various screen layers in the multi cleaner can be utilized according to requirements to meet the actual cleaning process either for scalping, grading, sorting or sifting/ classification. The feeding system is provided with an inlet buffer bin and feeding roller for regulated consistent feeding while the suction system incorporates both pre-aspiration and main aspiration with each being independent and fitted with provision for false air inlet to enable precise adjustment for both volume and velocity. The screen system is supplied with two main screen boat assemblies having three screen layers while an intermediate return screen unit is also fitted. A wide variety of different flow arrangements may be incorporated according to the specific processing application and the balanced drive assembly ensures perfect balance and vibration free motion.

Capacity 12 MTPH (Wheat)



Gravity Separator Type 5XZ-10.0



Used to separate any type of dry bulk particles that are similar in size but differ in weight with typical uses being as follows: the elimination of infertile, light seed; the removal of weed and other extraneous impurities; the grading of two or more quantities of a given commodity differing in weight; the recovery of good material from screenings; the elimination of stones, sticks, pods and other trash; and the removal of cracked, damaged, insect infested or frosted material. This series of gravity separator is commonly used for processing commodities such as peas, beans, coffee, cereal grains, maize, cotton seed, grass seed, lucerne, rice, peanuts, soy beans, herbs, and a variety of non agricultural products including plastics, minerals and metals. A range of deck coverings are available to meet the optimum performance for any particular separation application. The significant operating features for these machines includes: Rectangular deck for greater accuracy and performance, multiple fan system for even air flow; easy and simple operational adjustments: counterbalanced eccentric drive assembly; compact design available in either left hand or right hand discharge configuration. Dust control features may be supplied to suit the installation.

Capacity: 10 MTPH (Wheat)



■ BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...

Gravity Separator Type 5XZD-5.0

Suited for separation of particles of almost identical size but having differing weight where the material is continuously fed uniformly to the separating deck surface for separation through both fluidisation and vibratory motion where the light material stratifies to the top while the heavier material contacts with the deck surface. The deck may be adjusted in either plane to provide the correct stratification and separation required and all adjustments are readily made from a local operating station.

Capacity 5 MTPH (Wheat)



Gravity Separator Type 5XZ-3.0

A rectangular design deck machine suited to handling a wide range of differing materials for the separation through specific gravity and widely used within the small seed and agriculture commodity processing industries. This unit has a common multi fan pressure system and is simple and compact in design.

A variety of deck materials are available to suit specific applications and where required, trials may be conducted to confirm the most suitable deck materials. User friendly controls make this unit easy to operate and enables precise separations to be achieved. An exhaust dust-free hood may be supplied to suit the installation.

Capacity: 3 MTPH (Wheat)



Gravity Separator Type 5XZ-2.0

A smaller scale model of the TYPE 5XZ-3.0 machine and fitted with the same features. This size machine is particularly suited for small scale operations and short run operations where the larger capacity machines are less practical. Common applications include; small seed classifying, vegetable seed purity grading, handling the split fraction within larger gravity separation operations, grading of nuts, spices and similar products within stand-alone processing/packing installations, regrading contaminated product lines for removal of glass or similar impurities. The operation controls are simple and convenient and the machine may be fitted with a dust control hood for connection to central dust handling systems.

Capacity: 2 MTPH (Wheat)





BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...

Gravity Separator Type 5XZ

Incorporated for grading and separation of granular materials having nearly the same size according to weight with the range of product sizes able to be processed varying between 0.5mm (fine seeds) and 20mm (i.e. beans). The product is separated into layers of different specific weights according to the fluid bed principle. The Type 5XZ Gravity Separator has stepless adjustment for the vibratory deck amplitude and feed rate while each section of the deck has regulation control for the zone air pressure. The deck inclination level may be adjusted in each direction to suit the specific product specifications in order to achieve the separations required.

Capacity is up to 5000 kg/hr (Wheat)



Type TFDZ Vertical Aspirator

The Type TFDZ Vibrating Vertical Aspirator is used in the cleaning of granular products to eliminate foreign objects, clods and lighter particles. The machine is made up of a vibrating feed hopper suspended from flexible arms which allows its adaptation to varying operating conditions. The lighter parts are lifted by a current of air which surrounds the product along the entire width of the aspiration channel, and are carried upwards. The cleaned product falls into the lower outlet. On request the machine can be fitted with a collection hopper and magnetic safety device to retain ferrous objects, installed underneath the machine. The separation process can be checked by a wide illuminated visor placed on the front of the aspirator. The aspirator comes in two versions according to the type of use: N-type for cleaning and L-type for pre-cleaning.

Available in: Four capacity sizes



Type TFXH Air-Recycling Aspirator

The TFXH Air-Recycling Aspirator is used in the cleaning of granular products to eliminate foreign objects, clods and lighter particles in general. The elimination of this type of impurity is performed by air aspiration, which normally must be purified in successive processes. The air-recycling aspirator tends to eliminate the need to use filters, or at least reduce their required dimensions, through the incorporation of an autonomous internal cyclone separation system. The machine is made up of a vibrating feed assembly suspended from elastic supports and an adjustable aspiration channel, the flexibility of which allows its adaptation to any operating conditions. The product, distributed across the entire aspiration channel, is surrounded by a current of air which lifts it and carries the lighter parts upwards. A cyclone battery with an aerodynamic core separates the air from the dust, which is collected using a worm-screw and discharged via a rotary air-lock. The cleaned air is recycled back to the machine's aspirator. The cleaned product falls into the lower bin, and is discharged via a rotary seal. The initial separation process can be checked via a wide illuminated visor placed on the side of the separator.

Available in: Four capacity sizes



■ BETTER GRAIN & SEED PROCESSING EQUIPMENT CONTINUED...

Spiral Separator Type YXPC30

This separator comprises a number of spiral channels wound concentrically around a vertical centre shaft. A feeding vane rotated by the incoming grain/seed pours the material down the inner channel. The round seeds attain the fastest speeds and fly off to the outer channels while the irregular shaped grain/seed and flat sided materials remain in the centre spiral. A mixture of round and flat sided or irregular shaped grain/seed collects in the middle channels. Cut off valves at the outlets of the spirals diverts the respective grain/seed to the required destination. The capacity is upto 3-3.25 MTPH depending on the grain/seed type being processed. A common use is following the length graders for re-separation of different shape and density broken grain, round seeds and other impurities. These separators are also incorporated prior to pack out bins for a final security check separation to remove evasive round weed seeds.



Clipper/de-bearder

Incorporated for removal of awns from barley, white heads from wheat and for clipping oats and also for pre-brushing grass seeds ie: Rye Grass seed in preparation for following classification and grading. The intensity of action is regulated by an adjustable discharge valve and the rotor is fitted with adjustable beaters. Provision is made for by-passing the machine together with the fitting of an aspirator at the discharge for removal of the awn and light weight dust. Capacity approx 20 MTPH for wheat and 2.2 MTPH for grass seed. Drive is from an 11Kw "V" belt and pulley transmission.





BETTER LENGTH GRADING MACHINES

FGJZ Series Ultra Indent Cylinder Separators



The FGJZ series indent cylinder separators provide precise and efficient length separation to remove material longer or shorter than the product being cleaned. A range of case hardened shells is available to length grade all seed types from clover to maize. The machines are fitted with variable speed control and three operating adjustments for versatility, ideal for cleaning clover, cereal grains, oil seeds and grass seeds.

The cylinders have complete cleaning out facilities.

The capacities range from 1.5 MTPH through to 15 MTPH with the multi cylinder machines being arranged for either three grade separations for the two high combinations or four separations for the three high combination. Retreatment sections may be incorporated where required to enable complete recovery of sound grain/seed from the lower quality fraction.

The variety of configurations available enable these machines to be adapted to long and short separation applications within a wide range of industries.



5XW-5 Indent Cylinder/Classifier



This series is arranged as a two high assembly suited for length grading applications within grain and seed processing plants where the need is to separate both short and long impurities from sound product. The main features are as for the FGJZ series machines; however, the 5XW-5 machines are assembled within completely enclosed and easily removed cover panels. The cylinder arrangement may be arranged as either series or parallel flow and as each cylinder is driven from a separate drive, the cylinder rotating speed may be controlled according to the optimum separating efficiency.

Capacity is upto 5000 Kg/Hr (Wheat)



Disc Cylinder Separator Type FJXZ



A unique combination incorporating a pocketed disc separator for the upper section to remove small impurities from the feed material according to size in combination with the removal of the coarse impurities to provide a cleaned sample suited to be classified on the following dual indented cylinder sets where the grading is according to the specific size requirements called for. These cleaning machines are ideally suited for cleaning and grading of oats, barley and wheat for selective following processing while also being well suited for inclusion within seed cleaning arrangements.

A significant advantage of these combination separators is that of requiring a considerably smaller installation footprint. All components incorporate wear resistant features for optimum performance and minimum maintenance



BETTER WIDTH & THICKNESS GRADING MACHINES

Cylindrical Sieve Classifier Type 5XY-5

The Type 5XY-5 cylindrical classifier is incorporated for grain, pulse and seed classification according to the grain/seed thickness or width and is widely used for sorting and grading cereals, seeds, grains, pulses and similar granular products such as wheat, barley, maize, raw coffee, peas, beans, sunflower seed, rice, peanuts and similar commodities.

The machine is arranged as a dual assembly which enables either parallel or in line flow scheming. The range of screen sizes enables selection to meet any specific separating requirement and through the adjustable screen slope feature the separation and capacity may be optimized. Features are provided for rapid screen change and easy clean out together with incorporation of dust connection points for dust free operation.

Capacity for the type 5XY-5 sieve classifier is 5000 Kg/Hr (Wheat)



Grading Machine Type 5XY-700

Operating using the principle of width grading where the material is rotated within a common cylinder fitted with either slotted or round hole screens to effect the sizing according to width. Upto six separate width classifications may be made according to the requirements with the separations from the smallest to the largest while the tail discharge material may also be directed to a separate outlet. The speed of rotation is 35 RPM and the outer drum surface is continually wiped with brushes to ensure that grain/seed product does not peg in the screen aperture.

Each separated grade may be transferred for further processing as needed. Access, inspection and changing of the respective screen sections is easily completed from panels positioned along both sides of the machine body.

Capacity: 10 MTPH (Wheat)



Grading Machine Type 5XD-5.0

Operating using the principle of width grading where the material is separated on a series of screens according to width sizing. The screen arrangement enables selective sizing from smallest to largest through sequential graduation while the screens are continually being cleaned via ball type cleaners operating within carrying cages to which the screens are fitted up to. Two separate screen boat assemblies are installed with each having two decks of screens which are driven from a balanced drive assembly for stable and vibration free operation. A wide range of differing screen sizes are available to meet specific applications and the screen assembly vibration frequency may be varied from a VS controller.

Capacity: 10MTPH (Wheat)





BETTER GRAIN & SEED TREATING IDEAS

Type 5B-5 Automatic Seed Coater



Designed to automatically apply liquid coating to cereal grains, pulses, seeds, etc. The type 5B-5 Seed Coater incorporates a variable speed stepless regulated feed unit to discharge the material continuously onto a spinning disc assembly where the liquid coating solution is sprayed to achieve a consistent and even coverage. Additional mixing occurs within the following mixing conveyor section to provide a gentle transfer for the following drying process. A PLC control system C/W LCD touch screen is incorporated to provide the operation interface and the parameters including density of feed material, feed ratio and percentage of chemical solution required may be programmed in for automatic and synchronized operation.

Capacity: 5000 Kg/Hr (Wheat)



Type 5BH-B Coated Seed Dryer



Suited for rapid drying of coated or pelleted seed to accelerate the film formation and solidification of liquid chemical addition. The unit is fitted with two speed controlled rotating drums each having lifters to carry the seed product to Cascade down through the reverse flow warm air stream for effective drying. The design is as a totally enclosed unit with dust proof removable access panels to avoid the liberation of any noxious gases. All contact parts for the wet chemically coated seed product are fabricated from stainless steel. Heating is provided from an industrial oil/diesel/gas burner equipped with temperature control and auto regulation for reliable and consistent drying.

Capacity: 5000 Kg/Hr



TGZZ Series Fluidized Bed Dryer



This series of fluidized bed dryers are ideal for gentle controlled drying of prill coated or build coated cereal grains, pulses, grass seeds, etc. As they enable precise adjustment and control for regulated drying through the warm air passing up through the material while it is conveyed on a vibratory bed from the inlet to discharge and the operating features are as follows:

- Vibratory motion ensures smooth, quiet running and low maintenance
- Fluidized state is quickly achieved with the material being in instant contact with the warm air
- High co-efficiency of heating or cooling for optimum operating efficiency
- Energy savings of from 30-40% over alternative type dryers
- Easy adjustments with wide range of controls
- Gentle processing with nil degradation to coated product
- Easy clean out for change over and avoidance of cross contamination
- May be incorporated within a continuous production arrangement
- Model capacities from 250-7500 Kg/Hr



BETTER GRAIN & SEED DRYING IDEAS

Ventilation Dryer Series SKS 480

Designed for batch drying of speciality seed lines particularly where required for propagation purposes and also utilized for drying non free flowing seed lines contained in the head as well as bulbs, herbs, garlic and similar lines. Loading of the high moisture product is carried out manually and the dryer bed depth is set by the operator to suit the application with the turning of the line as it dries being also completed manually. Normal drying temperatures range from 30-49 Degrees Centigrade according to the product line being dried and the burner may be operated from either gas, diesel or heating oil. Safety protection control sensors are incorporated within the system supplied including air pressure, flame sensor, thermo over relay, burner fuse and system interlock failure.

Capacity varies according to the type of product being dried.



High Capacity Open Column Grain Dryer

This series of dryer are specifically designed for continuous flow high capacity drying within cereals processing installations combining the advantages of regulated application of heat with equilibrating stages to ensure that the grain moisture evaporation is controlled so as to avoid over heating causing fissure cracking of the grain. Stainless steel and anti corrosive materials are incorporated within the surface contact areas and dust control ventilation fans are fitted to meet environmental regulatory requirements. Each dryer is equipped with multiple safety devices to enable easy operator control and the heating source may be supplied from either gas, diesel, oil or from a biomass furnace. The PCL operational control system ensures that consistent finished product is achieved and incorporated and dried thermo overload, air pressure, interlock failure, level control, etc.

This series dryer may also be operated as a batch dryer where required.

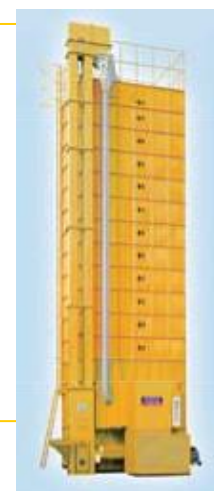
Capacities range from 10,000 – 65,000 litres/hour evaporation



Continuous Flow Tower Dryer

Designed for optimum drying of cereal grains and pulses where the regulated resting of the product is a pre requisite for achieving a satisfactory finished product quality standard. A pre-heating zone is incorporated with the following sections consisting of both hot air induction zones followed by a resting zone in order to maintain an equilibrate intermittent stage to ensure that the grain maintains a stable conditioning phase. These units are controlled for optimum finished products moisture content via a Plc with the initial m/c and final m/c as well as sensing within the drying column being continuously monitored on a real time basis to ensure modulation to maintain the called for finished product m/c. Heating may be from either gas, diesel, oil or biomass furnace.

Capacities range from 5000 – 60,000 litre/hour evaporation





BETTER DUST CONTROL IDEAS

LNGM Series - Square Section High Pressure Jet Filter Collectors

Universal model dust filter collectors available in either square or oblong profile and in a range of capacities sizes from 2160m³/hr –35000m³/hr. This series has round filter socks fitted and has optional dirty air entry into either the top or the lower section of the main body. Single or multi inlets are provided according to the filter collector capacity and the top plenum likewise has the number of outlets suited to the air volume capacity. These units are well suited to installation within corner areas, restricted spaces, and have either single screw discharge or twin discharge for the collected dust material according to the filter unit size. High-pressure reverse pulse valves are installed to purge each bank of socks on a regulated cycle for minimum resistance. Discharge of the collected lightweight material and dust is from rotary valves fitted to each collection screw conveyor. These dust filter collectors are ideally suited to complete processing line exhaust applications where all equipment items are to be connected for dust free operations

Capacities range from 5000 – 60,000m³/hour



TBLMD Series Low Pressure Jet Filter Collectors

Cylindrical body section design with a conical or flat bottom discharge and featuring optimum operating economies, reliable performance and dust separation efficiency. These units employ an advanced sock cleaning technique via direct jet solenoid valves to ensure superior cleaning effectiveness. The adoption of a flat bottom discharge complete with scraper and discharge rotary valve enables the height of the installation to be reduced while enabling light weight and difficult to handle dust types to be easily discharged.

All components are fabricated with special boring machines and jigs to ensure easy assembly and eliminate the possibility of leaking with fabrication of component items being from heavy gauge steel with sturdy fittings for long life.

This series is available in 32 different capacity sizes from 395m³/hr–32000m³/hr



TBLM Series High Pressure Envelope Filter Collectors

Designed for local exhaust applications such as bin and hopper vents, tip station exhaust, packing station exhaust, etc. This series of filter collectors are fitted with easy access envelope type socks which are easily demounted and complete with unique jet pulsing assemblies. Capacities range from 10m³/Hr -100m³/Hr and each unit is supplied with exhaust fan fitted ready for installation.

Variations are also available which incorporate a tip station either with or without vibrating screen arrangement.



■ BETTER DUST CONTROL IDEAS CONTINUED...

TBLXG22 Intake Pit Dust Collector

Arranged as modular units incorporating filter socks, reverse pulse arrangement and air receiver combined within an easy access cabinet able to be mounted upto in ground or above ground intake hoppers. The required number of modules can be assembled together to meet the hopper size and capacity. The exhaust air is provided from a separate fan and the lightweight dust and material is deposited back with the main product and avoids cross contamination from one line to the next.



Series TBLMY Filter Collector

The TBLMY Series High Pressure Jet Filter collectors are ideal units for installation within the feed milling, cereal processing, food manufacturing, brewery, grain and seed handling industries as well as within the broad range of industrial applications, i.e. cement manufacturing, mineral processing, etc.

Available in a range of sizes and capacities from 2000 m³/hr (9 socks) to 8000 m³/hr (36 socks) these units are complete with the following features:

- Cylindrical design with a conical or flat bottom discharge complete with rotary valve air lock fitted
- Tangential dirty air inlet for optimum separation of heavy particulate before this encounters the filter medium
- Simple technological design
- Proven performance, that provides 99.9% and greater dust separation efficiency under arduous operating conditions
- Advanced sock cleaning technique which incorporates specially designed solenoid valves
- Compact design for ease of planning-in to processing operations
- High air to cloth ratio capacity
- Operates quietly, continuously and automatically
- Hygienic design
- Infrequent and simple maintenance requirements



High – Low Pressure Fans

Available in a range of capacities from 500 m³/min – 45000 m³/min and pressures from 75mm – 1000mm water column and suited for application in exhaust systems, dust control for the low pressure series and pneumatic handling applications for the high pressure models.

The design incorporates:

- Perfectly aligned steel frame base mounted on to anti-vibration plates
- Sheet steel fan casings which have been stiffened and soundproofed, with low noise blade rotors
- Inlet and outlet ports complete with flanges for connection to ducting with anti-vibration couplings and rotor inspection door
- The motor may be mounted on slides applied to the machine base and drive transmitted to the rotor by sheave pulley, V-Belts and block unit support; or the fan rotor may be directly keyed to the motor shaft



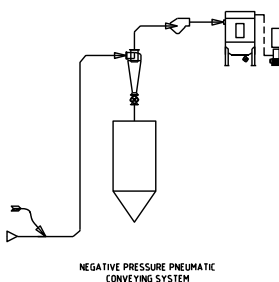
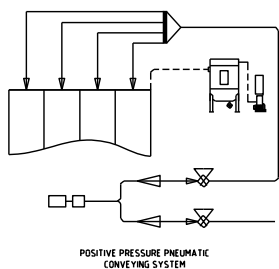
BETTER MATERIALS HANDLING IDEAS



Pneumatic Conveying

In the GRAIN TECH range of equipment are all the components necessary to design fully integrated pneumatic conveying systems, designed to suit individual plant and application requirements. Included are a complete range of rotary valves, package blowers, diverter valves, conveying pipe and couplings together with accessories to enable plant upgrades and new installation arrangements. Design and equipment specification may be completed using the latest computer aided software.

Consult us for tailor made positive or negative pneumatic handling systems.



Rotary Valves B/T Type



Transfer Hoppers



Package Blowers



Diverter Valves



Rotary Valves D/T Type



Line Feeders



BETTER MATERIALS HANDLING IDEAS CONTINUED...

Mechanical Handling

We are old hands in the material-handling field and will design mechanical handling systems to meet your needs. From a few pounds per hour to hundreds of tons per hour. Apart from the well-known drag link conveyors, screw conveyors and bucket elevators we have unique handling equipment such as rotary metering feeders, volumetric blenders, bin activators and multi-way diverter valves. Installation arrangements are detailed using the latest CAD design software operated by experienced engineers.

Consult us for all your material handling needs.



Screw Conveyors



Dual Screw Feeders



Superflo Conveyors



Diverter Valves



Gravity Diverter Valves



Bucket Elevators



Slide Gate Valves



Multi Way Valves



Magnetic Separators

☐ BETTER MATERIALS HANDLING IDEAS CONTINUED...



Level Control Switches

Ultrasonic Level Transmitter

EA Series

- ☐ Non Contact Operation ensures readings will not be affected by material characteristics (such as pressure, viscosity, density)
- ☐ Liquid measuring range max. 50m, Short Range 5m available
- ☐ Solid measuring range max. 35m, short Range 5m available
- ☐ Level, distance, flow volume display function selectable

Capacitance Level Switch

SA Series

- ☐ Ground Level Test Function available
- ☐ Max. Operating Temperature: 800°C
- ☐ Sensitivity and time delay adjustable

Vibrating Probe Level Switch

SC/ZVL Series

- ☐ High or Low Fail-Safe Mode
- ☐ Sensitivity Adjustable, can detect very low density powder
- ☐ User friendly & durable

RF-Capacitance Level Transmitter

EB Series

- ☐ Operating Voltage: 24Vdc; max.
- ☐ Output current: 4~20mA, resolution: ±2%
- ☐ Max. Tensile strength of wire (ø9mm) can up to 3.5 Tons and 50m in length
- ☐ Sensitive range: 150 pf, 500pf, 1500pf
- ☐ High Temp. Up to 200°C
- ☐ Unaffected by pressure, sound wave temperature

RF-Capacitance/Admittance Level Switch

SB Series

- ☐ Suitable for sticky, viscosity application
- ☐ Max. Operating Temperature: 550°C
- ☐ Time delay & ground level test function available

Rotary Paddle Level Switch

SE Series

- ☐ Torsion adjustable for light material
- ☐ Clutch assembly to protect the motor, good shaft seal designed
- ☐ Temperature up to 200°C
- ☐ Various power supply selectable
- ☐ Unique sealing ring design to protect dust permeation
- ☐ Application suitable for chemical, food, mining, plastic, ceramic industries



❑ **BETTER MATERIALS HANDLING
IDEAS CONTINUED...**

Conveying Equipment Accessories



Drag Conveyor Flight



Conveyor Chain



Uhmwpe Products



Elevator Bolt



Elevator Bucket



**Continuous/Helicoid
Flighting
(Endless Cold-Rolled Spirals)**



D Type Metallic Bucket



Ds Type Elevator Bucket



S Type Metallic Bucket



**Sieve Cleaner,
Pan Cleaner
and Rubber Balls**

BETTER PACKING IDEAS



Bag Packing Equipment

The Muyang LCS Series of bag packing machines incorporates a range of models suited to handling the wide spectrum of industrial packing applications including gravitational feed units as well as both screw and belt feed models with each being capable of having either gross weighing or optional net weighing. Packing rates are within the 300 – 400 Bag/Hr range and the bag sizes able to be packed range from 10kg – 50kg with an accuracy for static precision being 0.1% FS while that for dynamic precision is 0.2%FS. Each packer has a unique anti-vibration device fitted to ensure consistent weighing accuracy and stable operation when operating under adverse working conditions. The PLC operated controller incorporates automatic “Weigh track” re-taring for each weighment and includes features for each bag actual weight data recording.

Control and adjustments are readily completed from the advanced logic control panel.



**Net Weighing
Auger Feed**



**Net Weighing
Auger Feed**



**Net Weighing
Auger Feed**



**Net Weighing Dual
Auger Feed**



**Net Weighing
Belt Feed**



**Net Weighing
Dual Belt Feed**



Small Bag Packer



**Auger Feed
Bag Weighing**



**Valve Feed
Net Weighing**



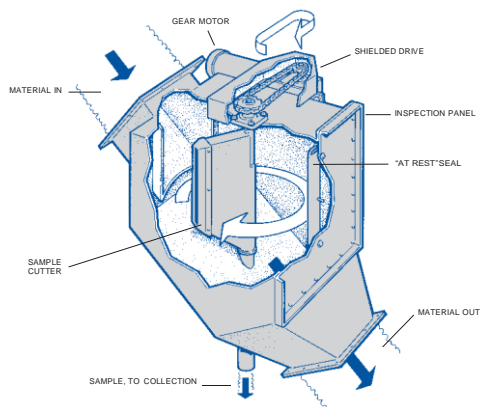
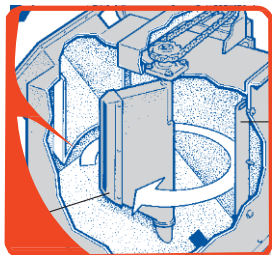
❑ BETTER PACKING IDEAS CONTINUED...

Bag Closing Equipment

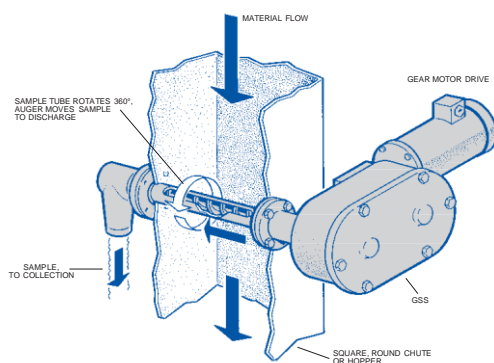
Optional bag closing units may be incorporated according to the particular type of material being used. Standard single sewing head through to dual sewing head and auto bag in-feed may be provided complete with bag transfer conveyor.



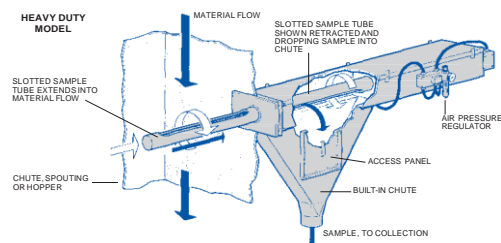
BETTER SAMPLING EQUIPMENT



In Line Spout Sampling Unit



Spout/Chute Sampler

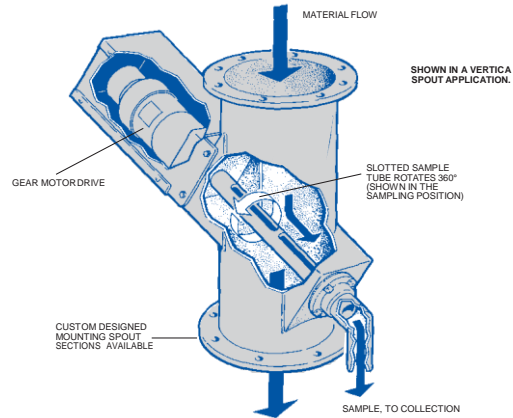
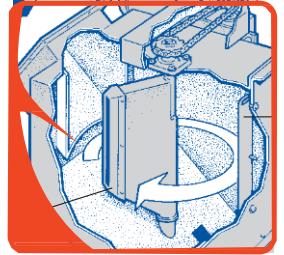


Hopper Sampling Unit

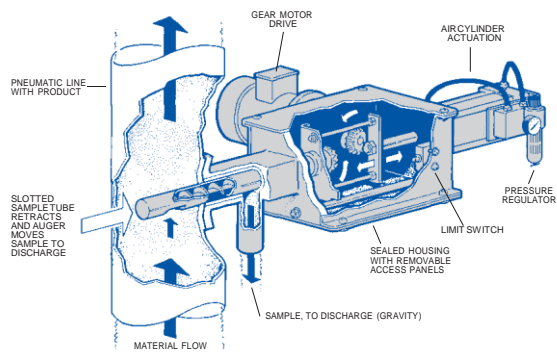
- Particle size reduction • Milling • Crushing • Pulverising • Screening • Grading
- Sifting • Classifying • Pelletizing • Agglomeration • Extruding
- Bulk Materials Handling • Drying • Cooling • Conveying and Packaging



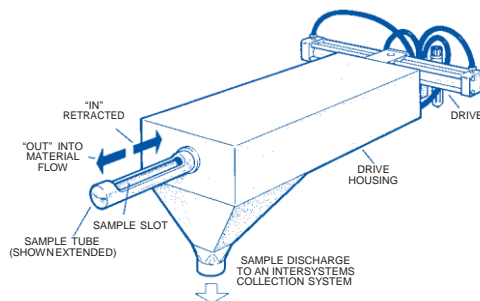
BETTER SAMPLING EQUIPMENT CONTINUED...



Vertical Chute Sampling Unit



Vertical Chute Sampling Unit



Bulk Intake Discharge Sampling Unit

BETTER LABORATORY EQUIPMENT



**Vegetable/Flower Seed
Cleaning M/C 5XC-100**
CAP. 100Kg/Hr



**Vegetable Seed Cleaning
M/C 5XL-100**
CAP. 100Kg/Hr



Abrading M/C 5XP-50
CAP. 50Kg/Hr



**Indent Cylinder M/C
5XW-100**
CAP. 100Kg/Hr



**Air Screen Cleaner
5X-0.7**
CAP. up tp 700Kg/Hr



**Gravity Separator
5XZ-100**
CAP. 100Kg/Hr



**Indent Cylinder M/C
5XW-100**
CAP. 100Kg/Hr



**Squash Seed
Separating M/C**



BETTER BULK STORAGE AND OUT LOADING

To meet the requirements for bulk handling, Grain Tech provides both pre-formed steel panel and bolt together galvanized hopper bottom silos in a wide range of capacities. These storage silos may be arranged as intermediate storage silos or be elevated for bulk transport loading. Dust free discharge chutes may be fitted to bulk out loading silos to maintain clean transfer and out loading operations.

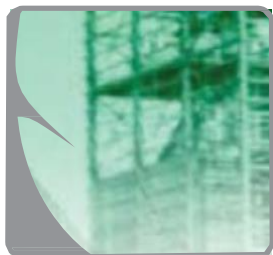


BETTER INTEGRATED CONTROL SYSTEMS

For reliable and efficient plant operation, GTE provide complete package Integrated Control Systems incorporating all necessary contactors, starters, over loads, mains switches, housed within easy accessed MCC units. PLC operational units complete with pc's and monitors together with custom software complete the pre-wired package ready for field wiring to the equipment items on site. This Integrated Control System arrangement enables greater installation economics and a significant saving in installation time requirements.



MUYANG GROUP AND GRAIN TECH



Bulk Storage Silos
10 - 10,000 metric ton capacity



Greenfield Site
Shrimp Feed Manufacturing Plant



General Feedstuffs Installation
Complete Remodel



Greenfield Mill with annual capacity of 120,000 metric tons -
high grade livestock and poultry feed.

Muyang Group
83 Jiefang, N. Road,
Yangzhou,
Jiangsu,
China 225003

Tel: + 86 514 7848880
Fax: + 86 514 7848686
Email: muyang@public.yz.js.cn

Grain Tech Engineering Ltd
55B Druces Road,
Manukau City,
Auckland 2240,
New Zealand

PO Box 97420,
Manukau City,
Auckland 2240,
New Zealand

Tel: + 64 9 263 6926
Fax: + 64 9 262 1335
Email: grain@ihug.co.nz
Web: www.graintech.co.nz

The Muyang Group Co. and Grain Tech Engineering have co-operated together over the past twenty years for the supply of bulk materials handling and processing equipment and complete projects throughout Australasia offering a total capability of Design, Project Management, Equipment Supply, Installation and Commissioning within the Bulk Materials Handling and Associated Cereals Processing Industries. This co-operative approach has enabled customers to make the most cost effective use of their resources according to individual specifications. Using our most up-to-date techniques, we can meet your requirements.



Fully Computerised Control System



MUZL Series Pellet Press
Capacity 2.0 - 30 MTPH



Double Shaft Paddle Batch Mixer



Complete Flour Mill Installations



Shuidi King 968 Series Hammermill



SYPZ Series Vacuum Liquid Coater



BETTER IDEAS FOR TYPICAL INSTALLATIONS



Cereals Processing



Grain/Seed Coating & Drying



Complete Grain/Seed
Processing Line



Prill Coating & Drying

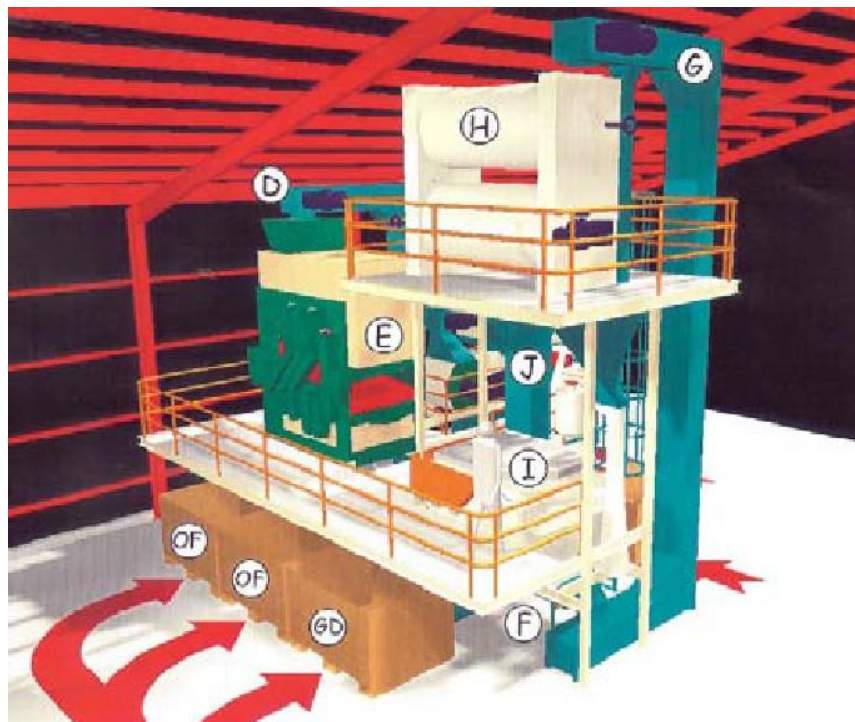
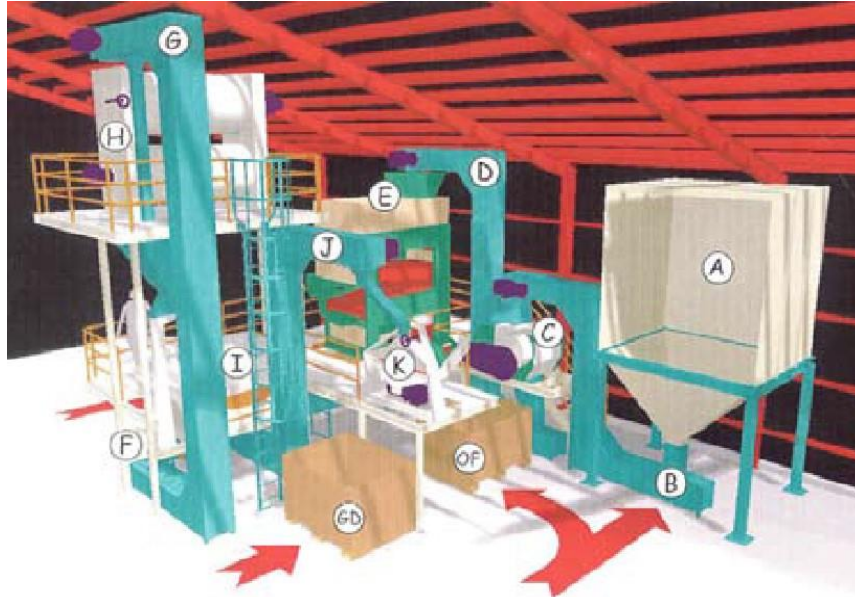


Grain Classification



Grain Length Grading

BETTER IDEAS FOR INTEGRATED GRAIN, SEED & PULSE PROCESSING ARRANGEMENTS



A. Infeed Tip Station	F. Belt Conveyor	K. Destoner
B. "Z" Pattern Transfer Conveyor	G. "Z" Pattern Transfer Conveyor	GD. Good Finished Product
C. Drum Pre-Cleaner	H. Indent Cylinder Set	OF. Offal Product
D. "Z" Pattern Transfer Conveyor	I. Gravity Separator	
E. Air Screen Cleaner	J. "Z" Pattern Transfer Conveyor	



NOTES

Grain Tech Product Catalogue 2010



**GRAIN TECH
ENGINEERING LTD**

For further information contact Grain Tech

on: grain@ihug.co.nz

or: project@graintech.co.nz

Providing Total Capability in Equipment, Systems, Processes, for:

- Particle size reduction • Milling • Crushing • Pulverising • Screening • Grading
- Sifting • Classifying • Pelleting • Agglomeration • Extruding
- Bulk Materials Handling • Drying • Cooling • Conveying and Packaging





APRIL 2010



**GRAIN TECH
ENGINEERING LTD**

55B Druces Road, Manukau City, Auckland 2240, New Zealand
PO Box 97420, Manukau City, Auckland 2240, New Zealand
Tel: +64 9 263 6926 Fax: +64 9 262 1335
Email: grain@ihug.co.nz Web: www.graintech.co.nz