

metragraincleaner.com

STELT2 GROUP

¥metra ¥metra ¥metra vdsc

≥metra







INNOVATIVE GRAIN CLEANING TECHNOLOGIES

Professional solution for grain cleaning, quality classification & impurity removal

We take care of everything from delivery to training



Delivery anywhere in the world



Set up on site and remotely



Complimentary lifetime support



We provide training on how to operate the equipment

HIGH EFFICIENCY

HIGH QUALITY

LOW COST

≼metra

Address: 110 Boston Rd,

Taylorsville, NC 28681,

United States

1(336)612-30-77 Phone:

Mail: info@graincleaner.com

www.metragraincleaner.com





The Metra Group Inc. presents the New Generation grain cleaning machine for all the grain industries: farms, grain storage enterprises, fodder factories, elevators, mills, and all grain crops and seed processing facilities etc,. The sieve less aerodynamic machine "METRA", enables you to obtain high-quality food grains and excellent sowing materials preparation that increase the yield up to 30-40%.

The machine "METRA" represents a new method of separation that is based on the principles of the stream (jet) technique and aerodynamic flows, which allows for the separation of the source material according to its relative density with high preciseness.

Metra unique technology with precise quality cleaning ability and high production volume allows to replace 3-4 grain cleaning machines within one technological line. For one processing pass, this machine can clean and allocate seeds by their relative density and divide them into independent fractions.

"METRA" is capable of processing seeds as small as(lucerne, popper, rape) as well as oats, barley, wheat, maize, peas, soy and many other cultures and bulk materials as well.



"METRA" HAS THE FOLLOWING ADVANTAGES:

- ✓ It does not damage the grain;
- Has a low energy consumption level (from 0.75 KW/hour to 22.0 KW/hour, depending on the machine's productivity);
- Reliability and durability due to design simplicity (absence of cinematic schemes and lubricant points);
- ✓ It does not require maintenance;
- It is capable of producing products of any level of humidity and impurity;
- ✓ High operating efficiency (it does not require expensive maintenance, there is no need for selection and replacement of the sieves for every type of grain, there is no necessity for careful and long cleaning after usage, and it can recoup itself within just one season).





"METRA" HAS HIGH TECHNOLOGICAL POTENTIAL, AND IS CAPABLE OF:

- Separating the mixture of wheat and barley (up to 60% for one operation);
- Selecting the peas damaged by bruchus (Bruchus pisorum); durum and wheat damaged by Vomitoxin and Fusarium;
- ✓ Dleaning 100% of the seeds of wheat, barley and other crops from seeds of wild oats (Avena fatua);
- Separating rotten corn from healthy corn (dry);
- Separating grain in the air flow while simultaneously drying the seeds (up to 2% per passing);
- Selecting from the row crop the most viable (biological valuable) and productive grains;
- Raising the class of grain mass (selecting feed fraction and increasing the quality level of the grain);
- ✓ Working as a grouts separator on the grouts-mills.



Scattering a field with seeds derived from the middle part of head, cob or sunflower hat, as well as free of grain and weed impurities, saves herbicides, fuels and lubricants, engine life,

salary and increases the yield by 30-40%.

The unique patented design of the machine "METRA" has no analogues.



AERODYNAMIC GRAIN CLEANERS

& AERODYNAMIC GRAIN CLEANERS

WITH CYCLONE DUST COLLECTOR

We offer more than 24 models of Aerodynamic Grain Cleaners, with capacities ranging from 200 to 8,000 bushels per hour or 5 to 200 metric tons per hour.





METRA ADS 200

METRA ADS 600



METRA ADS 200-CDC



METRA ADS 600-CDC



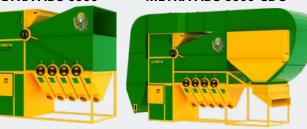
METRA ADS 1200 METRA ADS 1200-CDC



METRA ADS 2000-CDC



METRA ADS 6000 METRA ADS 6000-CDC



METRA ADS 400



METRA ADS 400-CDC



METRA ADS 800



METRA ADS 800-CDC



METRA ADS 1600



METRA ADS 1600-CDC



METRA ADS 4000



METRA ADS 4000-CDC



METRA ADS 8000



METRA ADS 8000-CDC



SERVICE COMMITMENT

24/7 technical support.

An intelligent system is built into each model with the help of which we can connect to the machine at any time, help you adjust your required settings, or make diagnostics before the cleaning season, as well as after it.

We take care of everything from delivery to training



Delivery anywhere in the world



Complimentary lifetime support

We provide training

on how to operate the equipment

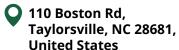


Set up on site





Professional solution for grain cleaning, quality classification & impurity removal













info@graincleaner.com



TECHNICAL PARAMETERS GRAIN CLEANER «METRA ADS»

Models	ADS 200	ADS 400	ADS 600	ADS 800	ADS 1200
Productivity in primary grain cleaning in Hour	200 bushels 5 tons	400 bushels 10 tons	600 bushels 15 tons	800 bushels 20 tons	1200 bushels 30 tons
Energy consumption kW/Hour HP	0.75 1.0	0.75 1.0	2.2 3.0	3.0 4.0	4.0 5.5
Length in / mm	94.1 / 2136	91.0 / 2336	91.1 / 2314	91.1 / 2314	91.1 / 2314
Width in / mm	22.6 / 574	22.5 / 570	27.2 / 690	27.2 / 690	27.2 / 690
Height in / mm	74.9 / 1902	75.1 / 1908	92.0 / 2338	92.0 / 2338	92.0 / 2338
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz
Weight Lbs / kg	520 / 236	523 / 237	1136 / 515	1158 / 525	1182 / 536

Models	ADS 1600	ADS 2000	ADS 4000	ADS 6000	ADS 8000
Productivity in primary grain cleaning in Hour	1600 bushels 40 tons	2000 bushels 50 tons	4000 bushels 100 tons	6000 bushels 150 tons	8000 bushels 200 tons
Energy consumption kW/Hour HP	6.0 8.0	7.0 9.5	11.0 15.0	15.0 20.0	22.0 30.0
Length in / mm	91.0 / 2311	91.0 / 2311	122.1 / 3100	122.1 / 3100	122.1 / 3100
Width in / mm	45.3 / 1150	45.3 / 1150	70.9 / 1801	70.9 / 1801	70.9 / 1801
Height in / mm	92.0 / 2337	92.0 / 2337	117.7 / 2990	117.7 / 2990	117.7 / 2990
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	480V, 60Gz	480V, 60Gz
Weight Lbs / kg	1930 / 875	1930 / 875	2955 / 1340	3087 / 1350	2977 / 1400

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TECHNICAL PARAMETERS GRAIN CLEANER «METRA ADS» with cyclone dust collector (CDC)

Models	ADS 200-CDC	ADS 400-CDC	ADS 600-CDC	ADS 800-CDC	ADS 1200-CDC
Productivity in primary grain cleaning in Hour	200 bushels 5 tons	400 bushels 10 tons	600 bushels 15 tons	800 bushels 20 tons	1200 bushels 30 tons
Energy consumption kW/Hour HP	0.75 1.0	0.75 1.0	2.2 3.0	3.0 4.0	4.0 5.5
Length in / mm	119.7 / 3041	127.7 / 3243	185.0 / 4697	185.0 / 4697	185.0 / 4697
Width in / mm	47.5 / 1206	47.7 / 1212	56.7 / 1440	56.7 / 1440	56.7 / 1440
Height in / mm	85.0 / 2159	85.0 / 2159	112.8 / 2866	112.8 / 2866	112.8 / 2866
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz
Weight Lbs / kg	1060 / 480	1110 / 503	2106 / 955	2128 / 965	2148 / 978

Models	ADS 1600-CDC	ADS 2000-CDC	ADS 4000-CDC	ADS 6000-CDC	ADS 8000-CDC
Productivity in primary grain cleaning in Hour	1600 bushels 40 tons	2000 bushels 50 tons	4000 bushels 100 tons	6000 bushels 150 tons	8000 bushels 200 tons
Energy consumption kW/Hour HP	6.0 8.0	7.0 9.5	11.0 15.0	15.0 20.0	22.0 30.0
Length in / mm	194.9 / 4951	194.9 / 4951	260.0 / 6603	260.0 / 6603	260.0 / 6603
Width in / mm	62.4 / 1585	62.4 / 1585	88.1 / 2239	88.1 / 2239	88.1 / 2239
Height in / mm	114.2 / 2900	114.2 / 2900	144.1 / 3660	144.1 / 3660	144.1 / 3660
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	480V, 60Gz	480V, 60Gz
Weight Lbs / kg	2842 / 1289	2842 / 1289	4939 / 2240	4960 / 2250	5070 / 2300

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ADDITIONAL MODIFICATIONS OF AERODYNAMIC GRAIN CLEANERS.

Models	METRA ADS 200-E
Productivity in primary grain cleaning in Hour	200 bushels 5 tons
Energy consumption HP kW/Hour	0.75 0.55
Length in / mm	70.5 / 1790
Width in / mm	20.9 / 530
Height in / mm	62.2 / 1580
Weight Lbs / kg	297 / 135

Models	METRA ADS 2000-M
Productivity in primary grain cleaning in Hour	2000 bushels 50 tons
Energy consumption HP kW/Hour	0.67 0.50
Length in / mm	59 / 1500
Width in / mm	49 / 1246
Height in / mm	75 / 1900
Weight Lbs / kg	882 / 400

THE AERODYNAMIC GRAIN CLEANER **METRA ADS 200-E**

The aerodynamic grain cleaner Metra ADS 200-E cleans and sorts seeds in the airflow. For small agricultural businesses. Reliable, efficient and economic machine.

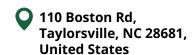
- Fast return of investment with potential to earn that money back within the first year.
- Best suitable for organic production, no damage of seeds (no-sieves technology).
- Sorts out the grains damaged by mycotoxins (fusarium, vomitoxins etc.). Losses from grain diseases could be minimized or eliminated.
- Quick switch from one culture to another. No need to lose a lot of time to changing sieves.
- Easy operation and machine cleaning. Doesn't require constant maintenance.

THE AERODYNAMIC GRAIN CLEANER **METRA ADS 2000-M**

The aerodynamic grain cleaner Metra ADS 2000-M cleans and sorts seeds in the airflow. For large agricultural businesses. Reliable, efficient and economic machine.

- Best suitable for organic production, no damage of seeds (no-sieves technology).
- Sorts out the grains damaged by mycotoxins (fusarium, vomitoxins etc.). Losses from grain diseases could be minimized or eliminated.
- Quick switch from one culture to another. No need to lose a lot of time to changing sieves.
- Easy operation and machine cleaning. Doesn't require constant maintenance.

Premium quality products FOR MORE DETAILS, PLEASE CONTACT US!











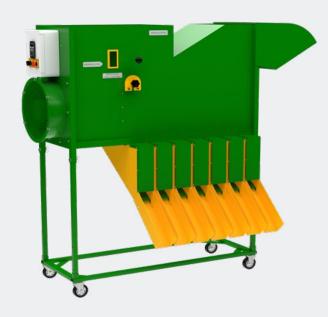
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METRA ADS 200-E





METRA ADS 2000-M







APPLICATIONS OF METRA GRAIN CLEANER

The "Metra" machine represents a revolution in grain cleaning technology. The Metra grain cleaner is a unique patented invention! Our technology is based on jet stream of air and aerodynamic principles which precisly separates source material based on relative density. The Metra machine is capable of processing all types of crop: Wheat, Durum, Corn, Soybeans, lentils, Sunflower, Hemp, Lucerne, Poppy, Oats, Chia, Barley, Maize, Peas, Beans, you name it...



Metra graincleaner cleans out any heavy or/and light impurities. Sorting and grading all types of grain.



Separating grains based on its relative density. Provides uniform seeds with most biological value for simultaneous germination and maturity to increase your yields up to 30%-40%.



Metra MS graincleaner is cable to divide two different density crops mixed together.



Separates grain into fractions to provide the best market value \$\$\$ for each grain category. Metra grain cleaner makes each grain category

Metra unique technology with precise quality cleaning ability and high production volume allows to replace 3-4 grain cleaning machines within one technological line. With one processing pass, this machine can clean and allocate seeds by their relative density and divide them into independent fractions.

The Metra separates the source material into five fractions based on their relative density. The first fraction comprises stones and heavier impurities, the second and third fraction are the whole grains, the fourth fraction is broken grains and chaff and the fifth fraction comprises the smaller impurities. There is also an exhaust fan which rids the machine of dust and lighter impurities.



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WHY METRA GRAINCLEANERS ARE BETTER

ABSENCE OF DAMAGED GRAIN

Metra air dynamic cleaning technology doesn't damage the grain unlike most of the grain cleaners on the market.

MOBILITY AND RELIABILITY

The simplicity of design and construction as well as genius technology makes Metra grain cleaners highly sufficient. Machine doesn't require any special set up or leveling, its relatively light and compact and can be placed on the trailer and function on the go as good as stationary.

VERSATILITY AND MULTI-FUNCTIONALITY

Due to its high productivity and separation ability, «Metra» can simultaneously pre-clean, primary and secondary clean in just one step using just one machine. Ability to identify the best seed is optimazing germination, improving sowing efficiency and increases harvest due to simultaneous maturation. This all collaborates to improve the crop yield up to 40%. This multifunctional machine replaces a line of 2 – 3 regular grain cleaners and provides simultaneous air drying of grain up to 2% per pass.

LOW ENERGY CONSUMPTION

Metra consumes from 0.75 kW/h of electricity for a 200 bushels/hour (5t/hr) capacity to 22 kW/h for 8000 bushels/hour (200t/hr).

HIGHLY ECONOMICAL

Our machine does not require any maintenance, doesn't have any moving parts or lubrication points. No sieves to change or replace for each grain type. No downtime for preparation and lubrication inbetween crops. With Metra to go from one crop to another takes only 5 – 10 minutes.

HIGHLY TECHNOLOGICAL OPPORTUNITY

Metra selects the most viable and productive kernels and separates diseased grain and grain damaged by parasites which often has no color or size difference and cannot be identified and separated by screen or color sorter. Our machine also separates grain effected by any type of fungus (VOM, FUS, AFLATOXIN etc.) along with chaff and any other impurities.

Metra is determined to offer the best universal solution to grain cleaning by applying the most innovative technology. We provide farmers worldwide with the best possible service and expertise in the business.

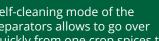
We strive to provide affordable, efficient and low maintenance technology for all agricultural applications. Whether you are a small scale organic farmer with a modest budget, or a multiple site, expansive commercial operation, we have the machine for you and your budget. We can assess your needs and current infrastructure and recommend products to complement your crop and set up.

Continual improvement and after sales service are vital to our continued success, and we ensure that you will receive the best possible support from our team.

- Possibility of sorting out the highest quality seeds which guarantees the germination up to 98%
- High quality of the cleaning
- Self-cleaning mode of the separators allows to go over quickly from one crop spices to the other one
- 8 degrees of engine protection, from a smooth start and stop to voltage drop protection
- 24 hour technical support
- Simplicity of construction and reliability of the machine
- Energy consumption 2.5 3 times lower comparing to the analogous separators
- Simplicity of operation
- Careful grain handling due to air







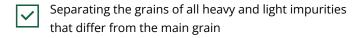


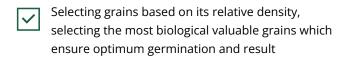


HARVEST INCREASE UP TO 40%









Separating different kinds of cereal thereby giving these products a decent marketable appearance



CLEANING all types of grain



SORTING / GRADING

for any type of grain



NO MAINTENANCE

no screens, no moving parts



HARVEST INCREASE

up to 40%



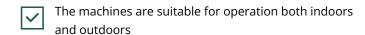
LOW PRICE & MOBILITY

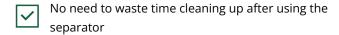
best price on the market

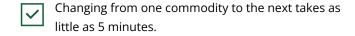


WE HAVE BEST

solution to any grain problem







FACTORY WARRANTY — UP TO 3 YEARS.

Average lifetime of color sorter — 20+ years. Average lifetime of aerodynamic grain cleaner — 30+ years.

We will exchange all parts under the warranty.

Premium quality products

110 Boston Rd, Taylorsville, NC 28681, United States



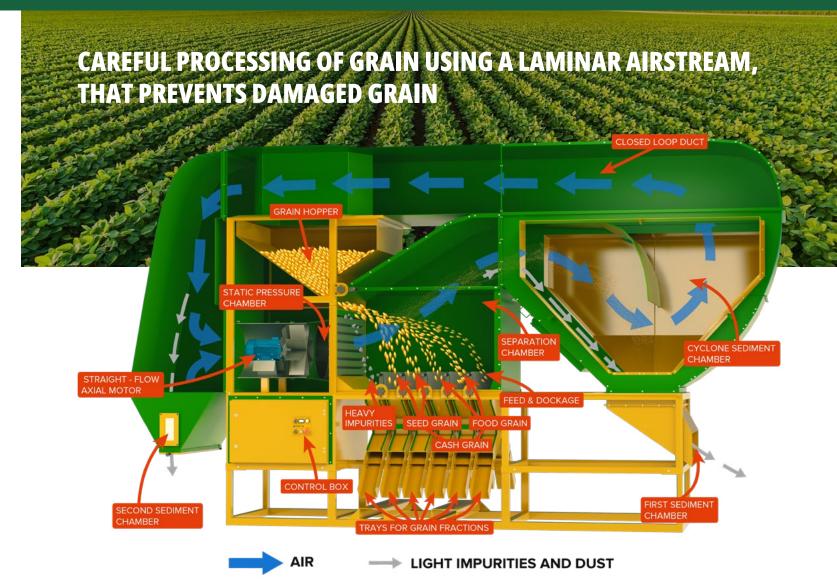


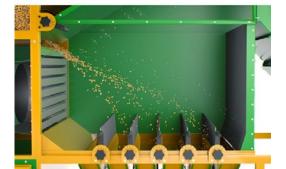




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MACHINES COME WITH SPECIAL RUBBER PADDING WITHIN THE SEPARATION CHAMBER.

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All dust and small particles are collected by the Cyclone Dust Collector for non-grain waste and are discharged through a channel into separate trays via the airstream

Premium quality products

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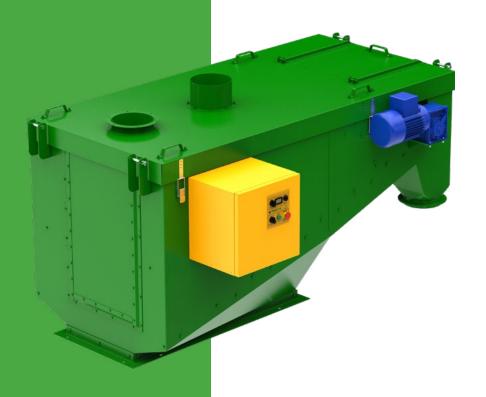






COMPACT PRE CLEANER & SCALPER GRAIN **CLEANER**

We offer 4 models of compact pre-cleaners with capacities ranging from 400 to 2000 bushels per hour or 10 to 50 metric tons per hour.





MODELS:

Metra GPC-400 Metra GPC-2000



Scalper Grain Cleaner SQC

MODELS:

Metra SGC-400 Metra SGC-400-S Metra SGC-400-H





TECHNICAL PARAMETERS COMPACT PRE-CLEANERS FROM METRA

Models	METRA GPC 400	METRA GPC 2000	Scalper Grain Cleaner SGC-400	Scalper Grain Cleaner SGC-400-S	Scalper Grain Cleaner SGC-400-H
Productivity in grain cleaning in Hour	400 bushels 10 tons	2000 bushels 50 tons	400 bushels 10 tons	400 bushels 10 tons	400 bushels 10 tons
Energy consumption kW/Hour HP	1.1 2.5	1.1 2.5	0.37 0.5	0.37 0.5	0.37 0.5
Length in / mm	47.2 / 1200	84.6 / 2150	44.5 / 1130	44.7 / 1135	44.7 / 1135
Width in / mm	47.8 / 1213	43.9 / 1115	31.9 / 810	35.8 / 910	35.8 / 910
Height in / mm	51.6 / 1310	46.7 / 1187	28.1 / 715	50.1 / 1272	62.3 / 1582
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz
Weight Lbs / kg	470 / 213	882 / 400	130 / 59	206 / 93	243 / 110



COMPACT PRE CLEANER FOR GRAIN AND BULK SOLIDS

Cleans grain twice as fast with one pass compared to competitive precleaners.

The pre-cleaner increases quality and speed of the subsequent cleaning of various commodities. Cleans grain by separating large impurities such as weeds, straw, leaves and stems.

Due to the variable speed of the rotating screen, you can adjust the productivity of the pre-cleaner to match that of the grain cleaner and build a production line consisting of several machines.

Premium quality products

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METRA SGC-400



METRA SGC-400-S







SIXTH GENERATION OPTICAL COLOR SORTERS

We offer 8 models of optical color sorters with capacities ranging from 40 to 800 bushels per hour or 1 to 20 metric tons per hour.



Optical Color Sorter

TELS

TE

MODELS:

Metra 6AS-68

Metra 6AS-68L

Metra 6AS-136

Metra 6AS-204

Metra 6AS-272

Metra 6AS-340 Metra 6AS-476

Metra 6AS-680







TECHNICAL PARAMETERS COLOR SORTER «METRA»

Models	6AS-68 1 chute	6AS-68L 1 chute	6AS-136 2 chute	6AS-204 3 chute	6AS-272 <i>4 chute</i>	6AS-340 <i>5 chute</i>	6AS-476 7 chute	6AS-680 10 chute
Capacity * bushels / hour tons / hour	40 – 80 1 – 2	40 – 80 1 – 2	80 – 160 2 – 4	120 – 240 3 – 6	160 – 320 4 – 8	200 – 400 5 – 10	280 – 560 7 – 14	400 – 800 10 – 20
Air pressure Mpa	0.4 - 0.6	0.4 - 0.6	0.5 - 0.7	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8	0.6 - 0.8
Energy consumption kW / hour	1.0 - 1.3	1.0 - 1.3	1.4 - 1.8	2.0 - 2.2	2.5 - 2.9	5.3 - 6.2	7.5 - 8.7	8.5 - 10.9
Air consumption cubic feet / min. liter / min.	<35 <1000	<35 <1000	<63 <1800	<95 <2700	<113 <3200	<134 <3800	<169 <4800	<215 <6100
Length in / mm	37.4 / 950	48.9 / 1241	50.8 / 1290	62.8 / 1594	79.2 / 2010	92.5 / 2350	113.5 / 2884	165.4 / 4200
Width in / mm	56.2 / 1428	80.2 / 2038	59.4 / 1510	60.3 / 1532	60.3 / 1530	59.8 / 1518	66.6 / 1692	60.3 / 1530
Height in / mm	59.5 / 1510	69.3 / 1761	69.7 / 1770	104.4 / 2653	82.7 / 2100	88.6 / 2250	61.0 / 1549	88.6 / 2250
Voltage V	220-240	220-240	220-240	220 / 480**	220 / 480**	220 / 480**	220 / 480**	220 / 480**
Phase	Single	Single	Single	Single	Single	Single	Single	Single
Weight Lbs / kg	574 / 260	683 / 310	970 / 440	1280 / 580	1810 / 820	2360 / 1070	3140 / 1450	4850 / 2200

^{*} Note: The specific index varies on the basis of different materials with different rate of foreign/impure materials.

Professional solution for product sorting, quality classification & impurity removal



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Intelligent CCD 1 Chute Multi-function Color Sorter



Intelligent CCD 1 Chute Multi-function Color Sorter





Intelligent CCD 2 Chute Multi-function Color Sorter ≥metra 6as-136



Intelligent CCD 3 Chute Multi-function Color Sorter ≥metra 6as-204



Intelligent CCD 4 Chute Multi-function Color Sorter

≥metra 6as-272



Intelligent CCD 5 Chute Multi-function Color Sorter

Smetra 6as-340



Intelligent CCD 7 Chute **Multi-function Color Sorter**





Intelligent CCD 10 Chute Multi-function Color Sorter ≥metra 6as-680





^{**} Supplied complete with Air compressor 480V



MULTIPURPOSE MACHINE SHAPE+COLOR SORTING INTELLIGENT **SORTING**

FASTER Easy, fast

only one key operation via tablet PC, no waiting, pick the grain in one step, save time and low consumption.

EFFICIENT Time saving, labor saving ntelligent sorter for high speed, stable

output / machine 1 hours, =10 people 8 hours, saving time and effort

ECONOMIC

Low cost , more funcations

election kinds of material via one device, Providing processing production, reduce production costs

HIGH QUALITY Better quality, no damage

special chute, accurate elimination of various impurities, nutrition is not lost, food is delicious, more healthy





Accept



Reject







Reject



Input





Accept Accept



Input



Accept



Accept







Input

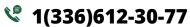
Accept

Accept

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MULTIPURPOSE MACHINE METRA 6AS

WE HAVE CREATED A COLOR SORTER SUPERIOR TO ANY OTHER BY TAKING GERMAN TECHNOLOGY AS A BASIS YET MAKING THE COLOR SORTER 30% CHEAPER. THREE TIMES MORE PRODUCTIVE AND TWO TIMES STRONGER.

SIMPLE OPERATION

ONE person is all it takes to operate. The color sorter works automatically; you just need to turn it ON and monitor the process.

SERVES OVER 20 YEARS

We strengthened the components of the Color Sorter by Two times.

8 MODELS OF COLOR SORTERS

Productivity from 40 to 800 bushels per hour (1 to 20 tons per hour).

1 YEAR WARRANTY

We will exchange all parts under the warranty. Average lifetime of color sorters 20+ years.

GOOD PRODUCTS SHOWING IN POWER

METRA COLOR SORTER VS "OTHER" BRAND COLOR SORTER IN THE MARKET

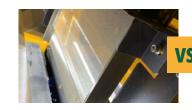
OPERATING SYSTEM



METRA color sorter comes with a mobile tablet computer, easy to use operation interface, and sustainable updated system, with no additional cost - WiFi remote operation, while debugging and detecting materials simultaneously.

Other color sorters use a stationary industrial computer. The operating system is outdated & inconvenient, and it cannot be continuously upgraded. When the product requirements are continuously improving, without the capability of a software update the only choice is for the software to be eliminated or replaced.

LED LIGHT



long life, with a stable light selected meaning that the color with similar colors. selection effect provides better results.

METRA color sorter is a color Other manufacturers' color CCD system: The light source is sorters are white CCD systems. white light with high brightness, The light source presents blue light or other colors. The source that can identify the identification materials are material as the actual color - the black, gray and white. It is material of a similar color can be difficult to identify the materials

PROCESSING SYSTEM



METRA color sorter uses The processing system of other an intelligent and efficient processing system, with a fast response that can maximize system comes with sustainable upgrades - increasing the unlimited choice of material its capabilities. selection.



manufacturers' color sorters is backward, the response speed is slow and the net the material selection rate. The effect of material selection is affected. The system cannot be continuously upgraded limiting

CAMERA LENS



The METRA color sorting machine adopts a 5400 pixel high-speed camera, which can identify the true color of it can recognize the color accurately while identifying the material diameter as small as 0.08mm. 0.04mm.



The number of pixels in other manufacturers' color sorters is 2000 and the identification material is black and white materials in high-definition, imaging. The identification color is fuzzy, and the minimum diameter of the material is





Rodless

cylinder

Country:

METRA COLOR SORTER HIGH ACCURACY SEPARATION RESULTS



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Camera *Nikon* Country:

Japan

Distinctive features:

High-end customized lens for Metra color sorter

Function: Lens



Core Process (intel) Chip

Country:

Distinctive features:

Adopt advanced technology of DSP digital signal processs) + FPGA Field programmable gate array)

Function: Processing chip





⊌metra

USA

USA

Country: South Korea

Distinctive features:

1. model YAFF 350;

2. max press: 1.0 Mpa temp: 0-60 flow rate: 53CFM (ANR) ELEMENT no: YAFF-EL350 YSC is a reputable brand with more than 50 years of experience and has the most strict and professioal quality control system.

Function: Filter water, oil and contaminates in the air

Stalinite

Country:

Pioneering stalinite glass for color sorter,

Function: Glass in front of camera

Glass



Distinctive features:

1. high-frequency 1200/s

Function: Shoot rejects

Srotecting System Country:

Solenoid

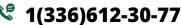
Valve

Distinctive features:

Exclusive initiative solenoid valve protecting system, extending lifetime of solenoid valve

Function: Protecting solenoid valve

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info@graincleaner.com



Distinctive features:

2. 200 million pixels;

Distinctive features:

0.01mm².

Function:

Function:

Japan

1. 5400 pixel TOSHIBA CCD sensor 5400

3. The detective defects can as small as

Country:

Germany

guarantee high-resolution image and

conponents due to high temperature.

Solenoid

Country:

2. long lifetime: more than 20 billion times

3. high-speed. response time 0.6 ms

Valve

Backgroud light and lighting for materials

USA

⊌metra

USA

Advanced shadowless cold light

avoid damage to other electronic

Image processing

LED light OSRAM

TOSHIBA



1. Durable, 304 anti-rust food safety standard aluminum alloy cylinder.

Japan

- 2. 304 food safety standard stainless steel rack for cleaning brushes,
 - 3. Model CY3B 20-600
 - 4. MAX PRESS 0.7mpa

Distinctive features:

Automatic glass cleaning systerm



SMPS

(Switched-OMRON mode power supply)

Country: Japan

Distinctive features:

More than five thousand hours

Function: Power supply



⊌metra

Anti-rust, non-toxic & harmless chute aluminium alloy

Country: USA

Distinctive features:

- 1. Super wide chute: 13.03 in, high capacity.
- 2. Food safety standard aluminum alloy
- 3. Single channel width 0.15 in
- 4. 68 channnels

Function: Chute for falling materials

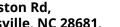


- Color sorting plus shape sorting
- Artificial inteligent light controling
- User-friendly one-key artificial inteligent operation
- APP remote control
- Visible image capture system
- Automatic dust sucking system
- Customized sorting program
- Airtificial data back-up Self-developed software
- Kilomega high internet speed



Distinctive features:

avoiding crack of glass

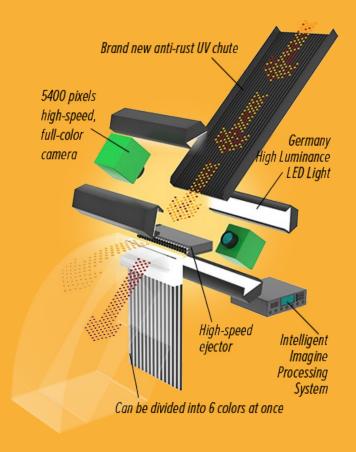


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8 ADVANTAGES OF THE INTELLIGENT FULL COLOR CCD SORTER





Remote Control and One-Key Operation

Detachable Lenovo tablet with a personalized operation system, 30 initial memorization sorting programs, One-key automation switchover and adjustment.



Intelligent Image Processing System

Identification scanning ability with speeds of up to 30,000 times per second/ Real time large data analysis that can fulfill many complex algorithms.



High-speed transmission system

High speed internet with tech support TP/TCP protocol, Internet remote maintenance function meaning that your system could be set up remotely by experts with accordance to your needs - This allows you to have the correct set up without clicking a button! Allow our experts to set up your configuration.



Advanced Image Acquisition

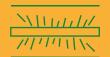
With 5400 pixel, super high-resolution full color Toshiba CCD camera, defects as small as 0.01mm2 can be sorted out (Impurity value can be adjusted according to different commodities and customers needs in order to meet different batch and sorting requirement.)





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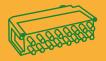
German High Luminance LED Light

Shadow free LED lighting system with high luminance, precise detection, and a stable frequency that ensures the highest sorting accuracy.



Brand new anti-rust UV chute

Wide-angle design, anti-rust, non-toxic & harmless aluminium alloy - in line with international safety standards, ensuring the smooth slide of the commodity, reduce waste, and achieve the maximum capacity. Customizable according to different commodities.



High-speed electromagnetic ejector

Imported metal-magnetic levitated ejector that passed a pressure test 2 billion times, making it durable, fast responding - with precise detection & improved accuracy while reducing energy consumption.



Flexible mode wide application

One machine that can achieve screening to various commodities while meeting the color sorting requirement of any and all agricultural products, industrial products and other special commodities.

METRA COLOR SORTER

Camera:

Phoenix, made in China

LED:

Osram, made in Germany

Filter:

YSC, made in Korea

CCD:

Toshiba, made in Japan

SMPS:

Omron, made in Japan

Cylinder:

SMC, made in Japan

Power Supply Chip:

TI, made in USA

Discrete Device:

ON, made in USA

Core Process:

Intel, made in USA

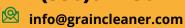
D/A Chip:

ADI, made in USA













VIBRATION GRAIN CLEANER

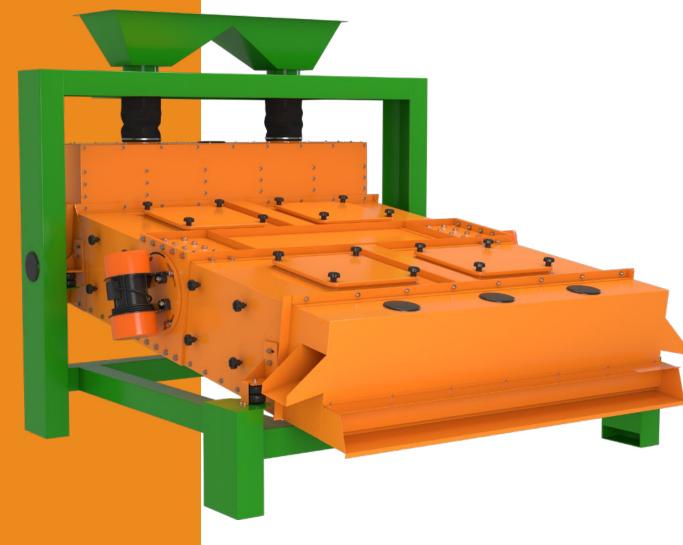
We offer 4 models of Vibration Grain Cleaners with capacities ranging from 400 to 2,000 bushels per hour or 10 to 50 metric tons per hour.





MODELS:

Metra VDSC-400 Metra VDSC-600 Metra VDSC-800 Metra VDSC-2000





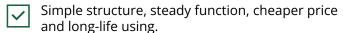


TECHNICAL PARAMETERS METRA VDSC

Models	METRA VDSC 400	METRA VDSC 800	METRA VDSC 1600	METRA VDSC 2000
Productivity in grain cleaning in Hour	400 bushels 10 tons	800 bushels 20 tons	1600 bushels 45 tons	2000 bushels 50 tons
Screen size in cm	31.5 x 47.2 80 x 120	39.4 x 70.9 100 x 180	59.0 x 90.5 150 x 230	70.8 x 90.5 180 x 230
Energy consumption HP kW/Hour	0.7 0.5	1.0 0.75	2.0 1.5	3.0 2.2
Length in / mm	64.9 / 1648	97.3 / 2470	116.5 / 2960	116.5 / 2960
Width in / mm	63.0 / 1600	61.0 / 1550	85.9 / 2180	97.6 / 2480
Height in / mm	57.2 / 1452	60.2 / 1530	64.4 / 1636	73.7 / 1873
Power consumption	220V, 60Gz	220V, 60Gz	220V, 60Gz	220V, 60Gz
Weight Lbs / kg	880 / 400	1220 / 550	1500 / 680	2425 / 1110

The vibration cleaner Metra has a double screen for better grain cleaning results.

IT IS DESIGNED WITH DOUBLE-DECKED SIEVES, WITH DIFFERENT SPECIFICATIONS, WHICH CAN SEPARATE LARGE, MEDIUM AND SMALL IMPURITIES FROM WHEAT, PADDY, CORN AND OTHER GRAINS. IT IS EQUIPPED WITH TWO LAYERS OF SCREEN WHICH MAKES BETTER CLEANING EFFICIENCY.



High capacity, low noise and low power consumption.

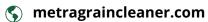
Optional vertical aspirator has high efficiency of removing light impurities and dust.

Driven by a pair of vibrating motors, vibrating direction & inclination of sieve cover are adjustable.

Premium quality products

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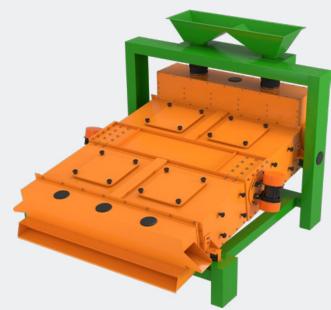


















AIR RECYCLING ASPIRATOR

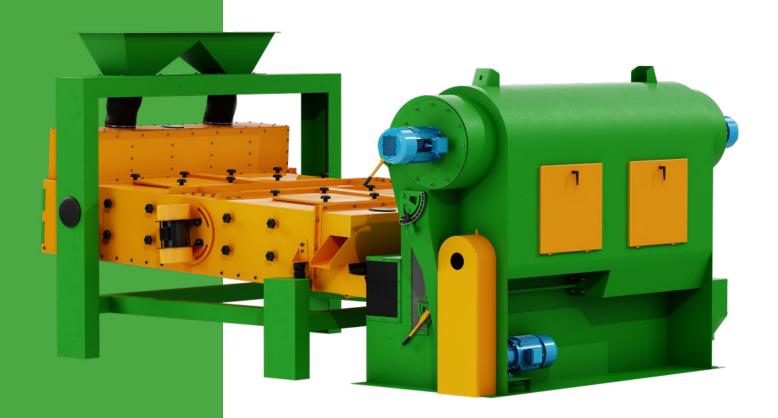
We offer 3 models of Air Recycling Aspirators with capacities ranging from 400 to 2,800 bushels per hour or 10 to 70 metric tons per hour.





MODELS:

Metra ARC-400 Metra ARC-800 Metra ARC-2000



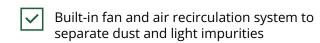




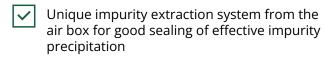
TECHNICAL PARAMETERS METRA ARC AIR RECYCLING ASPIRATOR

Models	METRA	METRA	METRA
	ARC 400	ARC 800	ARC 2000
Productivity in grain cleaning in Hour	800 bushels	1000 bushels	2800 bushels
	20 tons	25 tons	70 tons
Supplementary air intake cfm m³/h	280	310	377
	480	525	640
Energy consumption HP kW/Hour	3.95	3.95	7.4
	2.95	2.92	5.5
Length in / mm	63.5 / 1613	87.7 / 2226	109.3 / 2776
Width in / mm	39.4 / 1000	39.4 / 1000	39.4 / 1000
Height in / mm	68.7 / 1745	68.7 / 1745	68.7 / 1745
Weight Lbs / kg	1015 / 460	1103 / 500	1720 / 780

THE ARC RECIRCULATING AND SELF-CLEANING EXHAUST AIR ASPIRATOR IS AN AUXILIARY EQUIPMENT FOR GRAIN CLEANING, DESIGNED TO REMOVE LIGHT IMPURITIES AND DUST FROM THE GRAIN MASS. IT CAN BE INTEGRATED WITH OTHER CLEANERS SUCH AS THE VDSC VIBRATORY CLEANER OR SEPARATELY IN THE **CLEANING PROCESS.**



The air channel can be adjusted according to the requirements to achieve the best impurity cleaning result.



The pressure valve at the grain outlet can close automatically to ensure independent air circulation and no dust flying around. No harm to the environment

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MOBILE GRAIN CLEANER FROM METRA

The materials are separated by two winds in the air screening inlet and outlet boxes.

Light impurities are separated and discharged from the machine through the dust collector and impurity discharge auger; large impurities and small impurities are discharged through the impurity discharge pipe after being screened, and the remaining better materials are screened out of the grain tank by the wind and enter the specific gravity selection platform.

The materials pass through The stratification is carried out by the action of wind. The lighter materials (grates, mildew) pass through the miscellaneous bucket discharge machine, and the full materials enter the screening and classifying machine (optional)

The materials are divided into 3-5 grades according to their geometric dimensions.



MODEL:

Metra MGC-800







TECHNICAL PARAMETERS AND PRICE METRA MGC-800 MOBILE GRAIN CLEANING SYSTEM

Models METRA MGC 800

Productivity in grain cleaning (Commercial Grain) in Hour	1200 bushels 30 tons
Table Size in mm	80.7×76.8 2050×1950
2x Sieve Screen in mm	59.1×59.1 1500×1500
Sieve Layer	2 layers
Selection rate %	≥98
Clearness Rate %	≥99
Broken Rate %	≥5
Total Power HP kW	42.9 32
Measurements in mm	135.9×104.4×128 3450×2650×3250
Weight Lbs / kg	8600 / 3900
Moving speed mi/h km/h	≤3.1 ≤5

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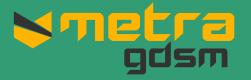


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METRA MGC-800







GRAVITY-ACTING DESTONER & BLOWING TYPE GRAVITY TABLE

THE METRA GDSM-400.

It boasts remarkable capabilities in sand and stone removal while maintaining low energy consumption and minimal noise and dust emission.

THE METRA BLGS-200 GRAVITY TABLE

is designed for the separation of dry bulk materials of uniform size but differing in mass, this blowing-type gravity separator excels in eliminating moldy, blighted, and insect-infested grains, ensuring only the highest quality grains are processed.





MODEL:

Metra GDSM-400



Blowing Type Gravity Table



MODEL:

Metra BLGS-200





GRAVITY-ACTING DESTONER FROM METRA

Models	METRA GDSM-400
Productivity in grain cleaning in Hour	400 bushels 10 tons
Screen width in mm	39.4 1000
Air flow rate cfm m³/h	4710 8000
Energy consumption HP kW/Hour	0.67 0.50
Length in / mm	59 / 1500
Width in / mm	49 / 1246
Height in / mm	75 / 1900
Weight Lbs / kg	882 / 400

THE METRA GDSM-400

is a pinnacle of grain cleaning technology, featuring a dual-surface design for optimal sorting and impurity removal. Supported by shock absorbers for stable operation, this machine integrates air flow, vibration, and sieving to achieve unparalleled efficiency and performance. It boasts remarkable capabilities in sand and stone removal while maintaining low energy consumption and minimal noise and dust emission. With adjustable inner sieve angles and air supply, it caters to various grains and specific cleaning tasks, ensuring your product's purity and quality.

BLOWING TYPE GRAVITY TABLE FROM METRA

Models	METRA BLGS-200		
Productivity in grain cleaning in Hour	200 bushels 5 tons		
Screen Area ft² m²	39.4 3.66		
Working Air Pressure psi pa	0~0.15 0~1000		
Energy consumption HP kW/Hour	17.90 13.35		
Length in / mm	151.2 / 3840		
Width in / mm	83.1 / 2110		
Height in / mm	80.3 / 2040		
Weight Lbs / kg	3090 / 1400		

THE METRA BLGS-200 GRAVITY TABLE

is designed for the separation of dry bulk materials of uniform size but differing in mass, this blowing-type gravity separator excels in eliminating moldy, blighted, and insect-infested grains, ensuring only the highest quality grains are processed. Ideal for when air aspiration and screening reach their limits, the BLGS-200 acts as an essential addition to your cleaning equipment system, not as a replacement. It efficiently removes both light and heavy impurities, including husks, immature, sprouted, and insect-damaged grains, through its precise sorting process.

Premium quality products

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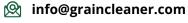






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METRA GDSM-400





METRA BLGS-200







METRA SEED TREATERS

We offer 5 models of Seed Treaters with capacities ranging from 120 to 800 bushels per hour or 3 to 20 metric tons per hour.







TECHNICAL PARAMETERS AND PRICE METRA SEED TREATERS

Models	STM-120	STM-200	STM-800	STM-800S	STM-800P (+ 3 peristaltic pumps system)
Productivity (on wheat seeds) in Hour	120 bushels 3 tons	200 bushels 5 tons	800 bushels 20 tons	800 bushels 20 tons	800 bushels 20 tons
Energy consumption kW/Hour HP	1.1 1.5	1.6 2.1	6.6 8.9	4.0 5.4	2.7 2.0
Tank for working fluid gal	13.2 50	26.4 100	63.4 240	79.3 300	66 250
Dosage range gpm I/min	0.02 - 0.9 0.1 - 3.3	0.02 - 1.6 0.1 - 6.0			
Power consumption	220V, 60Gz				
Length in mm	138.6 3520	110.2 2800	205.5 5220	145.7 3700	84.7 2150
Width in mm	47.8 1210	79.0 2000	191.0 4850	145.7 3700	70.9 1800
Height in mm	78.0 1980	102.4 2600	169.3 4300	177.2 3520	98.4 2500
Weight Lbs kg	331 150	486 220	1433 650	1764 800	684 310

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METRA STM-800S



METRA STM-800P







APPLICATIONS OF METRA SEED TREATERS



Agricultural Farms

Treating seeds before planting to protect against diseases and pests



Seed Processing Plants

Mass treatment of seeds to prepare them for planting



Research Institutions

Testing protective agents and seed treatment methods

FEATURES OF METRA STM - PERFECT SEED TREATMENT

OPERATION OF THE SEPARATE SUPPLY SYSTEM

The separate supply system utilizes NP-02 type peristaltic dosing pumps, with the number of pumps determined by the components of the working solution, including water. Flow rates and component percentages are set via a central control panel or individual dispensers. Water is supplied from the main tank of the treatment unit.

2 MONITORING AND PREPARATION OF THE WORKING SOLUTION

Dispensers continuously display real-time information on the supplied amounts of water and other components. The working solution is prepared in the hydraulic line before application to the seed material in the treatment chamber. The system also adjusts the amount of working fluid based on changes in seed supply.

- High precision dosing ensures accurate application of treatment liquids for optimal seed protection.
- Capable of treating various types of seeds, including cereals, legumes, soybeans, and corn.
- Quick adjustment of the required application rate of the working liquid enhances treatment efficiency.
- Equipped with peristaltic pumps for precise delivery of working liquids.
- Available in both mobile and stationary designs, these seed treaters can adapt to various operational environments.
- Designed to minimize the use of toxic chemicals while maximizing ecological benefits.

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THE SEED TREATERS FROM METRA CAN WORK WITH VARIOUS TYPES OF GRAINS, INCLUDING CEREALS, LEGUMES, SOYBEANS, SUNFLOWER, AND CORN.

Treat the seeds with water solutions or suspensions of treating agents for protection against diseases and pests



OATS GRAIN



RAPESEED



BARLEY GRAIN



TEFF SEEDS



WHEAT GRAIN



CORN GRAIN



PEAS



SOYBEANS

SEED TREATERS HELP PROTECT SEEDS FROM DISEASES AND PESTS

SEED PROTECTION

Seed treaters apply chemical solutions to protect seeds from diseases and pests

PRECISE DOSING

The machines ensure accurate dosing of treatment liquids, optimizing the amount of chemicals used

MIXING AND LOADING

Automatically mix, load, and treat seeds, reducing manual labor and ensuring even coverage

FOR MORE DETAILS, PLEASE CONTACT US!

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SERVICE COMMITMENT

24/7 technical support.

An intelligent system is built into each model with the help of which we can connect to the machine at any time, help you adjust your required settings, or make diagnostics before the cleaning season, as well as after it.

We take care of everything from delivery to training



Delivery anywhere in the world



Complimentary lifetime support



We provide training on how to operate the equipment



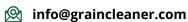


Professional solution for grain cleaning, quality classification & impurity removal



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