

# GRAIN TREATMENT AND LOGISTICS

COMPLETE SYSTEMS | DRYING EQUIPMENT | COOLING DEVICES | CONVEYOR TECHNOLOGY | CLEANING SYSTEMS | SILOS



# The History of Goldsaat – “Made in Germany” Quality

On 01/08/2015, “Goldsaat Agrartechnik GmbH & Co KG” celebrated its 20th anniversary under the leadership of Ramona Bohl and CEO Erwin Funk.

Oswald Metzen founded “Goldsaat Agrartechnik GmbH” in 1995. Today, at its location in Prümatalstraße in Prüm (Germany), the company can look back at a history that stretches far back into Berlin of the 1920s. This is where the roots of today’s successful company were first set down.

Initially founded as a Berlin-based export company, Saatgut machines were distributed by the company “Neuhaus” under the “NEUSAAT” brand. After 1945, manufacture moved first to Solingen and then to Remscheid and the brand continued under the name “Goldsaat”. The product range was gradually expanded with the “Poppelsdorf” pickling machine, the pre-cleaner “SIVO”, as well as cereal cooling devices and grain dryers.

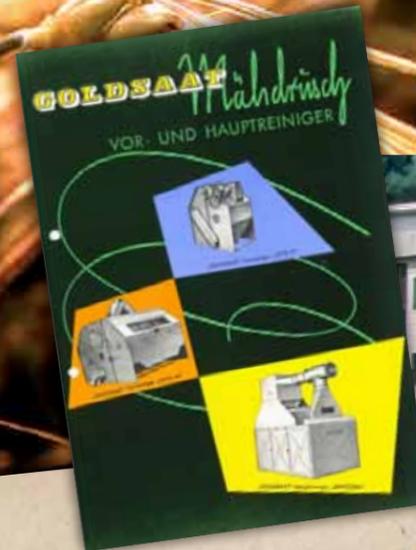
By the end of 1966, thousands of grain dryers from series “Continuus”, “Contilag” and “KTS” were in use by farmers, traders and cooperatives.

In 1967, the Prüm production facilities were added and there was continual expansion through to the 1990s. Innovations and developments in grain technology and cooling device production took place. After a few years, management relocated from Remscheid to Prüm.

In 1995, during a difficult economic period and the closure of “Goldsaat Fritz Döring GmbH”, Oswald Metzen founded “Goldsaat Agrartechnik GmbH”. In a strong alliance with “Oswald Metzen GmbH” for industrial equipment, business was revived and a solid foundation for the future was laid. By 2007, a new production hall and administrative building were built. Since 2013, the company has been trading under the name “Goldsaat Agrartechnik GmbH & Co. KG” under the ownership of Mrs Ramona Bohl (née Metzen), Mr Oswald Metzen and CEO Mr Erwin Funk.

Expertise was continually expanded and developed. Today, “Goldsaat” of Prüm, Germany is an international leader in designing, constructing and installing complete agricultural systems for grain. This also includes equipment for rice and maize. From planning through to a turnkey system, Goldsaat guarantees “Made in Prüm/Germany” quality that makes an important contribution to securing harvest yields in the agricultural sector. The company’s success is based on a team of around thirty experts, including craftsmen, office staff, engineers and technicians. Many of the staff come from the Prüm area and some have been working at “Goldsaat” for more than 20 years. They produce the high-performance, large-scale systems based on customer requirements.

The basis of the company philosophy is punctuality, precision, fairness and cost-transparency.



# Services

Know-how for optimal grain technology

We plan, build and install machines and plants, particularly for wheat, barley, rye, maize, rice and other cereals, as well as free-flowing products.

Our service portfolio encompasses individual modules to optimise or expand existing plants, through to complete systems that can perform every work step perfectly and precisely, even across very large volumes.

As a partner to modern farming and the agricultural industry, we design each system individually in line with customer requirements and wishes. Our speciality is very large and high-performance plants. But creating complex designs for use in existing structures is another of our specialist areas. The core skill of Goldsaat is building complete turnkey plants.

Installation, initial launching and servicing are performed by our experienced team of technicians on-location with the customer.



**COMPLETE SYSTEMS**  
Planning and Manufacture



08



**DRYING TECHNOLOGY**  
Ecological and economical  
Ideal for securing harvest yields



10



**COOLING TECHNOLOGY**  
Chemical-free conservation  
of your harvest



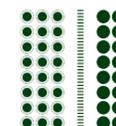
12



**CONVEYOR TECHNOLOGY**  
Gentle conveyance of  
free-flowing goods



14



**CLEANING TECHNOLOGY**  
SIVO UL - capable of  
an hourly output of 20 - 200 t



16



**SILOS**  
Goldsaat storage technology for grains and  
cereals



18

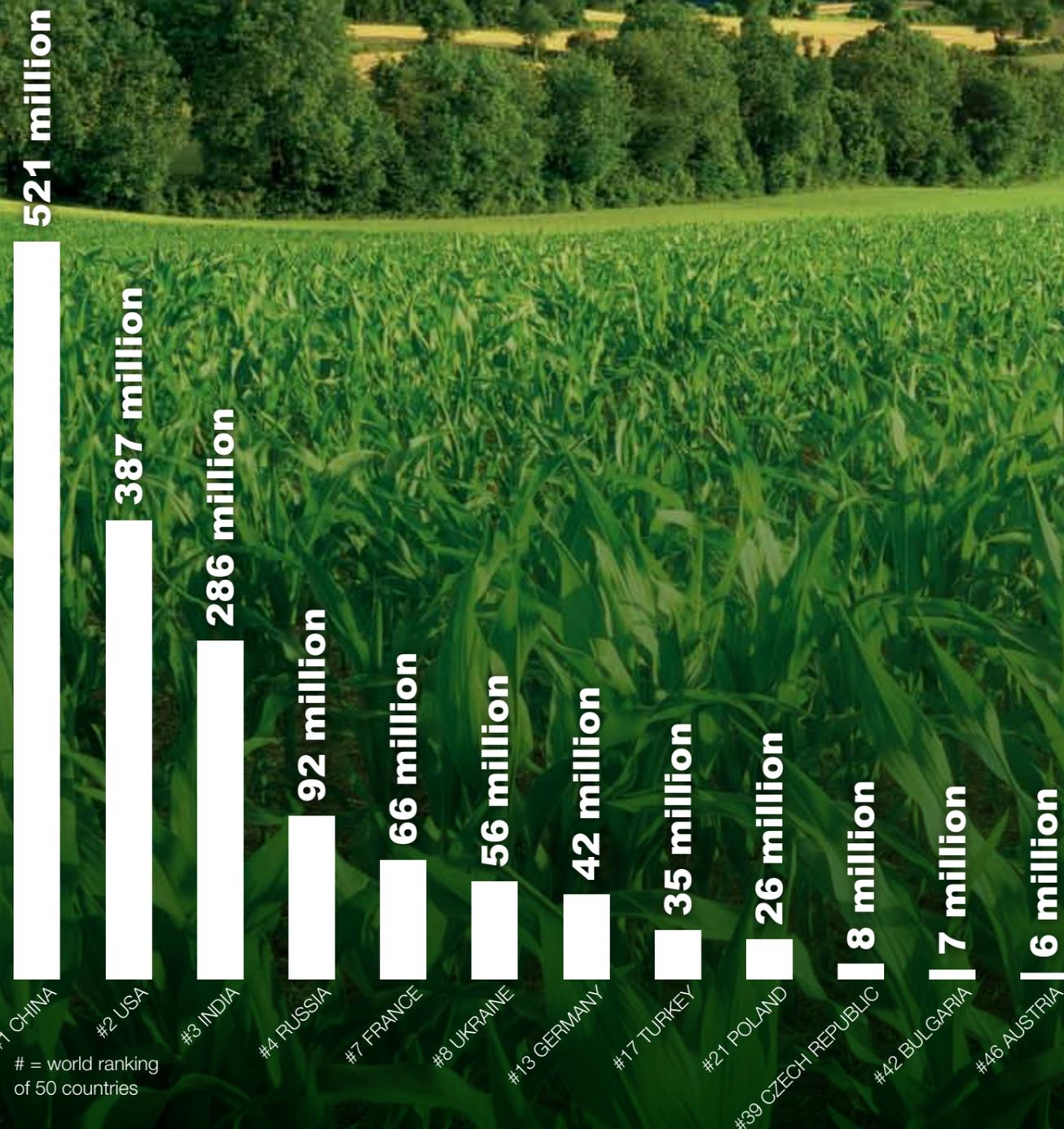
# Business Worldwide

Technology produced by "Goldsaat" can be found in all world markets.  
The key service areas are located in Central and Eastern Europe.

## World grain production in tonnes

For barley, oats, millet, maize, rice, rye and wheat

Across 12 example countries:



**Grain is the most important food market throughout the world!**

For a world population of 7.3 billion people, an annual total of more than 2.587 billion tonnes of grain is produced.



# Complete systems

Logistics from handover through to distribution

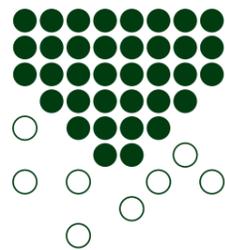
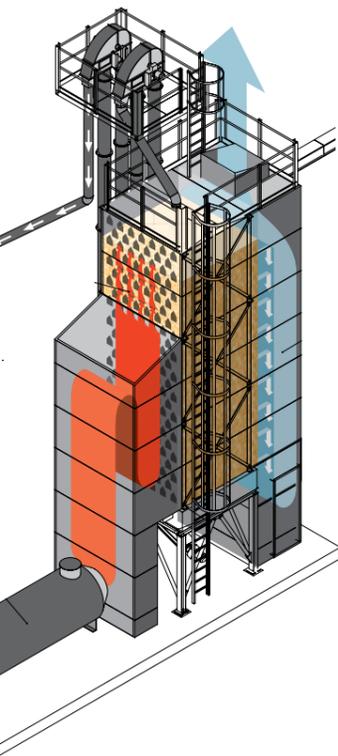
The whole is more than the sum of its parts (or components). This expression explains the process by which grain plants are constructed - all the components must match and be aligned to ensure secure conveyance, processing and storage. This is how our systems can achieve the desired efficiency. This is the principle by which we plan, produce and install our Goldsaat systems.

Planning and manufacturing large, high-performance plants from one metal casting process is one of our strengths. Our experts work hand-in-hand to perform proprietary engineering and produce spare parts. Even those looking for a more complex solution capable of performing a range of unusual tasks can rely on the specialists at "Goldsaat". Each client is assigned a contact person who acts as a go-between for the various departments, accessing specialist knowledge and ensuring proper planning, installation, commissioning and the flawless operation of your systems.

Goldsaat has been acquiring expertise for decades in the following areas: Consumer grain, malting barley, seed grain, maize, oilseeds/pulses and rice. Make the most of our know-how.

We will plan your system economically and ecologically and in a way that reliably secures your harvest and helps increase yields.





# Drying technology

Economical and ecological - hand-in-hand

One of the main skill areas of "Goldsaat" is drying machines for grain, maize and rice. "Goldsaat" has been working in this area for decades to great success and has introduced various developments based their experience with these systems.

The development of new systems and, most of all, the integration of modern drying technology in existing, often narrow and difficult-to-access plant structures are disciplines in which "Goldsaat" is well-versed.

## "Goldsaat" Vertical dryers

- Grain dryers**
- Maize dryers**
- Rice dryers**

Our flow-through dryer systems can be adapted to meet output requirements of 0.5 to 150 tonnes per hour. They combine economic requirements with the latest environmental findings: resource-efficiency and energy savings. This is thanks to innovative processes, such as heat recovery or warm-air drying with subsequent ventilation through the silo.

The goods requiring drying (e.g. maize, rice, grain or pulses) are put through a dehumidification process that is gentle, consistent and biologically-sound. The end result is natural raw materials and top-quality foodstuffs.

## "Goldsaat" Flat dryers

"Goldsaat" flat dryers are an alternative to through-feed dryers and are especially suited to non-free-flowing goods. They ensure consistent and gentle dehumidification and are suitable for drying cotton, acorns, carrots, chippings, oil-

seeds, peppers, granules, cereals, rape, maize etc.

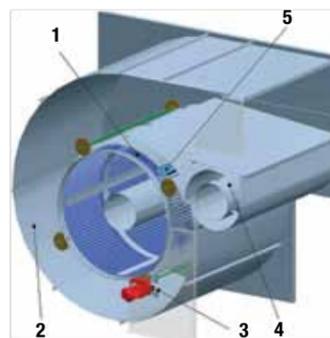
**Controls.** Thanks to perfectly aligned, fully-automated control elements, malfunctions in humidity regulation (i.e. over- or under-drying) are a thing of the past; time-consuming, manual controlling is also kept to a minimum

**Material.** "Goldsaat Dryers" are designed to have long service lives. The use of high-quality materials, such as rust-proof, light metal alloys, the drying plants feature excellent longevity and guarantee congestion-free flow.

**Environment.** Energy is becoming more and more expensive. This is why we continually work on developing insulation for warm air compartments and devise new ways of recovering and generating heat, as can be seen by the excellent efficiency already achieved by our systems. "Goldsaat" develops new techniques of reducing dust emissions, such as for maize dryers. This includes innovative centro separators that take up little space when installed and do their part for the environment.

### Equipment:

- Fans
- Discharge unit
- Controls
- Warm air generator (gas/oil)
- Dust separators



- 1 Filter fabric
- 2 Primary separator
- 3 Filter drive
- 4 Secondary separator
- 5 Extraction/dedusting of filter fabric





# Cooling technology

Pest control without pesticide



*Sitophilus granarius*. The wheat weevil (body length of 2.7 to 3.7 mm) is one of the most frequent pests found in grain storage facilities. Within a year, as many as 90 million offspring can be produced that are capable of consuming up to 50 tonnes of grain. According to statistics, approx. 2% of grain harvest is destroyed by pests such as wheat weevils, flour beetles, sawtoothed grain beetles, grain borers and grain moths.

Pests like warm conditions. Goldsaat cooling devices pump in cold air to drive out the pests from the stored goods which helps put a stop to excessive proliferation. This is all achieved without any pesticides which ensures the goods do not deteriorate in quality. Goldsaat has decades of experience in everything to do with the cold preservation of grain crops.

PLC controls, "granoplus" climate control, integrated manual control options for the device and electronics, as well as bulk materials monitoring via "coolstop" all contribute to ensuring flawless automated operation of the cooling technology. All the output levels and parameters can be regulated perfectly.

Naturally, only CFC-free coolants are used because protecting our natural environment is a cornerstone of our corporate philosophy.

Humankind is also protected by reducing noise pollution through intake silencers that come as standard with all our cooling facilities. This is further supported through proprietary sound protection called PST (Particular Silent Task).

Our cooling devices are available with output ranges of between 40 t/d and 250 t/d (regular summer output) or 70 t/d and 350 t/d (maximum performance).

Ref.: At 22°C ambient temperature, 50% relative air humidity, 16% grain humidity, the t/d for grain indicated, including 2 K (°C) granosafe residual heat, is cooled to 10°C. in 24 hrs.

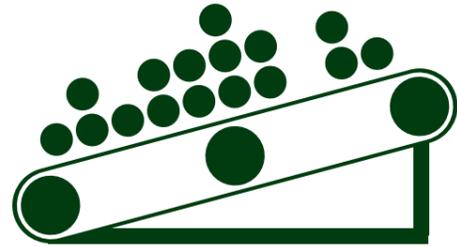
#### Overview:

Cooling device GK 40/404-DWM  
Cooling device GK 80/404-DWM  
Cooling device GK 160/404-DWM  
Cooling device GK 240/404-DWM  
Cooling device GK 320/404-DWM

#### Design features:

- PLC controller
- CFC-free coolant (R 404 A)
- Machine operating range: between + 4 °C and + 40 °C.
- Functional procedures are not influenced by overall counterpressure
- "granoplus" climate control
- Residual heat regulation up to 9 K (°C) irrespective of ambient temperature.
- Working range in compressor mode of between + 2 °C and + 17 °C, temperatures within this range can be selected irrespective of the weather.
- Device can be operated according to blow-in temperature or moisture sorption (aw-value of the cereal crop).
- Highest possible volume flow while consuming the least amount of energy.
- Integrated self-control options for the device and electronics, as well as bulk goods monitoring using "coolstop".
- Corrosion protection through use of galvanised sheet steel and multiple varnishes.





# Conveying technology

Moving big loads – with innovative and long-lasting solutions

Free-flowing products of all types, be they delicate or robust, can be transported towards the next processing station using Goldsaat conveying technology in an energy-saving, efficient, quick and gentle manner.

Conveyor performance, composed of speed and quantity conveyed, is optimised for every product. The automation technology used is also perfectly engineered, which is key for ensuring plant efficiency, be it an agricultural plant or recycling facility.

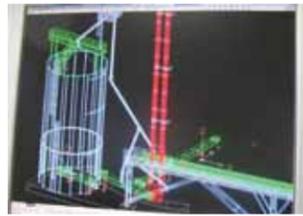
The design of each of our conveyor system solutions is tailored exactly to customer requirements. They operate reliably and are flexible enough to allow future expansion/modification, such as due to new environmental conditions or production requirements. We also offer top-of-the-range standard elements.

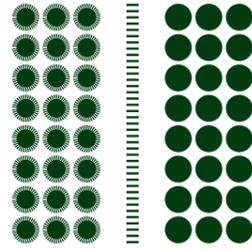
Our conveyor belts can shift volumes of up to 1,500 tonnes per hour; our feed screws can manage up to 300 tonnes per hour. Drag chain conveyors are capable of moving up to 1,000 tonnes while being gentle on delicate goods. The elevators which need to lift large quantities of product to great height can transport up to 1,000 tonnes per hour.

Belt weighers can be used for extra precision by efficiently regulating the material flow rate.

**Performance range:**

Elevators	Up to	600 t/h
Drag chain conveyors	Up to	600 t/h
Conveyor belts	up to	1000 t/h
Feed screws	Up to	300 t/h





# Cleaning technology

High-performing, economical and ecological!  
 Precleaner systems from the SIVO and SIVO UL series

## **SIVO** 20 t/h up to 200 t/h (heavy fruits)

The special design features of the Goldsaat SIVO mean it always operates reliably and can clean goods no matter what the level of humidity or contamination. Wherever there are performance losses or failures on flat screening machines due to the consistency of the bulk material, the SIVO machine is the ideal choice for ensuring flawless precleaning of feed and foodstuffs.

Very good cleaning results can be achieved with: cereals, rice, maize, pulses, small seeds, turnip rape, soybeans, peanuts, coffee, cocoa beans, sesame seeds, sorghum, buckwheat and many more.

## **Economical and malfunction-free!**

The SIVO precleaner has been reviewed as outstanding in practical trials, particularly where it is used upstream of a drying facility, or as part of low-temperature preservation.

The drying systems can be operated economically and without any malfunctions. SIVO also contributes to preventing dryer fires via pre-cleaning, which helps avoid clogs and material accumulation.

Dirt deposits are reduced and better cold preservation results are achieved. Drying and cold preservation thus become easier and more cost-effective.

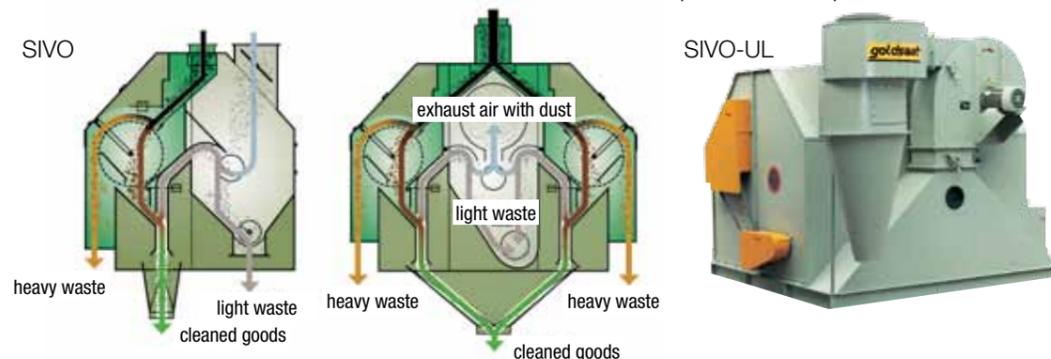
## **SIVO-UL** 20 t/h up to 200 t/h (heavy fruits)

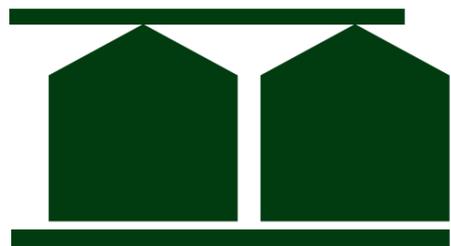
The SIVO UL grain precleaner, the successor to the tried-and-tested SIVO series, has been designed to be environmentally-friendly. The SIVO UL precleaner is capable of processing 20 to 200 t/h of grains and cereal and its compact design is further enhanced by small dust separators and exhaust air pipes.

The reduction in exhaust air volume also enables a smaller postseparator to be used, which in turn means less space is needed for any downstream filtering systems used. Fine adjustments can be made to the regulating valves to ensure the precleaning results achieved are the best possible. The design of the SIVO UL with ventilation system has been specially conceived to satisfy the requirements of today, both economical and ecological.

## **Advantages:**

- A high-performance, compact design for easy installation.
- Significantly reduced exhaust air volume (max. of 20% compared to conventional SIVOs)
- Applicable immissions regulations are met in full if a filter is linked downstream
- Dust separators and pipelines for exhaust air feature small dimensions and are low cost.
- Overall power consumption is reduced.





# Silos

Goldsaat storage technology for grains and cereals

A major part of the grains and cereals logistics process is taken up by storage options for the treated and untreated grain. The requirements vary greatly. Goldsaat designs silo plants for harvest and large-scale facilities for handling and grain trading, all of which are ready to operate from day one.

Key components include tailor-made conveyor and discharge solutions that transport the grains and cereal quickly and reliably to the warehouse or truck/ship-loading point. The outdoor silo facilities most frequently selected by clients are ones featuring round silos.

Goldsaat supplies these with diameters of up to Ø 32.80 m and heights of up to 28 m.

All the silos are assessed in line with the latest EUROCODE standards. Goldsaat can also supply conveyor solutions suitable for box silos.

**Types of silo:**

- Round steel silo with cone (with or without ventilation system)
- Round steel silo with sweep auger (with or without ventilation system)
- Free-flow floor silos



# GRAIN TREATMENT AND LOGISTICS

COMPLETE SYSTEMS | DRYING EQUIPMENT | COOLING DEVICES | CONVEYOR TECHNOLOGY | CLEANING SYSTEMS | SILOS

**goldsaat**<sup>®</sup>

AGRARTECHNIK



**COMPLETE SYSTEMS**  
Planing and Manufacture



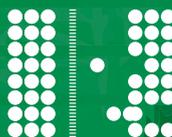
**DRYING TECHNOLOGY**  
Ecological and economical  
Ideal for securing harvest yields



**COOLING TECHNOLOGY**  
Chemical-free conservation  
of your harvest



**CONVEYOR TECHNOLOGY**  
Gentle conveyance of  
free-flowing goods



**CLEANING TECHNOLOGY**  
SIVO UL - capable of  
an hourly output of 20 - 200 t



**SILOS**  
Goldsaat storage technology for  
grains and cereals

**Goldsaat Agrartechnik  
GmbH & Co. KG**  
Prümtalstraße 20  
D-54595 Prüm/Eifel  
Telephone +49 (0) 65 51 / 95 07 - 0  
Fax +49 (0) 65 51 / 95 07 34  
Email: [info@Goldsaat.de](mailto:info@Goldsaat.de)  
Internet: [www.Goldsaat.com](http://www.Goldsaat.com)



business worldwide