TURNKEY

Grain and seed processing plants, silo and drying complexes, and port terminals
SOLUTIONS.
TOGETHER.

CONVEYING | DRYING | SEED PROCESSING | ELECTRONIC SORTING | STORAGE | TURNKEY | SERVICE
Cimbria is one of the world’s leading manufacturers in the processing, handling and storage of grain and seeds as well as offering an increasing number of applications involving other types of products. We design, develop, manufacture and install customer-specific solutions, regardless of whether this involves individual machines, complete processing lines or large turnkey projects. Our underlying approach always emphasises increasing quality and energy efficiency, as well as reducing operating costs.

OUR COMPETENCIES AND MISSION

PLANT DESIGN
PROJECT MANAGEMENT
AUTOMATION
DOCUMENTATION
AFTER-SALES SERVICE
TRAINING
CIMBRIA - A ONE-STOP COMPANY

Cimbria’s project and turnkey solutions comprise one of our six different business areas. With turnkey projects, we extract and leverage all the experience and expertise we have acquired from the other five business areas: transport, drying, seed processing, electronic sorting and storage. By choosing Cimbria as a business partner for large projects, our customers will thus gain a business partner with a range of skills and more than 60 years of experience in all areas involving the handling of crops.

We master all disciplines involving research and development, are highly knowledgeable about the crops, engineering and manufacturing, as well as possessing substantial expertise in professional project management, consulting services, training, site supervision and implementation. From the point at which the order is issued until the warranty period expires, we place complete responsibility in the hands of a senior project manager.

We are quite literally a one-stop company, possessing a solid and comprehensive overview, and our customers have one contact person who is responsible for the entire project.

STORAGE

Storage of seed and grain products requires both maximum care and control at the same time. In our designs for silos, we consider the handling and technology for all parts and details, and with more than 60 years of experience we have many valuable insights at our disposal. No silo project is too complicated or too simple for Cimbria - regardless of whether it concerns large or small, rectangular, round or trapezoidal silo solutions, or silos with smooth surfaces.

DRYING

Artificial heat treatment of agricultural products is the most reliable and most advanced method of ensuring that quality is maintained, even during prolonged periods of storage. Cimbria’s own development work in this specific area has resulted in the most flexible modular solution on the market, strengthening our position as a global leader.

CONVEYING

Cimbria focuses systematically on achieving intelligent and simple conveying solutions with limited transport routes and complexity in order to improve energy efficiency. We develop conveying solutions based upon our detailed knowledge of the special conditions applicable to each individual project. Our focus lies in conscientious and precise capacity calculations combined with good knowledge of the products or materials that are to be conveyed.

ELECTRONIC SORTING

With our electronic and optical sorting systems, we offer innovative sorting solutions that are customised for the objective concerned. The sorting systems are fully automatic and harbour the latest technology, ensuring both high quality and efficiency, whilst keeping quantities of rejected seeds and grain to a minimum.

SEED PROCESSING

Cimbria develops and manufactures all machines and equipment for seed processing. Comprehensive technical experience on the part of our engineering employees and their thorough knowledge of the product enable us to deliver solutions for cleaning, sorting and processing different seed and grain products that are of the highest standard on a global basis.

SERVICE

Serving customers is a fundamental aspect of Cimbria’s efficacy and business sense. This goes for the projecting and installation of the turn key plant as well as the guarantee of a subsequently smoothly running plant. Cimbria’s service staffs are widely experienced in localising and handling all system errors and this experience is placed at the immediate disposal of their customers. A wide range of Cimbria equipment implemented and installed in turn key plants is composed of modularly-structured standard components all kept in stock. This gives Cimbria the possibility to offer a day-to-day delivery of an extensive range of spare parts.
Cimbria’s experience from the project engineering of plants in more than 60 countries all over the world forms the basis of the consultancy services which we offer to our customers in all questions concerning the design of their complexes. In combination with extensive knowledge of grain handling and seed processing, which is one of the hallmarks of Cimbria, our consultancy services ensure that customers are presented with the best possible project proposals.
Cimbria has delivered many complex installations around the world operating under very different conditions and with a wide variety of products. The systems are based on our own research and development over more than 60 years. This, together with our strong focus on healthy working conditions, extensive flexibility and return on investment, has given us a leading position on the global market.

**OIL SEED INSTALLATION, HUNGARY**
Reception of wet sunflower and rape seed from field or rail wagons with pre-cleaning, fine cleaning, grading, storage and conveying system into vegetable oil seed mill. Conveying system for cake and hulls into storage and onwards into rail wagons or trucks.

**SUNFLOWER SEED INSTALLATION, RUSSIA**
Sunflower seed project with Drum Scalper, 2 x Delta Mega 167 cleaner, ECO Master Dryer model DMG-34R with a capacity of 50TPH in sunflower seed from 13-7% and related conveying system.

<table>
<thead>
<tr>
<th>Type:</th>
<th>ECO Master DMG 34R dryer, cleaning and processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer:</td>
<td>JCS &quot;Chisiminskoye&quot;, Republic of Bashkortostan, Russia</td>
</tr>
<tr>
<td>Delivered:</td>
<td>2012</td>
</tr>
<tr>
<td>Capacity:</td>
<td>50 TPH</td>
</tr>
<tr>
<td>Product:</td>
<td>Sunflower seed</td>
</tr>
</tbody>
</table>

**OIL SEED INSTALLATION, HUNGARY**
Reception of wet sunflower and rape seed from field or rail wagons with pre-cleaning, fine cleaning, grading, storage and conveying system into vegetable oil seed mill. Conveying system for cake and hulls into storage and onwards into rail wagons or trucks.

<table>
<thead>
<tr>
<th>Type:</th>
<th>Complete raw material handling and processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer:</td>
<td>Pannon Vegetable Oil (Glencore) Hungary</td>
</tr>
<tr>
<td>Delivered:</td>
<td>2012/13</td>
</tr>
<tr>
<td>Capacity:</td>
<td>-</td>
</tr>
<tr>
<td>Product:</td>
<td>Sunflower and rape seed</td>
</tr>
</tbody>
</table>
GRAIN DRYING AND STORAGE, DENMARK
Reception of wet grain, drying, cleaning, storage and control system with MCC, SCADA and PC operated plant.

<table>
<thead>
<tr>
<th>Type</th>
<th>DMG 22R dryer, Delta 159 and conveying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Mollerup Mølle, Denmark</td>
</tr>
<tr>
<td>Delivered</td>
<td>2012</td>
</tr>
<tr>
<td>Capacity</td>
<td>200 t/h</td>
</tr>
<tr>
<td>Product</td>
<td>Wheat, barley and rape seed</td>
</tr>
</tbody>
</table>

GRAIN STORAGE PROJECT IN RWANDA
Reception of wet maize from field with pre-cleaning, drying, storage, conveying system, as well as temperature monitoring, stock control system and operation with SCADA system.

<table>
<thead>
<tr>
<th>Type</th>
<th>Complete silo project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>Delivered</td>
<td>2012</td>
</tr>
<tr>
<td>Capacity</td>
<td>20,000 tons</td>
</tr>
<tr>
<td>Product</td>
<td>Maize and wheat</td>
</tr>
</tbody>
</table>

EAR CORN SEED COMPLEX, FRANCE
Detailed design, engineering, project management and supply of complete ear corn project with reception, husking, sorting, drying, shelling, bulk storage processing, chemical treatment and packing of maize seed.

<table>
<thead>
<tr>
<th>Type</th>
<th>Ear corn drying and processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Monsanto, France.</td>
</tr>
<tr>
<td>Delivered</td>
<td>2013</td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>Maize seed</td>
</tr>
</tbody>
</table>
Project design and organisation are the keywords when quality is to be assured on major projects, and Cimbria addresses this by offering a highly competent project team and vast experience. We possess the complete set of requisite skills within the company: process engineers, machine design, steel design and software engineering. We are able to offer the design of systems in the following areas:

- Seed drying, processing and storage
- Grain drying, cleaning and silo complexes
- Harbour terminals with high capacity, loading, storage and unloading
- Feedstuff factories
- Systems for breweries and malt houses
- Coffee drying and processing
- Heat treatment of grain
- Rice drying, cleaning and storage systems
- Transport and storage of biofuels
- Systems for special purposes

With Cimbria’s full range of project competencies, we provide our customers with high levels of responsiveness, reliability and peace of mind in terms of their projects. We guarantee that qualified expertise will be applied to all aspects of their projects and ensure the complete integration and co-ordination of the different functions and components.
From the point in time when the order is issued until the warranty period expires, we place complete responsibility in the hands of a senior project manager. A working group will be convened under the supervision of the project manager. This group will consist of a number of specialists, thus ensuring that their extensive dedicated expertise involving machines, electronics, process controls and buildings will be used for the benefit of the project within each of their respective disciplines.

Reliable and permanent project management helps to anchor the reliability and quality found in our products and project representations.
All machines in an assembled system of machines must be governed and regulated for the overall system to achieve optimum performance; hence the need for a modern automation system. Cimbria’s many years of experience in this area ensure that the best level of automation is always achieved in controlling all the processes.

One of Cimbria’s strengths in this respect is that we have collected all our expertise on processes, systems and automation in a single organisation. By selecting Cimbria as an automation partner, our customers always receive a correctly dimensioned system that is based upon modern technology and which attains optimum functionality.

The benefits of being a turnkey partner encompass design and execution, as well as subsequent servicing when the need for this arises. This includes both onsite and online servicing.

OUR PROJECT CONTRACTS

Cimbria’s control contracts include PLC and SCADA for process control with associated electrical control panels for both machinery and the facilities within the building. Our electrical and software engineers’ expertise lies not only in the complete design and execution of electrical systems and process controls, but also in the design of systems for machines.
DOCUMENTATION

Every single system is unique, and hence is delivered with specially adapted technical documentation that contains a complete installation manual with detailed instructions concerning its operation and a detailed maintenance guide. As a supplement to personal advice, the manual offers rapid clarifications of possible questions, while at the same time ensuring proper operation. We always maintain complete documentation for each individual system.

AFTER-SALES SERVICE

Servicing of our customers is a particularly important aspect of Cimbria’s image and business acumen, especially when it concerns process controls. Process controls provide the first indication of faults in a system and the chance of further localising the specific fault. Cimbria’s service personnel have substantial experience in localising and managing all system errors and we immediately place this experience at the disposal of our customers. Because all our SCADA systems are connected via the Internet, we can be online within just a few minutes, regardless of where in the world the system is located.

TRAINING

As part of our dedication to continuous improvement, we have established Cimbria Academy – a testing and training centre for the education, instruction and training of all personnel who will subsequently be working with our systems in their daily work. At Cimbria Academy we hold both general courses and individually designed courses that are customised to quality personnel for the commissioning, operation and maintenance of systems where it is important that special climatic and cultural conditions are taken into consideration.
TURNKEY PLANTS FOR HANDLING AND STORAGE OF GRAIN AND SEED

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