



Competence Center Materials Handling. [Why individuality is our solution for bulk materials handling.](#)



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01 | BULK MATERIALS PLANT

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02 | VACUUM-OPERATED  
SHIP UNLOADING SYSTEM

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03 | DIVERTER VALVE

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04 | ROTARY VALVE

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»» Why we respond to complexity with individuality. Each of our plants for handling powdered and pelletized bulk materials is absolutely unique. When a system is designed, the properties of newly developed products and extreme site conditions create a challenge for our engineers. Our optimum solution for such complex assignments is therefore always a fully customized concept and plant design. This is why you can be sure that the more specialized your specifications are, the more individual our approach will be.

We prove our skill and competence at all bulk materials handling and processing stages. No matter whether we convey, separate, store, dose or thermally treat your product – quality is our benchmark. Our specially designed components such as rotary valves, diverters, slide gate valves etc. enjoy an outstanding reputation as top-quality products in the plastics and chemical industries and also the food and minerals sectors. In the plastics and chemical industries we plan and install systems for manufacturing and processing. In the aluminium manufacturing industry we produce systems for handling raw materials from material receiving through to charging of the electrolysis cells. No matter whether your plant has an annual output of less than 5,000 tons or more than 500,000 tons,

whether you handle special or standard products – we are always the right partner to provide just what you need in our fields of expertise. The comprehensive know-how and decades of experience of Waeschle and Hartmann, united in the Coperion brand, provide a solid and competent basis to maximize your benefits. As the world market and technology leader in the bulk materials components and systems sector, we have installed more than 8,000 plants, the success of which clearly underlines our unique system and process competence. And in spite of all our engineering proficiency and expertise, there is one thing we always keep in mind: we listen very carefully to our customers! **That's what we mean when we say "confidence through partnership".**

**Around the world**

8,000 bulk materials systems installed
9,000 bulk materials components produced each year
Workforce of 700
Network with companies in Weingarten (D), Offenbach (D), Ferrara (I), New Delhi (IND), Singapore (SGP), Shanghai (CN), Ramsey (USA) and Houston (USA)
Technical center in Weingarten (D)

> 01



> 02



> 03



> 04



»» We are where you are – on the spot. This is also what true partnership is all about: Being able to react quickly and competently. With subsidiaries in the United States, Europe and Asia we have created a network which makes sure we are directly in touch with our customers around the globe. Our specialists and local partners speak your language and are fully conversant with national customs and practices. This is important for us, as we think trust and confidence can only thrive if you really understand the person you are talking to.





Our project management team has a wide-ranging scope of engineering skills and know-how at their disposal with all the facets of special knowledge and competence needed for the implementation of both plants and individual process stages. Our global network and the experience of our project managers at all our sites ensure a constant transfer of knowledge which offers you a host of advantages. We provide tailored systems in all sizes, always ensuring deadline compliance and the highest standard of quality. Local sourcing and cooperation with our global purchasing organizations

keep costs as low as possible. Our global asset and project management structure makes sure that all processes remain unaffected by frictional losses. As a result we are well-equipped for any eventualities which may arise during the course of a project, enabling us to act quickly and effectively. In this way we make use of our technological leadership to create economic and functional systems from which our customers benefit, so you can rely on a sound basis for maximizing your success in your market operations.



»» First-class handling for first-class products. To maintain the quality of your products at a consistently high level, powder and pellets must be optimally handled and transported at each stage of the process chain in accordance with their respective properties. Our intensive research and the development of new technologies have resulted in innovative processes and process components produced on our own premises which set standards in the industry. For you this means that your products are handled as gently as possible with minimum energy consumption.

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01 | PELLETS AND POWDER

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02 | TONER

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03 | COFFEE

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04 | ALUMINA

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»01



»02



»03



»04

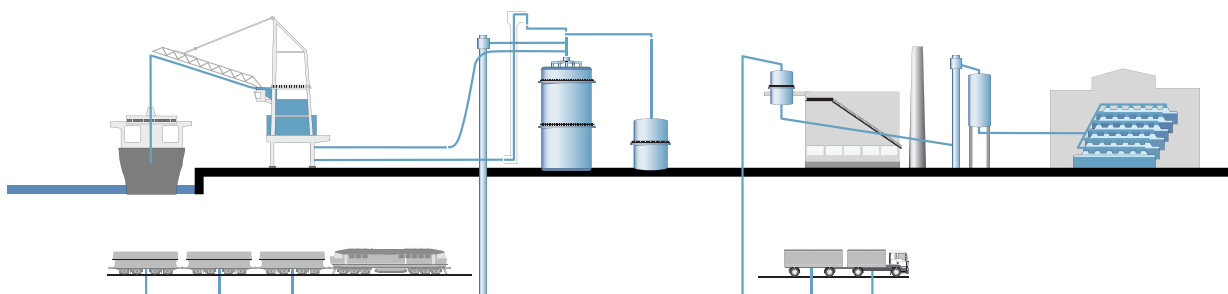




## ➤ Bulk materials systems in the aluminium producing industry

The tasks involved in the design and implementation of a plant from project planning through to installation, and also of individual process stages for handling alumina and petcoke for the production of primary aluminium, are extremely complex. With their experience, pragmatic approach and our innovative technical developments, our experts make sure that the optimum solution is elaborated for you in the shortest possible time. The individual steps in the process chain are unloading from the ship or waggon, transport to silos, silo charging and discharge with an anti-segregation system, on-site intermediate conveying and charging of the electrolysis

cells. Reliable and very gentle conveying of the raw materials ensures economical production at a consistently high quality level. Our comprehensive and professional service also plays an essential role. Throughout its life cycle, a plant is attended by our dedicated service technicians and engineers, who perform regular maintenance work to make sure that it runs smoothly throughout its service life. With selective modernization, we are also able to boost the performance of existing systems, bringing them up to state-of-the-art standards. All service activities are solely focused on safeguarding and even enhancing the benefits of our customers.





## ➤ Components for bulk materials plants

The components developed and manufactured on our own premises are held in high esteem as top-quality products in the chemical, plastics, food and mineral industries. These are process components such as rotary valves, diverters and slide gate valves used for feeding, dosing, discharge and distribution in all pneumatic conveying processes. We also supply certified solutions for applications with very high hygiene

requirements and according to ATEX specifications. Our process components also set standards at high pressures and with regard to wear protection. The development of our components is backed by our extensive experience in plant engineering, and our customers profit from process components tailored exactly to their specific needs.

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01 | ROTOR

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02 | HYGIENIC VALVE

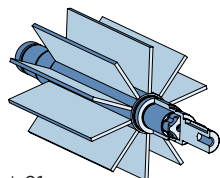
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03 | TWO CHANNEL DIVERTER VALVE

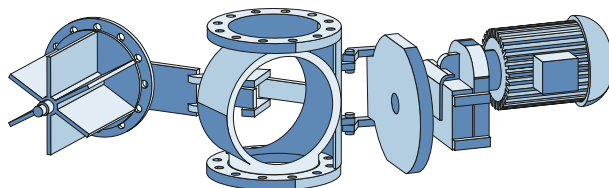
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04 | BLOW-THROUGH VALVE

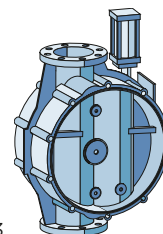
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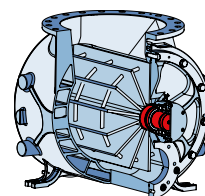
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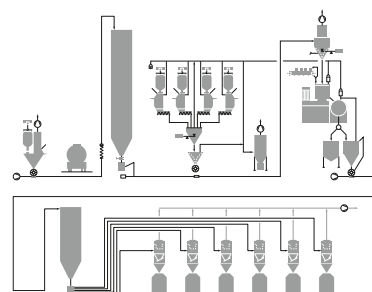
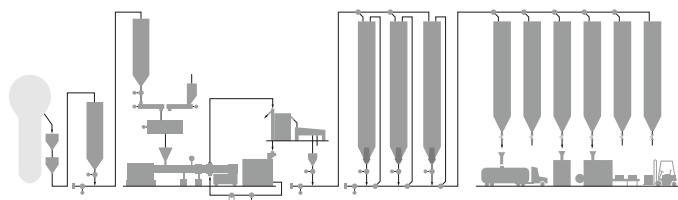




## ➤ Bulk materials plants in the plastics industry

We supply customized solutions for handling powdered and pelletized products for main and sub-systems to the plastics industry along the entire value-added chain. Applications include the production of plastics intermediate products such as PTA, BPA, adipic acid etc. for polyolefin and engineering plastics manufacturing plants as well as systems for subsequent plastics processing. The individual stages are feeding of the respective product into the conveying process, conveying, separating, mixing and homogenization, storage and discharge, dosing and weighing, cooling or heating and finally packaging and loading. Only handling the product in the most gentle manner possible can guarantee the consistent quality of

the powder or pellets. Market demands today clearly underline current and future trends: Higher throughputs with tougher quality specifications and maximized economy. To meet these requirements, plants must be designed to optimally suit the properties of the respective product, and each stage along the process chain must be coordinated exactly with the overall process. As the market and technological leader, we have set ourselves the aim of satisfying the highest of expectations. Our expertise in managing complex assignments and integrating processes gives you the security of knowing you have a reliable partner at your side.



»» Some people think it's our research department. Actually, it's yours. We can focus selectively on the specific requirements of your project as we have found an ideal way to simulate the world of tomorrow for our customers – the Coperion technical center.

Creativity meets innovative power – the Coperion technical center in Weingarten is the experimental ground on which we test future applications in a production plant, such as the properties of your new bulk materials and the optimum conveying mode. Although computer simulation and our theoretical design methods have been honed to a fine art, we still run practical tests on an industrial scale at our technical center, as we like to verify our design principles in practical trials. This gives us the security that there will be no surprises when the

plant is taken into operation. Our technical center provides excellent facilities for extensive tests, starting with the laboratory analyses through to trials on an industrial scale across all process stages. All new developments, processes and process components are subjected to intensive investigation at the center until they are ready for series production. Our continuous development work often produces innovations which secure our technological leadership and the resulting success of our customers.

Materials handling technical center

Industrial-scale technical center in Weingarten (D)
More than 50 conveying and separating systems for testing bulk solid properties
More than 800 m of conveying routes for trials
Conveying capacities of up to 200 t/h
Archive with more than 10,000 bulk materials samples
Development of in-house test equipment and simulations
Incorporated laboratory for fast product quality analysis

- 01 | TEST SET-UP
- 02 | BULK MATERIALS ANALYSIS
- 03 | BULK MATERIALS ARCHIVE







»» For the market we manufacture machinery and plants. For our customers we are a reliable partner. We design machinery and plants for the plastics, chemical, food and aluminium industries. We implement individual and turnkey solutions with the network of our three Competence Centers. But what's the feeling when it comes to Compounding & Extrusion or Materials Handling? And how do we interpret Service? Important for us is a customer who confides in our constant support. Maybe it is because there are not only engineers working at Coperion, but also chemists, food technicians and other experts. Maybe it is the teams who develop new processes and individual solutions together with our customers. It is certainly the close cooperation with the customer and the fact that we make his business part of ours. A growing confidence is the consequence. On this basis, we design machinery and plants.

**Facts and Figures**

Compounding systems installed worldwide	over 10,000
Bulk materials handling systems installed worldwide	over 8,000
Employees worldwide	over 1,700
Network of locations worldwide	27





#### > compounding & extrusion

**ZSK, STS and CTE** – three letters embody modern processing machinery and plant design for compounding technology. Our twin-screw compounders continually set new standards in the plastics, chemical and food processing industries. They are the high-tech, high-end core of our plants, guaranteeing the highest product quality.

#### > materials handling

**Hand in Hand** – we master all process steps in the treatment and handling of bulk materials. Quality is our benchmark when conveying, elutriating, homogenizing, storing, dosing or thermally treating the products. Our worldwide leading position in the field of bulk materials plants and components is proof of our extensive systems and process expertise.

#### > service

**Your Success is Our Success** – and your comfort is what we guarantee with our worldwide presence. Already during installation and commissioning of a machine or plant a service team is on-site. Maintenance, spare parts service, service consulting, training and modernization – we use our experience and competence to the advantage of our customers.



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For more information about  
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