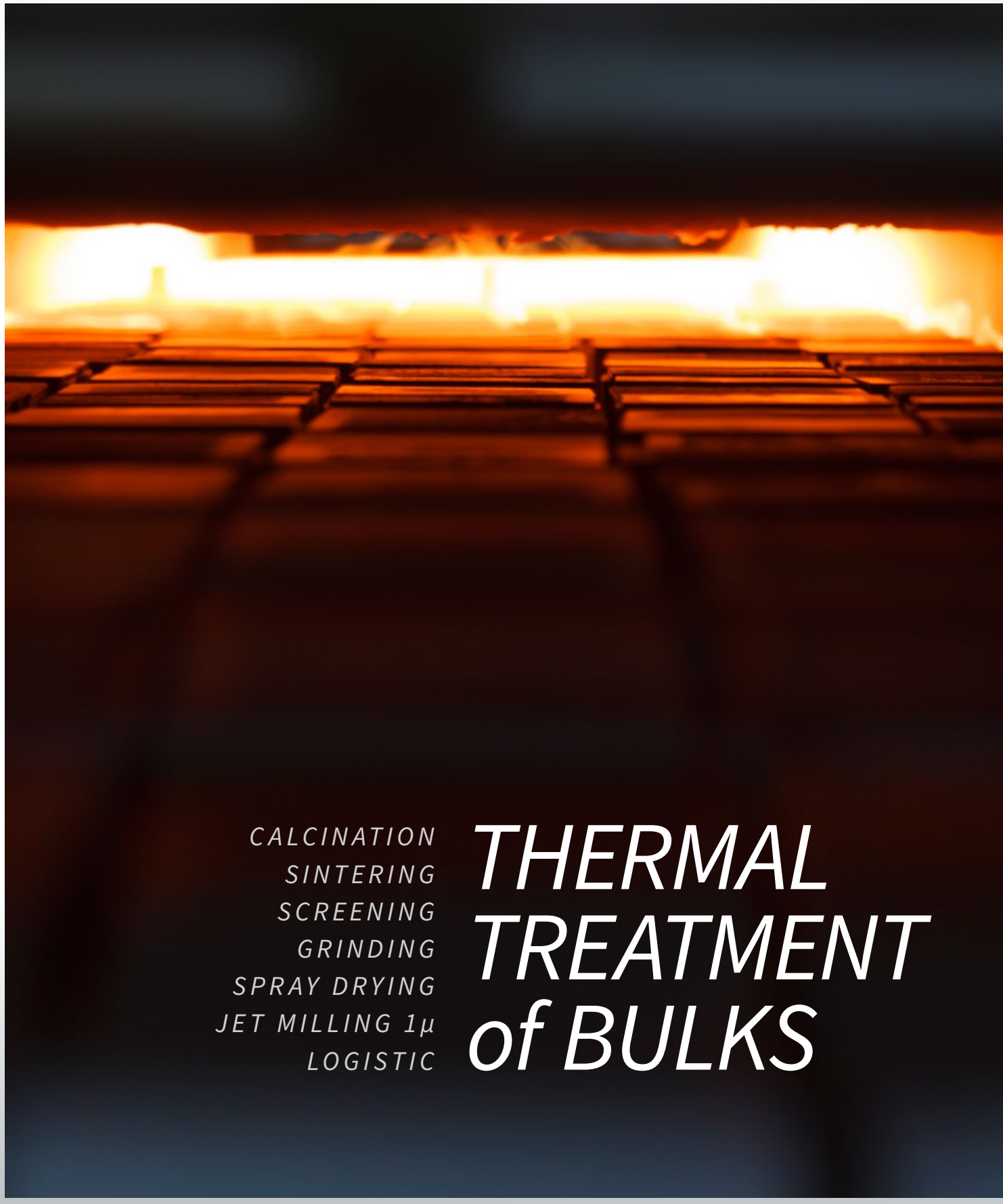
THERMAL TREATMENT of BULKS

RÖSLER CeramInno

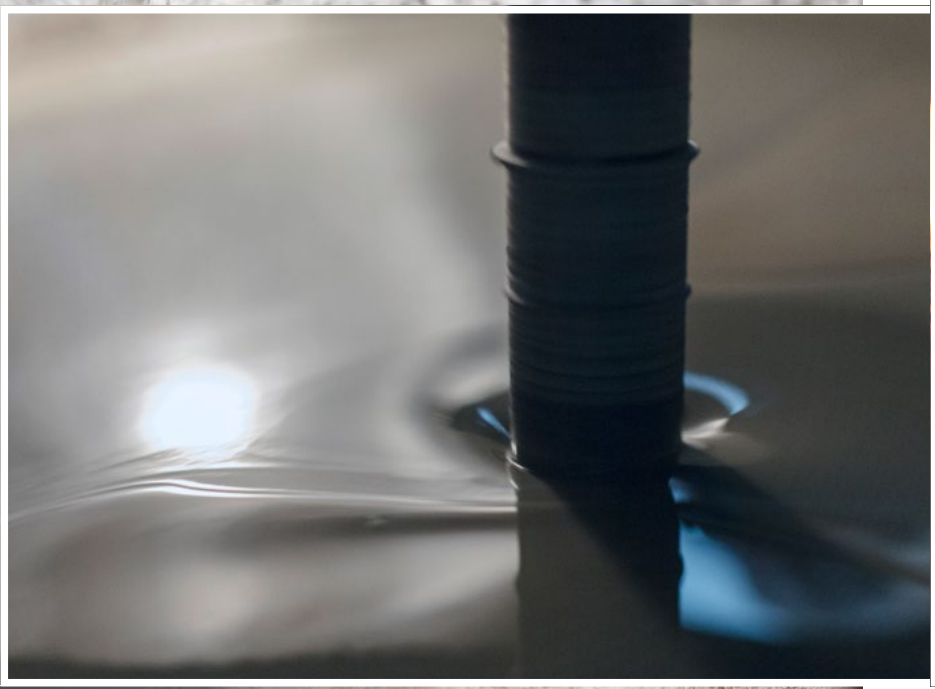


CALCINATION
SINTERING
SCREENING
GRINDING
SPRAY DRYING
JET MILLING 1µ
LOGISTIC

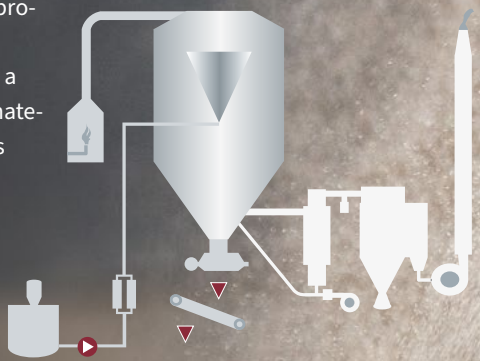
THERMAL TREATMENT of BULKS

Grinding and spray drying

As a specialised service provider, Rösler CeramInno provides a full service from the procurement of raw materials, through grinding in drum mills or dissolving whisk, up to spray drying and subsequent protective screening. Rösler CeramInno also packs the end product in containers such as sacks, barrels or big bags - depending on the customer requirements.



The spray dryer with an hourly capacity of approximately 1000 kg of spray granulate offers the possibility of producing special granulates for a wide range of applications. Initially, the raw materials are ground homogeneously in drum mills according to the customer's own recipes.



Directly after the drying process, the spray granulates are subjected to a protective screening. Subsequently, the dried spray granulate is packed in sacks or special containers according to the customer's requirements.

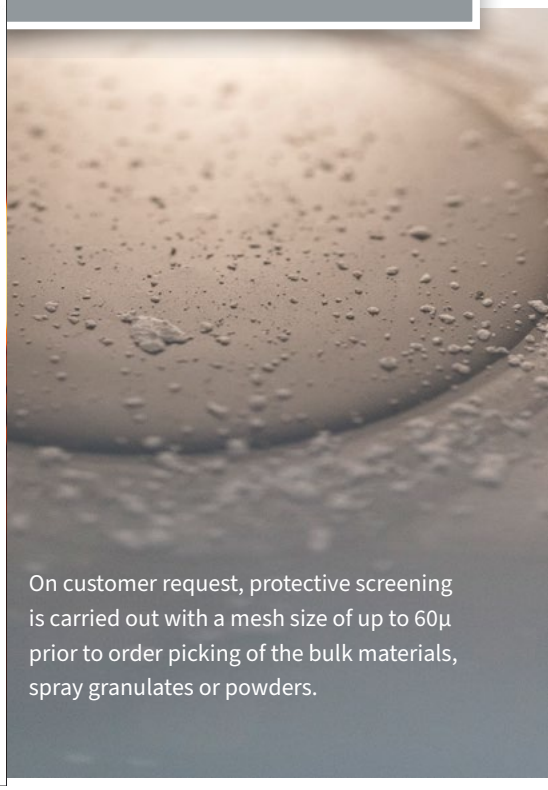
Calcination, sintering and screening

One of Rösler CeramInno's own developments is the SIC/AI2 O3 tile crank which is made from a special compound mass. Since the various bulk materials often make special demands on the kiln furniture, Rösler CeramInno itself has developed and produced various tile cranks. Rösler CeramInno is thus capable of flexibly developing kiln furniture for all of its customers' bulk materials.

Kilns with various firing capacities of up to 4 tonnes of fired finished product per day are available. A wide range of temperature profiles, from 0 to 1700 °C can be set individually in the kilns according to the requirements of the corresponding product.

After clarifying the product-specific requirements, ideal firing curves for the corresponding bulk materials are evaluated together with the customer. The combination of technology, experience and know-how guarantees our customers the best quality and fast availability.

Rösler CeramInno is a specialist for the contract firing of bulk materials and powders for a wide variety of industries. The products refined at Rösler CeramInno using state-of-the-art firing technology find applications in the chemicals industry, and the ceramic industry as well as the automotive industry.



On customer request, protective screening is carried out with a mesh size of up to 60µ prior to order picking of the bulk materials, spray granulates or powders.

Particle size analyzer PSA 1090 from Anton Paar

For D10, D50 and D90 analyzes of the finest calcined powder fractions, the Rösler CeramInno laboratory also offers the possibility of precisely characterizing the powders produced by Rösler in the spray drying process and jet mill process. Incoming goods inspections of raw materials as well as outgoing goods inspections of processed materials are carried out using a particle size analyzer. Of course, laboratory measurements of powder fractions are also offered as a service on behalf of customers.

QS System, test methods and logistics

As a DIN ISO 9001 certified company, Rösler CeramInno guarantees extremely high quality standards as well as complete transparency and accountability at all stages of the production process. Quality parameters (such as eg specific surface measurement BET in m2/g) can be applied on site continuously, quickly and flexibly.

Sampling and quality checks are carried out on an hourly basis by trained specialists directly at the kilns or spray dryers in order to ensure the perfect balance of high hourly output and best product quality.

Rösler CeramInno sees itself as a specialised service provider that focuses on customer requirements. Package types and sizes are specified by the customer individually.

As a full-service provider, Rösler takes care of the complete logistics from procuring the raw materials to the dispatch of the ready-packed barrels, sacks or big bags picked and labelled according to customer standards

Calcination and sintering

Kiln designation/ kiln type	Hea-ting	Max. firing temperature	Kiln length	Size of firing table	Through-put per day	Firing material
Entbinderungs-Ofen (Conveyor kiln)	Electri-city	600 °C	15 m	Usable width 56 cm Usable height 11 cm	2,0 bis 4,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln, loose bulk on a link belt, special kiln for discharging or burning out of organic materials.
SD Kiln (Conveyor kiln)	Electri-city	800 °C	ca. 20 m	Belt width 60 cm Usable height 5 cm	2,0 bis 3,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc
SB Kiln (Conveyor kiln)	Electri-city	900 °C	ca. 20 m	Belt width 60 cm Usable height 10 cm	2,0 bis 3,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc
K Kiln (Conveyor kiln)	Gas	900 °C	37 m	Belt width 160 cm Usable height 15 cm	8,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln, loose bulk on a link belt, special kiln for discharging or burning out of organic materials.
C Kiln (Firing table kiln)	Gas	1.300 °C	20 m	120 x 60 cm Usable height 30 cm	1,0 bis 1,5 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln
H Kiln (Firing table kiln)	Gas	1.300 °C	27 m	120 x 60 cm Usable height 30 cm	1,5 bis 2,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln
M Kiln (Firing table kiln)	Gas	1.350 °C	55 m	160 x 60 cm Usable height 30 cm	2,0 bis 4,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln
S Kiln (Firing table kiln)	Gas	1.400 °C	46 m	160 x 60 cm Usable height 30 cm	2,0 bis 4,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln SIC firing plates as superstructure possible
G Kiln (Firing table kiln)	Gas	1.420 °C	35 m	170 x 80 cm Usable height 30 cm	2,0 bis 4,0 t	Powder, tablets, bulk materials of all kinds, crucibles etc specially produced SIC/Al2 O3 tile cranks as firing aids in the kiln SIC firing plates as superstructure possible
R-Ofen (Roller Kiln)	Gas	1.600 °C	30 m	Usable width 56 cm Usable height 11 cm	2,0 bis 4,0 t	catalyst carrier, battery materials, tailor made spray dried granules
P-Ofen (Plate Pusher Kiln)	Electri-city	1.620 °C	18 m	Usable width 35 cm Usable height 30 cm	1,0 bis 2,0 t	materials, catalyst carriers, battery materials, oxides, pigments, additive

Spray drying

Type	Heating	Throughput	Range of services
Spray dryer	Gas	1,0 - 1,5 t/hour	Grinding in drum mills or with a dissolving whisk (individual slurry rheology) screening analy-ses, grain size distribution, moisture measurement, production of spray granulates

Finest grinding

Typ	Throughput	
Jet mill	Depends on the fineness of grinding About 100kg – 200 kg per hour 1µm Minimum grain size	For battery materials, color pigments, oxides, CIM/MIM suitable ceramic or metallic powders for feedstock production Grinding (dry) of calcined powders for additive manufacturing of ceramic components

The company

Rösler CeramInno is an innovative, medium-sized company that has been operating in Schauberg for over 70 years.

State-of-the-art firing technology, a large machine park and 70 highly motivated and well-qualified employees are the cornerstones of the company.

“Advancement through research” - that is the Rösler philosophy. Awarded the seal „Innovative through Research“ by the Foundation for German Industry, Rösler cooperates closely with universities and research institutions in several joint projects, funded by the Federal Ministry of Education and Research (BMBF).

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RÖSLER CeramInno

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