### ebbecke verfahrenstechnik

YOU MAKE YOUR BRAND – WE MAKE YOUR PRODUCT.

www.evt-ag.de

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### Welcome at

### A. EBBECKE VERFAHRENSTECHNIK AG



Axel Ebbecke Dipl.-Ing., Dipl.-Kfm

Board of Directors Senator of the German Business Senate Senator of the European Economic Senate

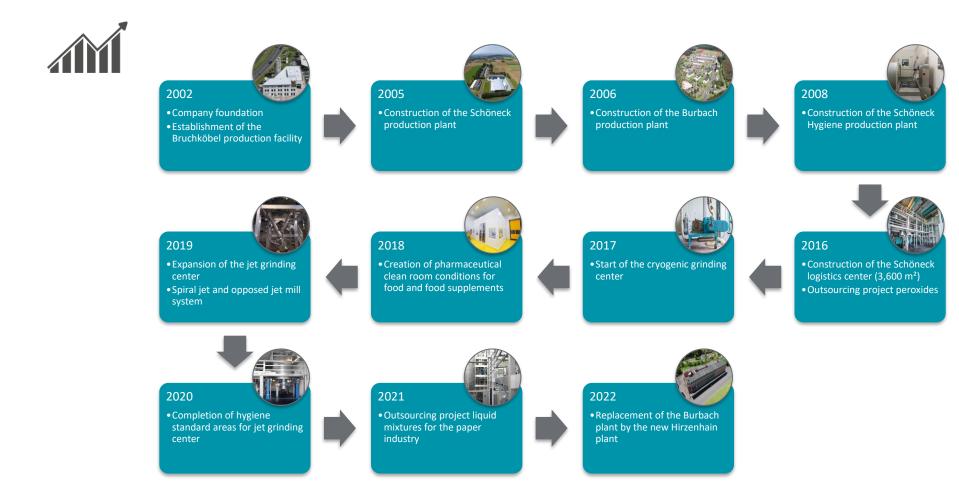
#### Dear customers,

we would like to welcome you to A. Ebbecke Verfahrenstechnik AG - your technical specialist for the realization of process engineering projects as a classical contract manufacturer and strategic partner. With a wide range of machine technology of the entire mechanical process engineering we can offer you complete supply chain projects up to the outsourcing of complete plants. With a wide range of special equipment - most of it developed in-house - we are able to design specific powders for you that will strengthen your competitive position and give you a unique position in the market.

We are happy to discuss your technical requirements with you and to work out individual solutions together with our team of experts. Trust, reliability and the ability to respond to individual requests are what sets us apart. Please contact us even for seemingly small projects. Even small projects develop into large projects over time and we would be more than happy to accompany you in this development process.

With kind regards

Axel Ebbecke Board of Directors



### Locations



### **9** SITE BRUCHKÖBEL

Headquarter and Production: Technical Products and Personal Care PROCESS TECHNOLOGICAL CAPABILITIES:



#### SITE SCHÖNECK

Dispatching and Production: Chemical and Hygiene Products PROCESS TECHNOLOGICAL CAPABILITIES:



#### SITE HIRZENHAIN

Spray-drying Center

PROCESS TECHNOLOGICAL CAPABILITIES:



### Our portfolio of services

Contract Manufacturing





Liquid-Mixing / Dispersions	
Pastillizing	
Laboratory Services	
Logistics	



### CO-Packing according to your demands

Our plants are ready for you - flexible and efficient



#### **OUTGOING PACKAGING UNITS**

SILO TRUCKS | BIG BAG | OCTABINS | METAL DRUMS | FIBER DRUMS | SACKS | CARDBOARD BOXES | EVA-SACKS ETC.

### **SPECIAL PACKAGING UNITS**

LOW-TEMPERATURE MELTING, WATER SOLUBLE EVA-PACKAGING | CANS | TUBULAR BAGS | BOTTLES ETC.



### OUTGOING GOODS PACKAGING

SILO TRUCKS | BIG BAG | OCTABINS | SACKS | CARDBOARD BOXES | FIBER DRUMS | METAL DRUMS ETC.

### FILLING WEIGHT

FROM 0.5 KG TO FULL SILO TRUCK LOADS

### MIXING COATING



### Bulk solids processing with convincing results

Homogeneous mixtures even with difficult products



### **MIXING PLANTS**

TUMBLING MIXING PLANTS | RHÖNRAD MIXING PLANTS | EIRICH MIXERS | DRUM MIXING PLANTS

### MIXING CHAMBER VOLUME

30 LITERS TO 10 M<sup>3</sup> GROSS MIXING CHAMBER VOLUME



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### MATERIALS IN CONTACT WITH THE PRODUCT

ALL MATERIALS IN CONTACT WITH THE PRODUCT IN STAINLESS STEEL, V2A OR HIGHER-GRADE

### DOSING

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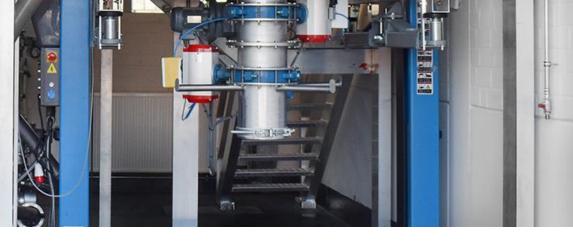
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BY MEANS OF CLOSED DOSING SYSTEMS SUCH AS DOSING SCREWS | VIBRATING CHUTES | SUCTION CONVEYORS | ETC.

### **GRAVIMETRIC WEIGHING**

THE ADDITION OF SOLIDS AND LIQUIDS IS CARRIED OUT BY MEANS OF A GRAVIMETRIC LOAD CELL WEIGHING SYSTEM

### MICRONIZATION GRINDING



### Contract grinding individually solved

Dry micronization in highest quality



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### JET MILLING SYSTEMS

AFG 200 | AFG 400 | ESM 170 | ESM 250 | ESM 450 | ESM 500



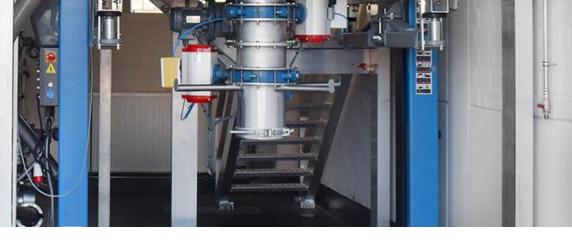
### **GRAIN SIZE** D50 = 1,5 µm up to 4.000 µm





### HYGIENE STANDARDS TECHNICAL STANDARD | PERSONAL CARE | FOOD | DENTAL | MEDICAL DEVICES

### MICRONIZATION GRINDING



### Contract grinding individually solved

Dry micronization in highest quality



### SIFTER MILLS

Hosokawa Mikropul ACM 10 | Hosokawa Alpine GMP



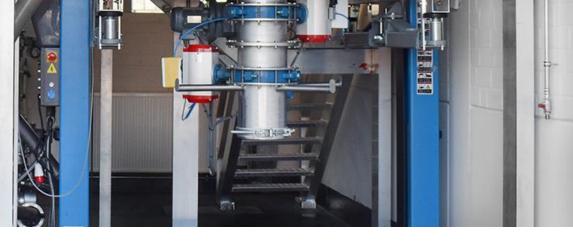
### **BEATER CROSS MILLS** Blower rotor mill | Disc mill for plastics



### **UNIVERSAL MILLS**

Netzsch Condux CUM 300 counter-rotating pin mill | Hosokawa Alpine UPZ 250 pin mill | Hosokawa Alpine UPZ 315 | Hosokawa Alpine UPZ 160 | Pallmann 150 | Netzsch Condux CUM 100 | Hosokawa Alpine CWZ 250 wide chamber mill with pin discs

### MICRONIZATION GRINDING



### Contract grinding individually solved

Dry micronization in highest quality



### HAMMER MILLS

Netzsch Condux CHM 850 | Netzsch Condux CHM 400 | Fitzmill | Ebbecke EFM 200



### CUTTING MILLS Netzsch Condux CSM 400 | Netzsch Condux CSM 300 | Herbold

### CRYOGENIC GRINDING CENTER



### The cryogenic grinding center

Production of modern materials by cryogenic processes



### **CRYOGENIC GRINDING PILOT PLANT**

CRYOGENIC GRINDING FOR SMALL QUANTITIES AND SAMPLE PACKAGES AND FOR TESTING THE PROCESSES TO BE USED.

CONTRACT CRYO-MILLING FOR VOLUMES FROM 100 KG TO 5,000 TONS



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### **CRYOGENIC PROCESS DEVELOPMENT**

WHEN IT COMES TO DEVELOPING YOUR NEW PRODUCTS, OUR EXPERTS ON CRYOGENICS OFFER THEIR TECHNICAL SUPPORT

### **CRYOGENIC CONGEALING**

EFFICIENT PROCESS TRANSFORMING MOLTEN MASS INTO POWDER IN A TEMPERATURE RANGE BETWEEN -30 AND -70 °C



### CRYOGENIC GRINDING CENTER

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### The cryogenic grinding center

Production of modern materials by cryogenic processes



### **CRYOGENIC MILLING CENTER**

Netzsch Condux Cum 300 counter-rotating | Hosokawa Alpine CWZ 250 wide chamber mill with pin discs | Netzsch Condux CSM 300 cutting mill | Netzsch Condux CHM 300 hammer mill | Hosokawa Alpine UPZ 160 GMP | Hosokawa Alpine AFG 400 opposed jet mill | Hosokawa Alpine AFG 200 opposed jet mill | Fitzpatrick Fitzmill

### SIEVING EQUIPMENT

Tumbler Screening Machine Allgaier 1.600 | Eddy Current Screening Plant J. Engelsmann Type Pallafix

### SIEVING FRACTIONATION



### Professional screening according to your requirements

The right screening process for any size and almost any bulk material



### **SCREENING SYSTEMS**

LONG STROKE SCREENING | TUMBLER SCREENING | CENTRIFUGAL SCREENING | VIBRATION SCREENING | VIBRATION/ROTATION SCREENING | ULTRASONIC SCREENING



FRACTIONING

35 µm up to 4.000 µm



### SCREEN CLEANING CAPABILITIES

BALL CLEANING DEVICES | TRIANGULAR BRUSHES | AIR JET | ULTRASONIC TECHNOLOGY



### **PRODUCT TOUCHNING MATERIALS**

ALL PARTS OF THE SCREENING MACHINE THAT COME INTO CONTACT WITH THE PRODUCT ARE MADE FROM STAINLESS STEEL, V2A OR HIGHER CLASSIFICATION

### COMPACTING GRANULATION



### **Customized solutions**

With reliable technology to the required product



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### COMPACTORS

HOSOKAWA BEPEX MS50 | HOSOKAWA BEPEX K200/100 | ALEXANDERWERK WP 250



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### FINE GRAIN SCREENING

LONG-STROKE SCREENING MACHINES WITH EXTENDED SCREENING LENGTH AND THUS HIGH SEPARATION PRECISION, LOW DUST RATIO AND ROUNDED GRANULATES

### GRANULATION

2-STEP GRANULATION WITH PRE-GRANULATOR AND FINE-GRANULATOR WITHIN A CLOSED SYSTEM

### MATERIALS

ALL PRODUCT TOUCHING COMPONENTS MADE OF STAINLESS STEEL, V2A OR HIGHER GRADE

### DRYING SPRAY-DRYING

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### Drying systems for granules and powder

System diversity as the basis for a dry result



### TRAY DRYING

IN DRYING CHAMBERS WITH AUTOMATIC MOISTURE MONITORING, HEAT CIRCULATION AND AUTOMATIC AIR EXCHANGE



### VACUUM DRYING

GENTLE VACUUM DRYING AT 40 MBAR WITHIN THE TEMPERATURE RANGE FROM 60 TO 70  $^{\circ}\mathrm{C}$ 



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### **CONTINUOUS DRYING**

USING DRYING SYSTEMS SUCH AS INFRARED, MICROWAVE OR BAND DRYING

### SPRAY DRYING

BY USING FLEXIBLE SPRAY TOWERS, EVEN CAMPAIGN SIZES FROM 5 TO 20 TONS CAN BE DRIED EFFICIENTLY WITH A HIGH VARIETY OF PRODUCTS

### LIQUIDS DISPERSIONS



### Solutions, suspensions and pasty masses

Liquid and powder mixtures



### **CREATING SUSPENSIONS/ DISPERSIONS**

IN REACTORS | IBCS | DRUMS BY ADDING POWDERS | POWDERS ETC.



#### **TEMPERATURE SENSITIVE PRODUCTS**

HEAT PUMPS AND FILLING LINES FOR FILLING TEMPERATURE SENSITIVE PRODUCTS WITHIN VARIOUS TEMPERATURE RANGES



### **CONTRACT FILLING OF LIQUIDS**

DELIVERY VIA TANKER TRUCKS AND FILLING INTO DRUMS, CANISTERS, CANS AMONGST OTHERS



OUTGOING PACKAGING UNITS IBC | DRUMS | CANISTERS | CANS | ETC.

### PASTILLIZING SCALING





### Molten products in granular form

Dust-free and well-dispensable solid forms

CAPACITY

1 000.8



### **BAND LENGTH** 10 to 20 m



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### DELIVERY CONTAINERS

TANKERS | IBCS | DRUM CONTAINERS



### COOLING

BY MEANS OF COOLING SOLE IN TEMPERATURE RANGES FROM 4 TO 6 °C.



### **TARGET BIN**

Big Bag | Bucket | Barrel | Cardboard | Sacks etc.



### Test and analysis orders

We carry out extensive testing and analysis orders for you



#### **GRAIN SPECTRUM ANALYSIS**

VIA LASER DRY MEASURING CELLS OR LASER WET MEASURING SYSTEMS, MOISTURE MEASURED USING A MOISTURE ANALYZER, KARL-FISCHER-ANALYTICS AND HYDRO-TRACER TO ACHIEVE MINIMAL RESIDUAL MOISTURE



#### **SPECIAL SYSTEMS**

CHEMICAL TITRATIONS | GAS CHROMATOGRAPHY | INFRARED SPECTROMETER | ETC.



### **OTHER PHYSICAL ANALYSES**

BULK DENSITY | COMPACTED DENSITY | TEST SCREENING | AIR JET SCREENING | FLUIDITY | CAKING PROPERTIES | MICROSCOPY



### All-round service for your products

Logistics management



#### **STORAGE CAPACITY**

3.000 PALLETS PARTIALLY AS STORAGE SPACE FOR HAZARDOUS MATERIALS



### SITES

SCHÖNECK NEAR FRANKFURT AM MAIN AND BURBACH NEAR SIEGEN



### OUR SERVICES

STORAGE | CONSIGNMENT | SAMPLE MANAGEMENT AND SAMPLE DISPATCH | FILLING / TRANSFERRING



### LAGERGEBINDE

Siloware | Big Bag | Oktabin | Sack | Fiber Drum | Kanister | Fassware | u.a.

### SPECIALISTS FOR BULK MATERIAL PROCESSING

With a wide range of machine technology of the entire mechanical process technology, we can offer you complete supply chain projects up to the outsourcing of complete plants. With a large number of special plants - to a large extent developed in-house - we are able to design specific powders for you, which will strengthen your competitive position and guarantee you a unique position in the market.

You have the material - we have the know-how: With more than 350 production plants, A. Ebbecke Verfahrenstechnik AG is a cross-industry service provider and problem solver for customers from all over Europe.



#### Raimund Ebbecke

Graduate engineer, company founder and former sales manager of the Engelsmann Group Professional experience: 63 years



#### Günter Dathan

Former salesman of Condux + Hosokawa-Alpine (grinding/ crushing) Professional experience: 44 years



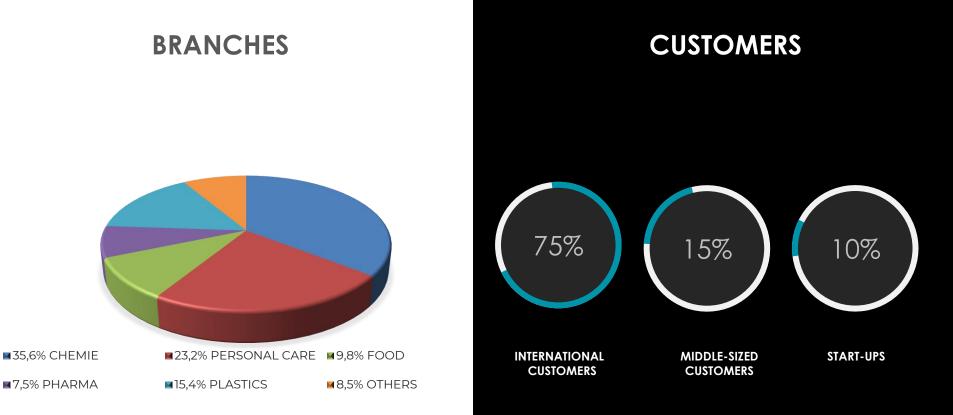
#### Jürgen Wiegand

Qualified chemist and application engineer (ret.) at Evonik Industries (blending/coating) Professional experience: 43 years



#### **Axel Ebbecke**

Dipl.-Ing. Verfahrenstechnik / Dipl.-Kfm. Professional experience: 28 years



# Let's go **green** together!

#### **ENVIRONMENT**

Environmental protection is one of the top corporate objectives at A. Ebbecke Verfahrenstechnik AG. The entire management of the company is unreservedly committed to integrated, sustainable environmental protection that influences all corporate decisions.

The working practice we realize every day has the goal to make Ebbecke Verfahrenstechnik AG Germany's leading contract manufacturer in the field of processing powders and granulates with ultra-modern and at the same time environmentally friendly production facilities. A. Ebbecke Verfahrenstechnik AG has decided to plant a tree for each order on its compensation areas at the Schöneck site. When new tree cuttings are planted and the growth period then develops, a particularly large amount of  $CO_2$  is converted into oxygen.

This is our company's contribution to  $CO_2$ -neutral production and offers you as a customer the opportunity to actively participate in environmental protection in cooperation with us.





### YOUR SPECIALIST IN BULK MATERIAL PROCESSING

A. Ebbecke Verfahrenstechnik AG

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