

ALL TOPICS AT A GLANCE:

- The AVA Newsticker.....
- New AVA sales structure: Sectors instead of regions
- AVA vertical helix dryer Dietary supplements
- Successful commissioning in Taiwan
- Your entry into mixing and drying technology starting from EUR 268.00 /month*
- AVA drying equipment for ion exchangers
- Treatment of construction materials – dry mortar mixes
- AVA supplies recycling technology to Poland
- AVA Continuous mixer for SAPs (super-absorbent polymers)
- AVA vertical systems when treating highly active substances
- Vertical cylinder dryer for insecticides
- AVA mixing technology for flue ash preparation
- Hot dust - no problem

The AVA News-Ticker....

Welcome to Xavier Pin: We are very happy to welcome Xavier Pin, who, with his company XP3S, is our representative for France since March. We wish him (and ourselves) much success and are looking forward to a promising future.

Xavier Pin's contact details are:



XP3S
Xavier PIN
10 Allée des Lilas
F-69110 Sainte Foy lès Lyon
Phone: +33(0)668103315
Fax: +33 (0)4 83 07 60 35
» xavier.pin@xp3s.com

Congratulations! Rebecca Carroll, best known as our specialist in the field of transport, is now celebrating ten years at the company. Rebecca Carroll finished her apprenticeship and has been a very important lynchpin for our company for years. We would like to thank her for the long-term cooperation and look forward to many more AVA years together.



Rebecca Carroll (left) and Dagmar Huep

Das AVA Technical Centre has grown: As one of the few providers (maybe the only provider?) we are able to present the whole range of mixing and drying technology in our Technical Centre.

Horizontal and vertical mixers and dryers as well as new ring layer dryers, in laboratory size and for small scale production, with different scoops and spiral shapes – a design suitable for every application. We find the best technical solution for your product!



And more congratulations: the most successful sales office in 2009 was once again our long term sales partner in Austria **'Industrievertretungen Reinhard Bog'**. We would like to say thank you for the trustworthy, cooperative and successful work together.



Reinhard Bog

Growth of the team: From the middle of the year, another process technology engineer and a sales engineer will be added to the AVA team. We are already looking forward to the support.

New AVA sales structure: sectors instead of regions

The bandwidth of different applications for which AVA technology can provide a successful solution is becoming more diverse and the challenges are becoming more complex.

In order to gather together AVA's existing expertise and further intensify this, our sales operation will be restructured from a purely regional basis to a sector-based focus.

As a result of gathering together our expertise in individual business units, we can better advise our customers in order to successfully provide our individual solutions in the field of mixing and drying technology. The following business units will be created, firstly only for Germany and Austria, then globally in the next stage:



Business Unit 1
Contact **Silver Anklin**

Pharmaceutical
Food-feed
Metallurgy



Business Unit 2
Contact **Stefan Dengler**

Renewable energy sources
Power stations
Steelworks and foundries



Business Unit 3
Contact **Frank Bessner**

Chemistry
Plastics and elastomers
Cellulose



Business Unit 4
Contact **Jan Wankerl**

Construction materials
Environmental technology
After-sales

In addition to the actual sales figures, each business unit will have the objective of gradually expanding AVA sector expertise. This includes creating sector-specific presentations and flyers as well as expanding strategic partnerships and cooperation.

AVA vertical helix dryer for dietary supplements



A dryer project for a large manufacturer of dietary supplements was concluded very recently. Magnesium citrate is dried. With an initial moisture of 40%, with 26% bound as crystal water, a relatively large amount of energy, i.e. a high drying temperature is required to remove the water. The GMP facility consists of two HVV-VT1600 cone dryers as well as a vacuum and condensation system with heat exchanger and condensation system and fluid ring vacuum pump. The dryers are heated using a half-tube with 16 bar of pressure and a heated mixer, through which a pump circulates pressurised water. Notwithstanding the increase of heat transfer pressure, the heated mixer stops the product from sticking to its surface.

The batch is processed for approximately ten hours, of which one hour is required for filling and emptying. The equipment has a daily capacity of approximately 2000 kg or 3000 litres of dry product (83kg/h).

A new application for AVA and once again a bit 'more' than just mixing and drying.

Successful commissioning in Taiwan



On 22 February 2010 we had the special honour of taking part in the impressive inauguration of a new production facility for the modification of methyl cellulose in Taiwan. AVA was invited, in its capacity as the main supplier, supplying a total of four dryers and two coolers of 2,500 litres respectively. Helmut Huep and Frank Bessner were on site to take part in the inauguration ceremony and the subsequent site tour.

After a total of two years taken to implement it, the result is more than satisfactory for the people involved. In this case, before the project was planned, there were also tests carried out so that the outmoded cone orbital spiral principle could be switched over to the original AVA spiral system.

Your entry into mixing and drying technology from EUR 268.00 / month*



New! Now available through leasing!

The trend towards small, flexible mixers, dryers and reactors for project development and small batches continues unabated. Regardless of whether it is a research institute or university, a development department of a company producing chemicals, foodstuffs or pharmaceuticals, or a start-up with innovative products, it not always possible to obtain finances and also not sensible from a risk point of view to immediately invest in a large production machine. AVA consistently allows for this development and is continuing to intensively develop and optimise its small batch devices.

AVA laboratory devices are primarily used for powder and suspension mixes, for the drying and reaction of powders and for granulation. The customer receives a machine optimised for their application. In doing so, he can choose between numerous options such as double cladding or cutter heads, a driveable chassis or an integrated thermal oil device to make the devices into a complete package unit.

In order to tailor an excellent complete package for the customer, AVA has managed, through modularisation, consistent process orientation and optimisation in the whole value-added chain, to both reduce the delivery times of devices as well as improving the price/performance ratio.

The range of products supplied is topped off by AVA's usual high quality as well as fast and flexible sales and after-sales service.

Visit us at Powtech and find out for yourself, look at our website, www.labormischer.com, call us or send us an email and we will contact you.

* NEW! Machine leasing now available! For example the AVA HTL 10 laboratory mixer, with a 10% down payment and a duration of 36 months (offer is subject to credit status and approval by the leasing company).

AVA drying equipment for ion exchangers



Ion exchangers have diverse applications in the chemical industry. The areas of application range from decalcification or hardening of water or hydrous solutions through to use as catalysers for various syntheses. AVA develops special, fully-automated production facilities for this range of process applications, constructed and supplied many times.

The heart of these devices is a vertical AVA cone dryer. This can also be equipped with an exhaust filter, condensation and vacuum station, climate control device and fully automatic control. In addition to the actual process safety and availability of equipment, ease of use and thus reliable equipment productivity was already focussed on in the development stages.

The AVA cone dryer is therefore equipped with a lifting column in order to ensure that it can be inspected and cleaned as well as possible.

Treatment of construction material Dry mortar mixes



A high degree of homogeneity and large throughput amounts with frequent changes of product as well as a constant mixing output that can be recreated 100% characterises the most important requirements that the construction industry places on mixing technology. The challenge for the AVA processing and mixing technology is thus in the requirement to have constant homogeneity of the various core sizes and ranges in batch times (filling/mixing/emptying) of 2 – 5 minutes.

In accordance with the high requirements, AVA batch mixers are successfully used for the manufacture of various mortars, grouts, adhesives and other construction materials. In doing so, the production process can be set up so flexibly that the required mixing result can already be achieved with 25% of the nominal filling. If additional small materials are to be dispersed, high-speed mixing tools stop the formation of agglomerates in the side of the mixing drums. Furthermore, the side mixing drums support the mixing of additional chemicals, cellulose or additives that build up.

The AVA developers have achieved emptying of the batch mixer with virtually no residue (> 99.5%) and a shortening of the emptying times by using a special shape and design of the emptying flaps.

AVA supplies recycling technology to Poland



AVA is providing an HTC horizontal batch mixer for a fermentation facility in Poland and therefore providing the most important components for the process of transforming organic household refuse into compost.

The organic waste is first ground and sieved. It nevertheless contains residue of glass, stones, metals and other materials. For this reason, the customer decided to have a subsequent mixing process for an AVA mixer in "heavy duty" specification, which is characterised by its very robust design which wears little and is very resistant. In addition to the main product, polymer solutions are also mixed in, which have a favourable effect on subsequent fermentation.

Due to the high intensity of mixing, a perfectly homogenised end product is achieved, which can be pumped, and can thus be pumped into a silo for subsequent biogas manufacture.

AVA continuous mixer for SAPs (super-absorbent polymers)

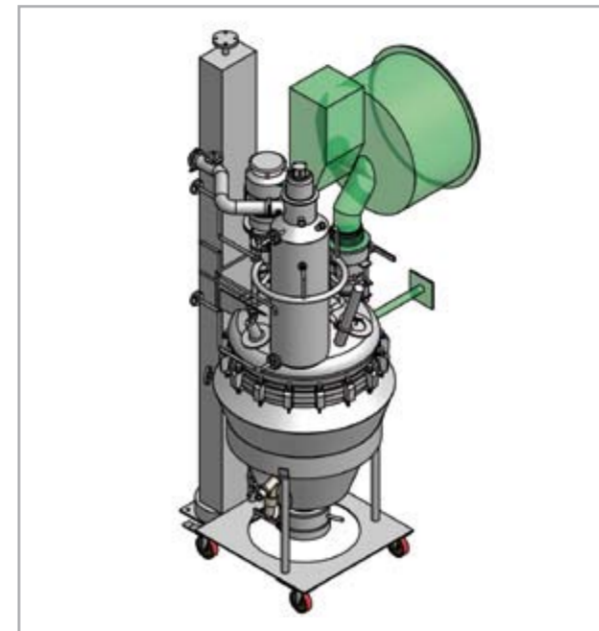


Superabsorbers (SAPs, super-absorbent polymers) are plastics that can absorb up to 1000 times their own weight in fluids. The main area where these are used is baby nappies as well as feminine hygiene products and incontinence materials. The task for AVA here was to improve the existing SAP product quality, to improve the throughput of the complete equipment and to carry out several process stages in one machine.

As a result of switching production from batch operation to continuous operation in an AVA HTK mixer, the throughput capacity of the whole equipment was increased by over 50%. The turbulent mixing with the adjustable AVA mixing device makes it possible to add and disperse liquid additives in the AVA mixer. The upstream process stage of wetting the SAP powder was saved in this way.

As a result of this expansion to the capacity of the existing facilities, production costs could be reduced considerably without purchasing a complete new set of production technology.

AVA vertical systems for handling highly active substances



AVA cone mixers and dryers already meet the requirements for good containment in their basic specification. The containers are enclosed, the mixing shaft position and sealing is outside of the area where the product is. The customer can select from different GMP-compliant, mechanical seals with minimal redundant space.

Accessories, be they pressure absorbers, temperature gauges, gas and CIP nozzles, samplers, etc. can be created and installed in such a way so that they are connected to the wall and free of dead space. High quality flaps or ball segment valves are also free of dead space and can be cleaned well without having to be taken out.

After mixing the powder in an AVA cone mixer with the original spiral system, the product is discharged into the transport containers in a similar manner to how it is filled and then used for filling in the next stage of processing. With the same system and one of the dryers mounted on a rotating lifting column, the products can be discharged, dried and filled into transport containers from a centrifuge under containment conditions.

AVA reacts flexibly to technical process-related matters and customer requirements and works out a tailor made solution together with each customer.

Vertical cylinder dryer for insecticides



An AVA cylinder dryer has just been commissioned for a large manufacturer of insecticides and agricultural pesticides. In addition to the core area of vertical cone dryers, cylindrical vertical dryers are of particular interest to our customers if the construction height is limited.

The AVA cylinder dryer with a heated mixer unit that was provided ensures optimum evaporation of the solvent contained in the filter cake. This AVA dryer is equipped with special mechanical seals as well as an AVA cutter head. This ensures that the agglomerates that are formed during the drying phase are separated at the end of drying.

By using the original AVA dual spiral, a very quick and reliable drying process is achieved.

AVA mixing technology for flue ash preparation



Directives, laws and regulations, national and European norms set out required quality standards for flue ash and regulate their use. The knowledge of technical standards that has been gained here in relation to technical and economic advantages has now become an international standard. Constructions that demonstrate the quality improvements found in concrete with a high proportion of flue ash are the Eurotunnel and the bridge over the Great Belt in the Baltic Sea, one of the largest worldwide. Both are exposed to aggressive salt water. The construction companies have to guarantee the clients a service life of 120 to 100 years. Flue ash stops salt water corroding the steel reinforcement in concrete.

A precise mix of flue ash and construction components is required to adhere to the processing norms. For 20 years, AVA has focussed on the production of mixing equipment for diverse tasks in this sector. Our first mixer for flue ash processing has been operating for two decades without problems in a large power station in the Ruhr area. Its role is to mix a substance for flue ash with a deviation tolerance of +/- 1%!

Hundreds of mixers with our quality standard now work in coal-fired power stations, at cement manufacturers and construction companies in numerous countries around the world.

Hot dust - no problem



AVA is also known as a supplier of complete process solutions related to the core processes of mixing, drying and reacting. In real terms, this means that AVA offers its customers innovative and flexible solutions and thus distinguishes itself from traditional mechanical engineering companies. An example of this is the implementation of a mixing and cooling facility to cool hot dusts for a customer in Northern Europe. The calcareous dusts are cooled from a temperature of over 300°C to a temperature below 100°C and moistened by adding water. The steams that are formed as a result are deposited into a special vapour washer and condensed. Due to the high amount of energy applied and the material that it is applied to being very hot, a closed process could not be implemented with the systems available on the market.

The AVA process technology engineers thus developed a multi-stage washing and cooling process, the components of which are supplied to AVA's end customers as complete package units and are put into operation by AVA there. The core of this facility is the AVA HTK moisture mixer, which is highly regarded on the market due to its reliability and the fact that only a low amount of maintenance is required.