

BEST DEWATERING, DRYING & CONDITIONING TECHNOLOGY FOR THE VEGETABLE OIL INDUSTRY

VETTERTEC SCREW PRESS FOR WET CAKE DEWATERING

VetterTec screw presses are used to pre-dewater wet cakes. This will minimise the energy demand in the dryer, transport cost and other investments for the downstream equipment's, significantly. The wet cake is being fed into the pressing screw through a feed hopper; the screw inside the press conveys the wet cake into the compression area, where the product is further compressed during onward transportation.



The pressure is achieved by reducing the volume of the wet cake and by mechanical force towards the screen at the same time. The press water escapes through the screen cages. At the end of the pressing section, the material falls through a discharge hopper thus leaving the press.

VETTERTEC SPRAY DRYER FOR PROTEINS

VetterTec spray dryers are converting a liquid phase into a high quality powder with defined particle sizes. The spray dryers are built in hygienic



design so that the powder can be utilized for human consumption. Our spray dryers are used to convert liquid isolated protein stream, for example soya protein isolate, sunflower protein and other liquefied streams.

A number of different designs with integral fluid bed, external fluid bed, different air outlets, different chambers, etc. are available to provide the desired particle size, even agglomerated, and moisture content of the final product. For protein stream in form of a cake or paste the **VETTERTEC FLASH DRYER** can be used.

VETTERTEC TUBE BUNDLE DRYER FOR SOYA- AND SUNFLOWER MEAL AS WELL AS CONDITIONING

The tube bundle dryer is a combined contact and convection dryer and using steam for the drying process. This drying is indirect, very gentle to the product and safe in terms of explosion and fires. At the same time, the amount of air in the vapour is very low and potentially a high percentage of the drying energy can be recovered by re-use in boundary processes (energy integration).



DRIVEN BY COMPETENCE

VetterTec has more than 90 years of specialization and experience in evaporation, drying and dewatering equipment for the starch, ethanol/alcohol, brewery, environmental, chemical and food industries.

- ✓ VetterTec has **experience** with the **majority of dryer and evaporator types** and can select the optimum technology from self-owned technologies without any preference.
- ✓ VetterTec has a **broad product expertise** in a wide range of industries.
- ✓ VetterTec solutions combine **energy efficiency** with the highest product quality.

- ✓ VetterTec can offer optimised, **integrated drying solutions** with best energy recovery.
- ✓ VetterTec supplies **reliable and proven technologies** for a highly secured capital investment and best ROI.
- ✓ VetterTec operates worldwide and has **experience in many other industries** such as
 - ✓ Corn Wet Milling Industries
 - ✓ Wheat Starch Industries
 - ✓ Fuel Ethanol Industries
 - ✓ Alcohol Industries
 - ✓ Brewery Industries
 - ✓ Chemical Industries
 - ✓ Food Industries



ACHIEVING SUSTAINABLE SUCCESS

PARTS AND SERVICES

Our commitment doesn't stop after successful production startup. VetterTec is offering to continue the close relationship with the customer to ensure an optimized life cycle in terms of cost and performance.

- ✓ Plant Performance Optimization
- ✓ Troubleshooting
- ✓ Training and Seminars
- ✓ Plant Retrofitting
- ✓ Preventive Maintenance
- ✓ Spare Part Service/After Sales

CONTACT US...

...and find out how we can help you achieve more!

vettertec.com

Head office (Germany)
VetterTec GmbH
Tel. +49 561 50019-0
info@vettertec.com

Germany
VetterTec GmbH
Tel. +49 7121 9017-0
werco@vettertec.com

North America
VetterTec Inc
Tel. +1 450 505 6111
info.na@vettertec.com

United Kingdom
VetterTec Ltd
Tel. +44 1372 365900
info.uk@vettertec.com

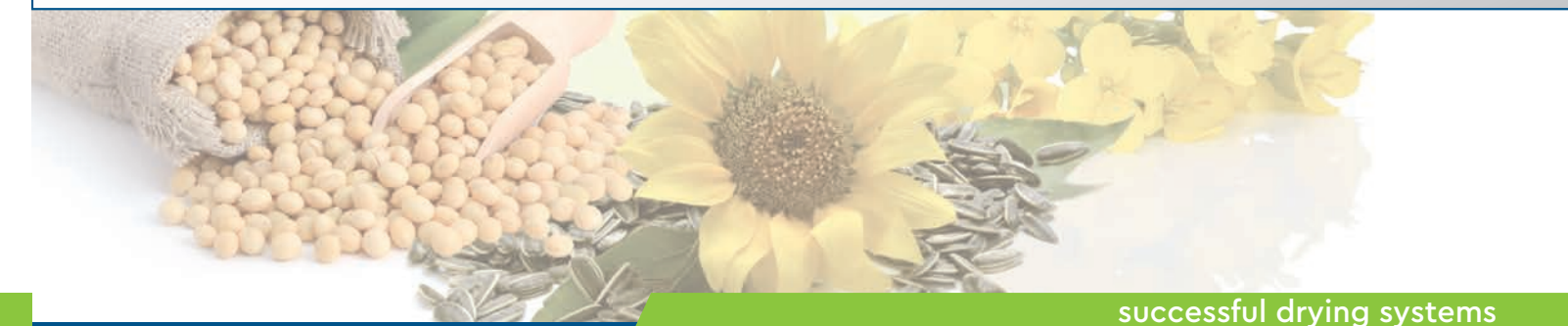
P. R. China
VetterTec China Co. Ltd.
Tel. +86 13 901800861
info.cn@vettertec.com

EXPECT MORE – CUSTOMIZED DRYING SOLUTIONS

VEGETABLE OIL INDUSTRIES



Perfectly adapted to your individual requirements



successful drying systems

PROVEN SYSTEMS

Based on our broad product portfolio, we are able to integrate or combine these technologies in order to serve single point responsibility and optimised solutions in terms of optimal product quality and minimised energy consumption.

All our systems will be designed individually, so feel free to contact our experts.

VEGETABLE OIL INDUSTRY

Vegetable oil is utilised as inedible and edible oil, in both it plays a major role. In the inedible use for example as additives for perfumes, paints, shampoos. In the edible to add flavour or texture or to heat and cook food.

Vegetable oil is obtained by processing, respectively extraction of the oil from soya beans, rapeseeds, olives, sunflower seeds and other soft oil seeds. Depending on the seed some oil extraction processes also creating **side stream with a high protein content**. This side stream can be used for animal as well as for human diets.

VetterTec technology is focused on the processing of rapeseed, sunflower seeds, soya and olives as the source for vegetable oil. We are supplying reliable quality equipment for the following applications:

- ✓ Mechanical dewatering of wet cakes (in front of the dryer)
- ✓ Drying of soya and sunflower meal (after the toaster, by indirect heated tube bundle dryers with steam)
- ✓ Conditioning of soft oil seeds (by indirect heated conditioners with steam)
- ✓ Desolventizing – removing of alcohol, out of a wet cake
- ✓ Drying of isolated proteins, e.g. SPI (Soya Protein Isolate) as liquid stream (by spray dryers)
- ✓ Drying of protein streams, e.g. sunflower protein in form of a cake or paste (by ring and flash dryers)

With our long and successful track record as supplier of thermal conditioning equipment to the global vegetable oil extraction industry we are able to act as a strategic development partner and prepared to adopt our technology to new challenges in these industries.

“A LARGE NUMBER OF HIGHLY EFFICIENT, PROVEN AND RELIABLE INSTALLATIONS IN MANY WET PROCESSING PLANTS ARE OPERATING AROUND THE WORLD.”

VETTERTEC CONDITIONER



- ✓ Indirect heating
- ✓ Gentle treatment
- ✓ Integrated filter
- ✓ Energy recovery

VETTERTEC MEAL DRYER



- ✓ Indirect heating
- ✓ Best meal quality
- ✓ Specific design
- ✓ Energy recovery

VETTERTEC SPRAY DRYER



- ✓ Low powder temperature drying
- ✓ Controlled particle size
- ✓ Centrifugal and nozzle atomisers
- ✓ Internal and external fluid beds

VETTERTEC RING AND FLASH DRYER



- ✓ Simple economic design
- ✓ Shortest residence time
- ✓ Small footprint
- ✓ Four different designs available

VETTERTEC SCREW PRESS



- ✓ Highest dewatering efficiency
- ✓ Gas-tight version available
- ✓ Precise and strong machined
- ✓ Robust design

VETTERTEC DESOLVENTIZER



- ✓ Gas-tight
- ✓ Minimized residual alcohol
- ✓ High efficient

SOYA PROTEIN ISOLATE SUNFLOWER MEAL SOYA MEAL BROKEN SOYA BEANS

VETTERTEC ADVANTAGE

What you get:

- ✓ All technologies are group designed and manufactured
- ✓ Best technology well selected for your application
- ✓ Highly reliable systems with a long life expectancy
- ✓ High thermal efficiency, optional with heat recovery
- ✓ Optimised and integrated drying processes, including air emission reduction and control
- ✓ Cost effective solutions

BEST DEWATERING AND DRYING TECHNOLOGY

For the Vegetable Oil Industries VetterTec offers the complete range of dryers comprising:

VETTERTEC DESOLVENTIZER

The dryer design is a so called gas-tight tube bundle dryer; means the drying takes place in an atmosphere without oxygen (air). Its working principle is a combination of contact drying and convection drying. The heating is indirect, means the product inside the dryer is not get in contact with the heating medium, here steam.

