

BELT DRYER

FOR BULK MATERIALS -TYPE KBD



BELT DRYER

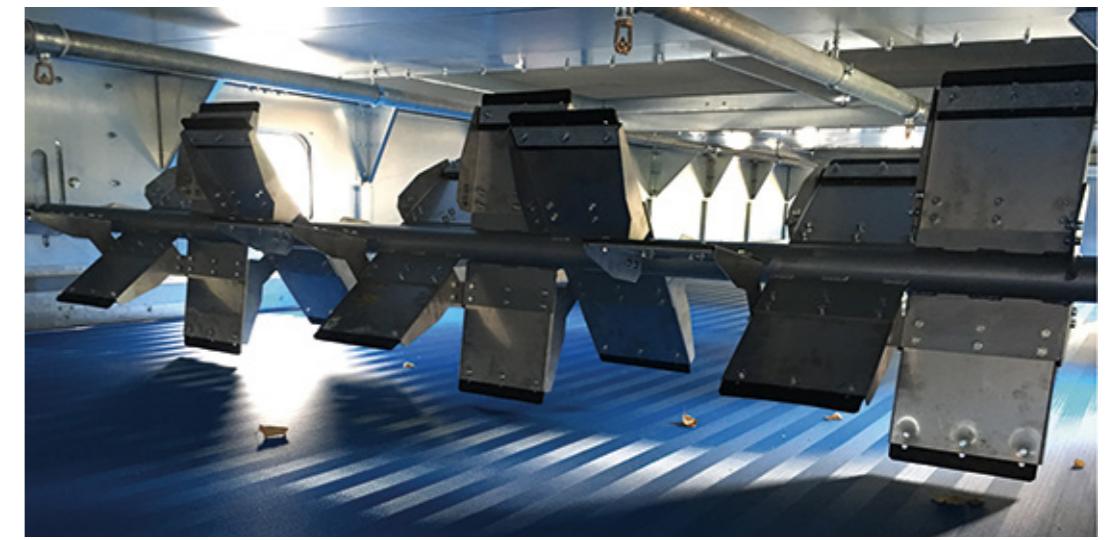
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There are many different materials that need to be dried so they can be further processed and utilized. Some require specific handling during the drying process, others require tightly regulated parameters of moisture and temperature of the drying process and the value of others may be increased with minimal cost and by using waste heat only. The KATRES LOW-TEMPERATURE BELT DRYER can offer such parameters.

LOW-TEMPERATURE BELT DRYER ENHANCES YOUR PRODUCTS VALUE

*The reason that a belt dryer makes a great investment,
is its ability to make maximum use of heat to dry various materials.*





Materials to be processed in belt dryers

- materials with a high content of initial moisture such as bark or wood chips for energy-related purposes
- harvested cereals or cossettes for the production of animal feed
- wood mass for the production of pellets
- fruit, vegetables and other products for the food industry
- crushed plastics, municipal waste, including sewage sludge which need to be dried in order to burn them efficiently and to dispose them in an environmentally-friendly way.

BELT DRYER CHARACTERISTICS

A belt dryer is an excellent technological device that can use heat efficiently. The heat is used for drying various bulk materials.

Drying in the low-temperature belt dryer happens between 40°C and 120°C. The transport of the material into the dryer and out and also the whole drying process are controlled by fully-automatic regulation. This ensures the efficient use of energy and maximum production while observing the required properties and the final moisture of course.

All parts of the dryer are designed and made with regard to the requirement of corrosion resistance and long life in harsh environments. The dryer can be installed outdoors. The minimum necessary maintenance can be performed without the need to stop the operation of the dryer.



The benefits of investing in a low-temperature belt dryer

- You will get good quality fuel with reduced and uniform content of moisture. This will be a benefit to the high performance of your boiler, low emissions and its lifespan.
- The belt dryer will not allow particles of dust to escape into the air thanks to its design and without any need to install additional filters.
- Minimum of noise is also guaranteed. Therefore, the belt dryer can run 24/7, in winter and summer, day and night.
- Low temperature heat which is often no longer of any use at the place of its generation can be used as a source of heating. It is a significant advantage in both views – economic as well as environmental.
- The whole operation of the dryer is controlled by an automatic control system that also ensures fire safety without the need for the permanent presence of an operator.
- The operation of the dryer can be controlled remotely.

IT IS POSSIBLE TO DRY CONTINUOUSLY WITH A BELT DRYER

KATRES belt dryers help you to enhance the value of your production with minimal cost using heat utilization technology.

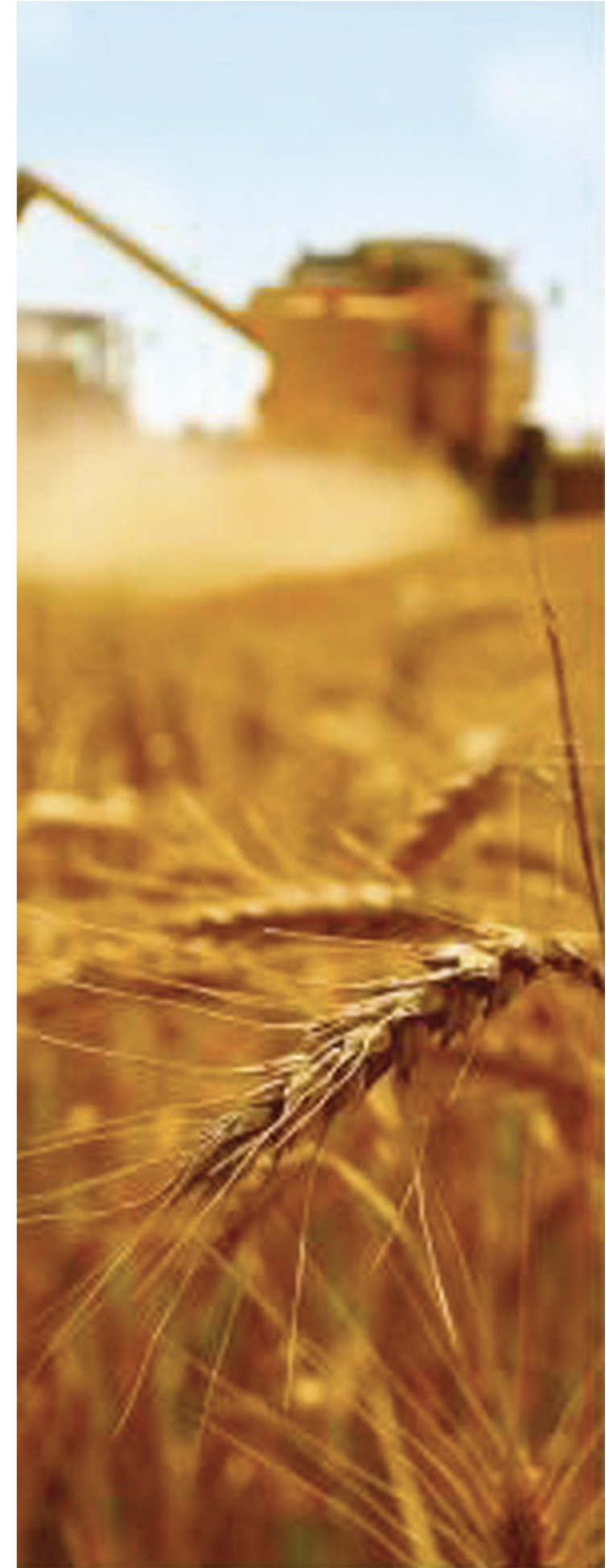
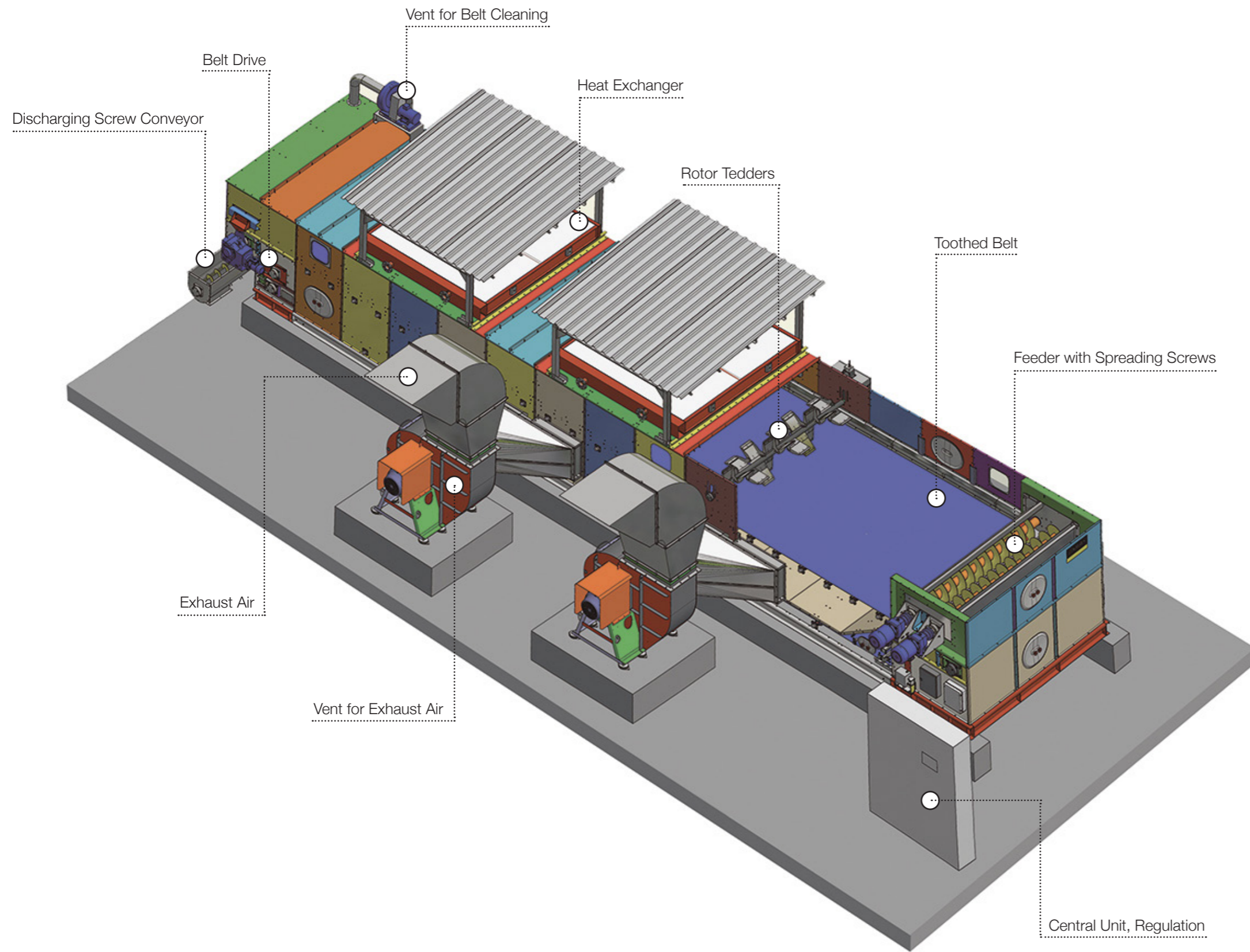


COVER

Assembled Steel Structure

The structure of the dryer is designed with regard to its long life. The materials used include stainless steel, aluminium and galvanised steel which are corrosion-resistant for a long time. With minimum operational costs and maintenance requirements and without the requirements for additional roofing, it is possible for the dryer to stand outside. Assembly is fast thanks to the modular system. It is also possible to increase the capacity of the dryer production by building other modules if needed.

SCHEME OF BELT DRYER



SAFETY COMPONENTS

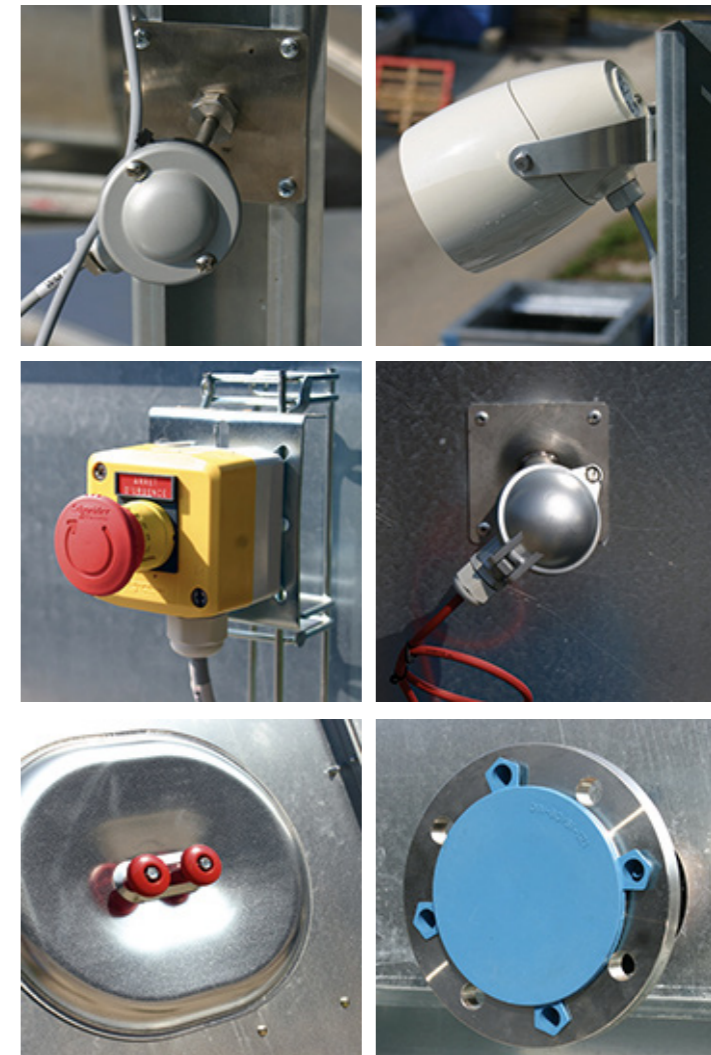
The operation of the dryer is constantly under control

The dryer is ready to work on a continuous basis without the permanent presence of an operator. It is protected against fire with a certified control unit. Safety is ensured by an independent battery power supply and separate water delivery for fire extinction.



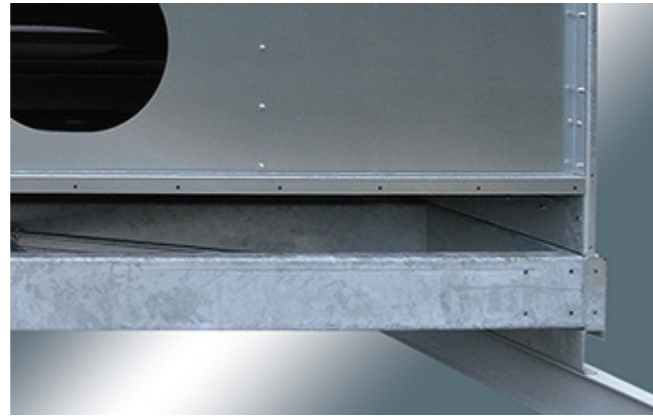
SAFETY FIRST

The safety of the operation is maintained by independent fire-fighting equipment and the temperature, moisture and movement sensors.



Supporting Frame

A very solid structure is a fundamental part of the dryer. It is usually built on a concrete foundation. It is made of hot-dip galvanised steel. It allows quick assembly and also any extension or disassembly of the dryer.



Rotor Tedders

The material is turned repeatedly when passing through the drying zone on the belt and it is homogenised. Undesirable clumps are divided. This ensures even drying. The height of the tedder above the belt is continuously adjustable or it is possible to disable the tedder.



Feeding

The material enters the dryer through the feeding part. Two conveyor screws put layers of the material on the belt. The height of the material that is being dried on the belt is continuously adjustable between 60 and 170 mm. The quantity of the supplied material is continuously and automatically regulated by the controlling system.

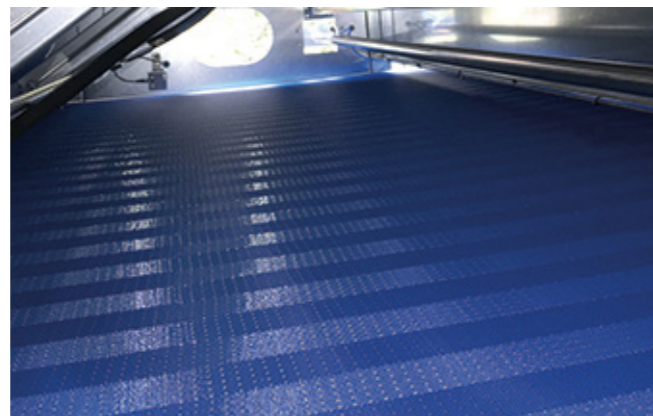


Heat Exchangers

The heat that comes to the dryer is transmitted through the heat exchangers. They are high capacity heat exchangers, their tubes are made of copper and the plates are made of aluminium. They are designed according to the individual customer requirements and the needs of the material.

Toothed Belt

A very important part of the dryer is the toothed belt. The material, which is evenly spread in layers on the belt, goes through the dryer. Heated air from the exchangers passes through the material and the belt which removes the moisture. The belt prevents dust particles from escaping into the air.



Air Vents

The flow of drying air is provided by high-performance vents. Air from the outside is sucked through the heat exchangers. This warms it and then the heated air passes through the material on the belt and after the saturation of moisture, it leaves the dryer.



Belt Drive

The quality and accuracy of the required drying determines the speed of the belt going through the drying space. Using a frequency converter, it is possible to adjust the speed. The optimal rate can be achieved by using the transmission unit and the speed is controlled by the information from the controlling system.



Exhaust Air

Air is saturated after passing through the dried material. The heat was economically used for water evaporation. The moist air is vented outside from the dryer by an air pipe line.

Discharging Conveyor

After drying, the material falls at the end of the dryer from the belt into the chute and is raked out of the dryer by the screw conveyor. The continuous measurement of final moisture content takes place here. Then, the dried product is transported for further processing.



Cleaning with Air

The belt is infinite and operates continuously. It is regularly blown off and cleaned with the air pressure created by a small vent. This is very important for maximum drying performance and for achieving high efficiency throughout the drying process.



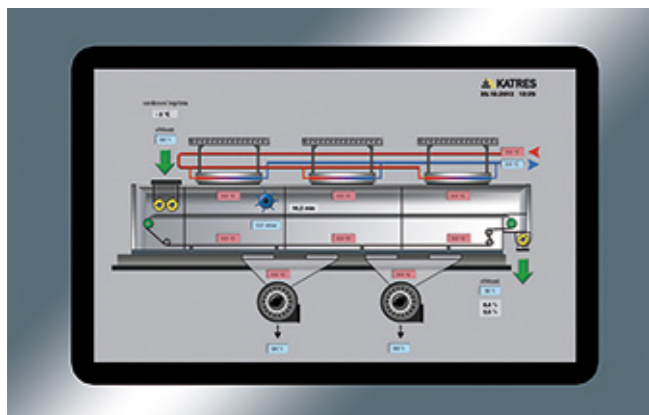
Central Control Unit

The dryer is equipped with complete wiring including a switchboard. The frequency converters and also a touch control panel for controlling the dryer are found here. The equipment will be customized for you with a full guarantee.



Touch Control Panel

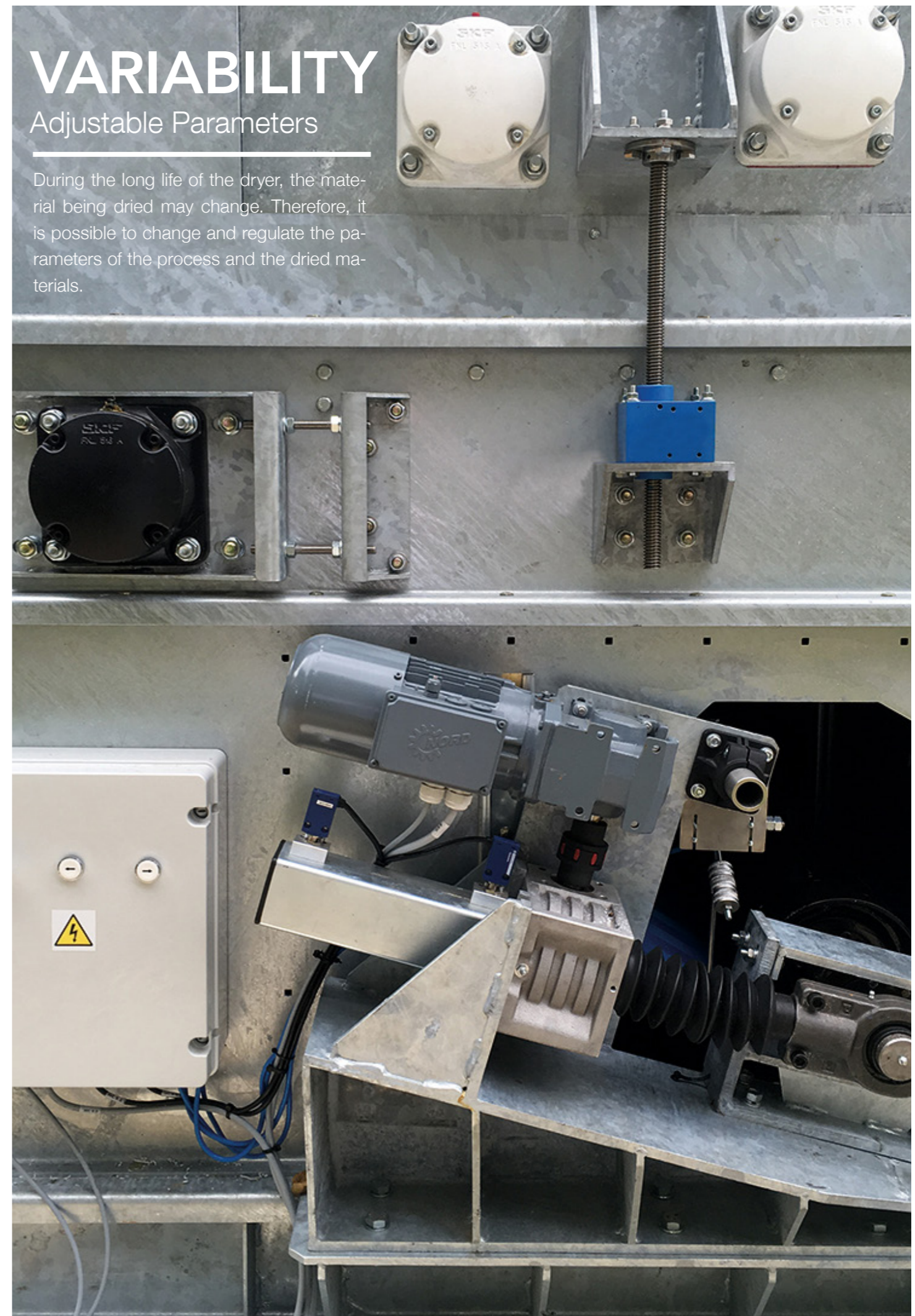
All data can be tracked and the parameters of the drying regime can be changed on the control panel. Since the operation of the dryer does not require the permanent presence of an operator, it is possible to check the parameters of the dryer remotely.



VARIABILITY

Adjustable Parameters

During the long life of the dryer, the material being dried may change. Therefore, it is possible to change and regulate the parameters of the process and the dried materials.



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www.katres.cz



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