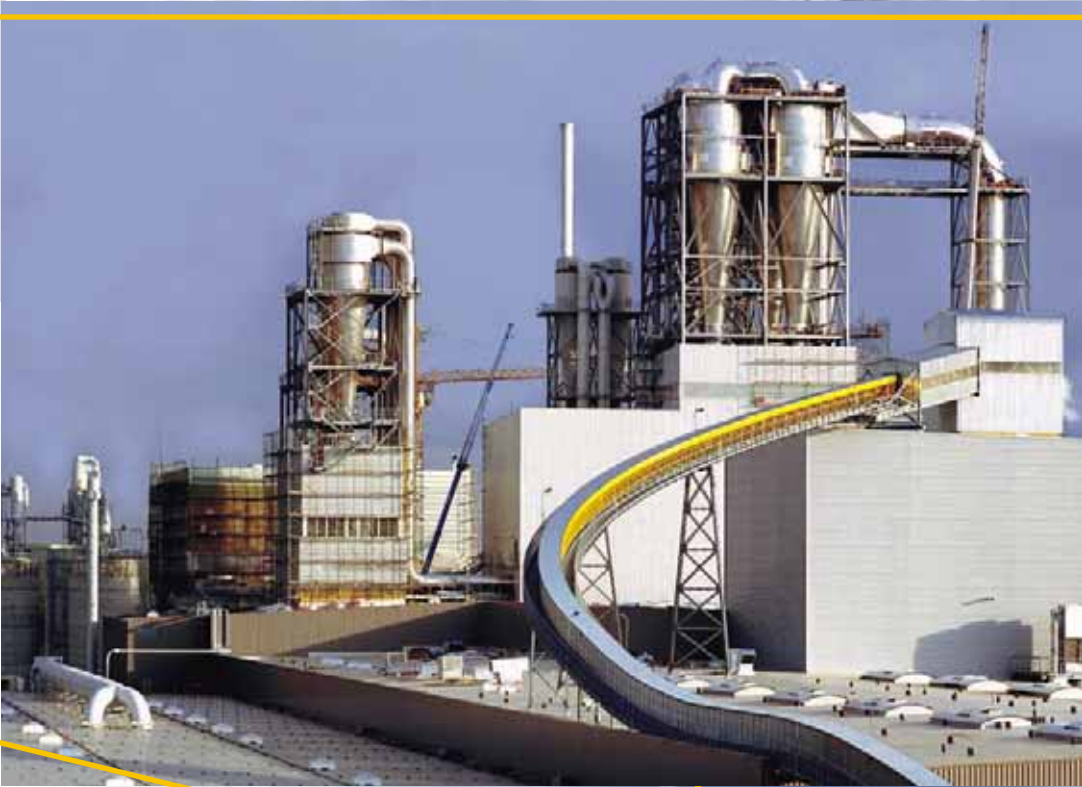


# Flash Tube Dryers



# Fibre Dryers with and without air circulation



FT Single stage fibre dryer

**Drying of wood fibers for the MDF and HDF industry:**

Wet material is injected via a blow-line into the dryer, dried to the desired moisture content and pneumatically conveyed through the dryer tube. High performance cyclones separate the gas stream from the fibres, which are discharged via rotary valves. Exhaust gas is either vented into atmosphere or to a secondary dedusting system. Part of the gas can be recirculated, if the dryer is heated by gas of high temperature.

**Capacity:**

- Up to 50 t/h (b.d.) mechanical throughput

**Technical characteristics:**

- Low dryer inlet temperature (dependent on the type of material and moisture content)
- Adjustment of dwell time dependent on the type of material
- High throughput
- Low mechanical scale of installation
- High standard of operating safety and reliability
- The amount of gas recirculated is infinitely variable
- Approximately 25% of thermal energy saving in installations with recirculation

**Construction characteristics:**

- Material input and resination via blow-line
- Adjustable final moisture related to either blow-line or mechanical blending
- Single dryer tube

**Energy sources:**

- Indirect heating using heat exchangers with steam or thermal oil for primary energy transmission
- Direct heating with dust, gas, light or heavy oil (for recirculation)
- Hot gases from green energy and waste combustion (grate firing systems)
- Exhaust gases from gas turbines and/or diesel engines for electric energy production
- Exhaust gases from thermal oil boiler

**Dust collection:**

- High-efficiency cyclones
- Wet electrostatic precipitators (WESP)
- Recuperative thermal oxidisers (RTO)

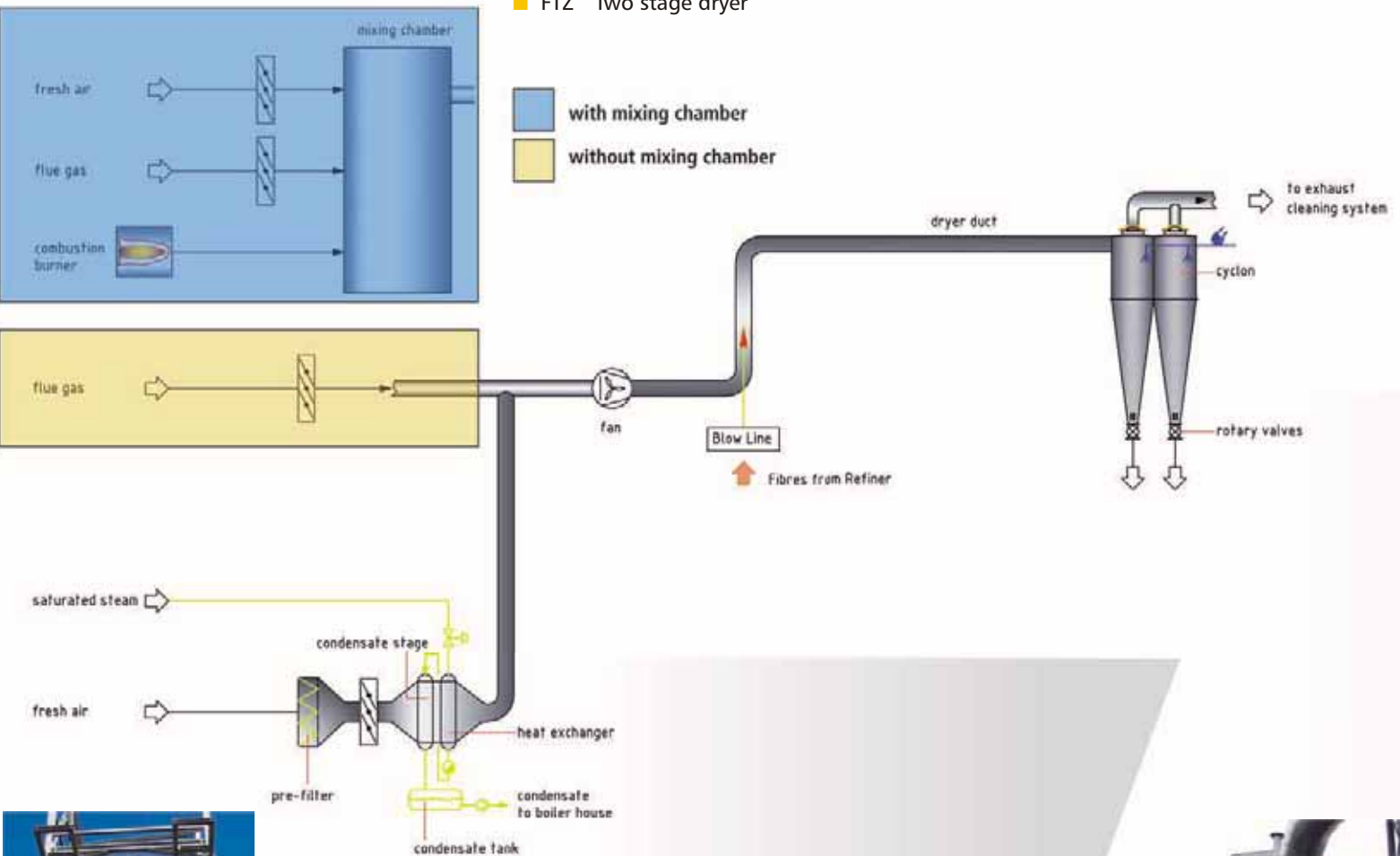


# Standard Installation Fibre dryer - Type of Construction



FTU Single stage fibre dryer with recirculation system

- FT Single stage fibre dryer
- FTU Single stage fibre dryer with recirculation system
- FTZ Two stage dryer



## Fibre dryer - Type of Construction

- Direct heating
  - Flue gases from
    - gas burner
    - dust burner
    - light or heavy oil burner
    - grate firing
  - Exhaust gas from turbine, boiler houses, generator
- Indirect heating
  - Heat exchangers with steam or thermal oil



# Standards and Components



High efficiency cyclones, pre-assembled



Dryer duct

- Stainless steel dryer duct, completely clean welded inside
- Cleaning doors alongside the dryer duct
- Frequency control for fan drive
- Wear protection of fan housing and impeller
- Vibration sensor for fan bearings
- Temperature sensor of motor and fan bearings
- Ambient air filter
- High efficiency cyclones
- Rotary valves
- Rupture discs
- Extinguishing systems
- Spark detection



Control flaps for flue gas and ambient air



Main fan



Ambient air filter



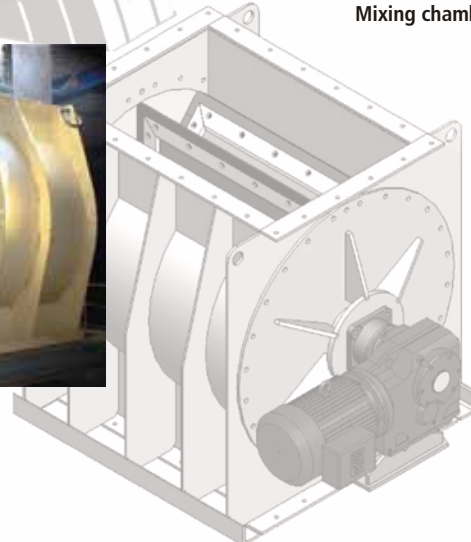
Control valve, sliding gate and gasburner



Mixing chamber



Rotary valves



## Air Grader for Fibres

Separation of wood residues, glue lumps, fibre deposits, latex and minerals

### Function:

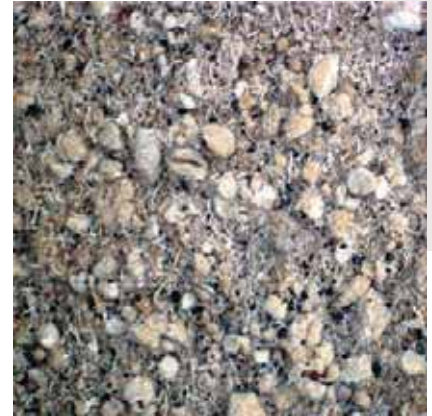
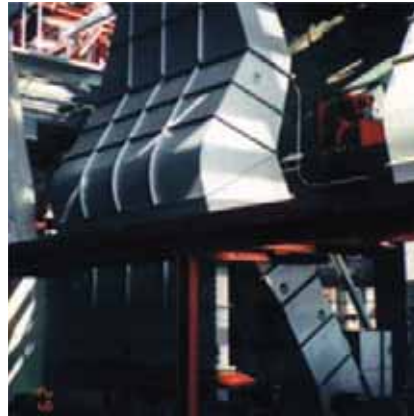
The material usually is fed into the Air Grader with a rotary valve arranged underneath the cyclone of the fibre dryer. After the material has entered the Air Grader, heavy material such as wooden particles, glue lumps, sand, latex spots and coarse fibres drop out through the coarse material discharge chute.

The acceptable material is conveyed off pneumatically and is resifted in a second stage.

The coarse material of the second stage is collected by a rotary valve or by a screw conveyor and rotary valve.

The acceptable material of the second stage is conveyed pneumatically through the ducts and the radial fan to the cyclone.

There the material is separated from the air flow and discharged by a rotary valve.



### Range of application:

The SGF-Air Grader is used in the MDF or dry hardboard industry for the separation of wooden particles, glue lumps, sand, latex spots and coarse fibres to avoid press damage and to increase the product quality. The SGF-Air Grader could be installed between the fibre dryer and the forming bin.

### Capacity:

- Up to 35 t/h (b.d.) mechanical throughput

### Technical characteristics

- Infeed rotary valve to avoid inlet of false air
- Outfeed rotary valve under the cyclone
- Pressure control to enable adjustments of capacities

### Options:

- Dissolving rolls
- Pre heating of grading air to sustain fibre temperature
- Conditioning of the air by injecting steam to adjust fibre moisture and temperature

### Technical advantages:

- Easy installation
- Highest efficiency
- Good cost-performance ratio
- High availability
- Low maintenance and operating costs

### Dust collection:

- High efficiency cyclones
- Bag filter

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