Screening and Processing

Drying System

Wood Yard

Conveying solutions in the cement industry

Maintenance and Service

ISPM

Waste to Fuel

Waste to Flame

Waste to Electricity

Biomass Fuel Handling

Pneumatic Conveying

# INDUSTRIAL PROJECT AND SERVICE

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**THE FUTURE´S SOLUTION TODAY**

**ISPM-Service** is a portuguese company born in 2015 with an environmental and innovative concept, guided by values that encourage sustainable development in an industrialized Era, where the generation of energy from waste is not only a way to ensure the future of the planet, but also a mean to profit. ISPM is a flexible, enthusiastic, socially responsible organization and adaptable to the changes. Our business is characterized mainly for a joint effort with our business partners. Together we design, produce, and assemble equipment and turnkey projects in various areas. Our technical assistants are motivated and highly qualified professionals. Overcoming challenges and searching for the generation and implementation of technological, innovative, and out-of-the-box business solutions, are on our day-to-day basis and part of our longterm vision for **ISPM-Service**. We are a visionary company, we work today for tomorrow as the beginning of the future.

Paulo Teixeira

**ISPM has been named Official Reseller Of:**

*BMH Technology* in Portugal and France;
*Jeffrey Rader, Stela* and *Aumund* in Portugal;
*Demuth* in Portugal, Spain and France.

BMH TECHNOLOGY

JEFFREY RADER

DEMUTH

stela drying technology

AUMUND

ISPM

# Drying System

Across the world, too many outdated drying systems are still in use. The result is high energy consumption. Even the “low” values are still 1.5 kWh or even 2.0 kWh per kg of evaporated water. By contrast, most of our systems have a peak low-power consumption of less than 1.0 kWh/kg.

slela®
drying technology

We have made it our goal to implement this in all our systems and to develop it even further – if you take into account the condensation heat of the most advanced belt dryers, a value as low as 0.4 kWh/kg is even possible.

**Agricultural industry**
**Wood panel industry**
**Pulp and paper industry**
**Pellet industry**
**Cement industry**
**Energy-producing biomass heating plants Food industry**
**Feed industry / pet food**
**Waste disposal industry**

# Low-temperature belt drier

Mondi Frantschach GmbH
Type: BT 1/6200-42
Product: bark
Drying capacity: 26,4 t/h from 53% to 37%
Year: 2011

Quellenangabe „Holzkurier/Schnaubelt“

# STELA - Low-temperature belt drier

STELA is a mid-sized family-owned enterprise in third generation with an experience of more than 40 years in the technology of low-temperature drying.

## A technically mature solution

### Plant performance increased by using a belt drier

At Mondi Frantschach in St. Gertraud, Austria, capacity in the bark boiler - installed in 1981 - was getting tight. For this reason, the company searched for new ways to increase its in-house energy supply, in order to raise the amount of high-pressure steam generated while still using the existing plant. The decision was made to use a belt drier from Stela Laxhuber of Massing, Germany, in which the biomass would first be predried. This would increase the efficiency of the fuel and increase the boiler performance in turn.

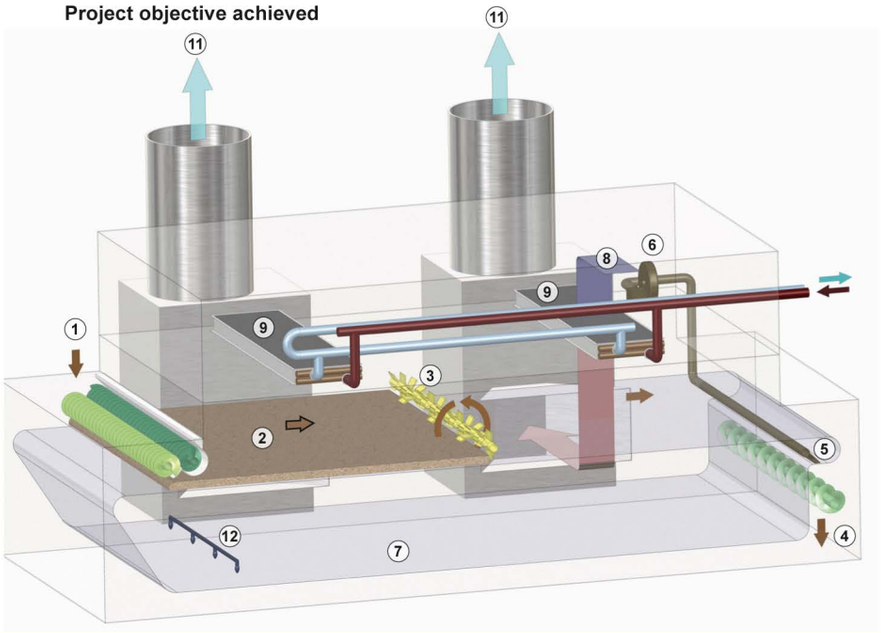
Since maintenance work had always been conducted properly, the existing bark boiler at Mondi Frantschach was in a good condition. Nonetheless, it was operating to capacity on the flue gas side. “The flue gas speed for the boiler was too high. A new investment would have meant very high costs. Therefore, we needed a way to reduce the amounts of flue gas coming out of the boiler so we could produce more high-pressure steam”, says Project Manager Günther Leitner about the original situation. For this reason, we decided to invest in a bark predrier, so that the bark would already have the water removed from it in advance, thus increasing its calorific value.

**Mature plant technology**
Since bark predriers are the exception in Europe, in the beginning, it was no easy task for the Project Manager to locate a suitable supplier. What was decided upon relatively quickly was the idea to use a belt drier. “The plant technology offered by Stela Laxhuber persuaded us with its maturity”, relates Stefan Raffalt, who is also familiar with the project. “This Bavarian company was able to offer us the best cost/performance ratio.” The company, founded in 1922, can also point to some fantastic reference plants it has already worked on, as those in St. Gertraud found out. At the end of November, the Stela belt drier began operations at the company’s site in the state of Carinthia.

**Project objective achieved**
At Mondi Frantschach, the energy required for the bark drier is obtained from waste heat. “If you have heat already available for free, as we do, then that’s the best possible solution”, says Leitner. After the drier had been running for three months, the first results were in in St. Gertraud. Reports from Mondi Frantschach indicate that “the project’s objective of producing more high-pressure steam from the bark boiler has already been achieved, and the values guaranteed by Stela Laxhuber were adhered to”. Inside the plant, the dry bark content was increased from 50 to 63%. The belt drier has a water evaporation rate of 9 t/h. In addition, the 50m long belt drier is designed to use multi-vent technology. This provides the belt drier with slow-running, high-volume fans, which increase drying speed. Thus the drying speed is increased and, the same time power consumption and noise emissions are reduced. “This second factor was also an important argument in awarding the contract to Stela Laxhuber”, emphasises Raffalt. So you can hardly hear that the drier is running, even when standing right in front of it.

**A successful partnership**
In St. Gertraud, they are extremely happy about their successful partnership with the Bavarian drier specialists. “We are very satisfied with work of Stela Project Manager Tobias Latein and his team. Even though Stela Laxhuber did not yet have that much experience in the area of bark predrying, with the outstanding joint-expertise of the project team from Mondi Frantschach and Stela Laxhuber, we were able to achieve a result which was satisfactory for all concerned. This drying technology is a mature solution”, underlines Raffalt. “The investment allowed us to increase the efficiency of our existing system”.

Indication of source: Holzkurier 3rd of March 2011




1 = feeding station
2 = product
3 = turning device
4 = discharge screw
5 = belt cleaning system (dry)
6 = fan for belt cleaning system
7 = web belt
8 = fresh air
9 = heat exchanger
10 = heat supply and return
11 = exhaust air
12 = wet cleaning

# Stela low-temperature belt dryer

Stela is a medium-size family-owned enterprise with more than 45 years of experience in drying technology. More than 3500 driers were installed all over the world, whereof over 140 belt driers are used for the drying of biomass.

- By means of fuel predrying, the capacity of the boiler is increased up to 20 %
- Available waste heat sources like e.g. hot air, low-pressure steam or hot water of different temperatures serve for hot air generation
- Adaption and alteration works do not cause a long downtime of the boiler

## References

**Mondi Frantschach GmbH (Austria)**

Dryer type: BT 1/6200-42
Product: bark

Uptime: 8500 h/a
Water evaporation: 9 t/h
Moisture content: 53 % / 37 %
Drying temperature: approx. 74°C
Thermal power: 13.200 kW
Operating since October 2010

**Södra Cell Mönsteras (Sweden)**

Dryer type: BT 1/6200-49.5
Product: softwood bark and other wood residues
Uptime: 8500 h/a
Water evaporation: 10 t/h
Moisture content: 60 % / 45 %
Drying temperature: approx. 72°C
Thermal power: 13.000 kW
Commissioning in May 2012

**Arauco (Chile)**

Dryer type: BT 1/6200-61.5
Product: woodchips, shavings, bark, sawdust
Uptime: 8500 h/a
Water evaporation: 19 t/h
Moisture content: 64 % / 49.1 %
Drying temperature: approx. 100°C
Thermal power: 20.600 kW
Commissioning in May 2012

# Low temperature belt dryer for wooden biomass





# Low temperature belt dryer for biomass

**STELA Laxhuber GmbH**
We are an internationally orientated company that has been successful in its activities in the drying of biomass products on belt dryers - we were active in this sector from the beginning and have had a defining impact on the development of technology with low-calorific heat for this sector.
Today we are market leader with more than 140 low-temperature belt dryers in operation worldwide.

**Technical specifications**
- Output ranges of up to 50 t water evaporation/h realised
- Total output of the lines for sawdust drying corresponds to an annual production of 5,000,000 t pellets
- Total water capacities of 5.3 million tons per year thus far
- Own production facilities with continuous quality control by qualified and trained STELA employees

**Belt dryers are used in a wide range of industrial branches and product divisions:**
- Pellet industry
- Wood glazing
- Biomass to liquid (BTL)
- Wood products industry
- Pulp and paper industry
- Sawmills
- Biomass power plants

In addition to conventional (wooden) biomass, STELA belt dryers can also dry the following products:
Coal pellets, pulp, straw, garden waste, pomace and much more.


Bark


Sawdust


Wood shavings


Wood chips

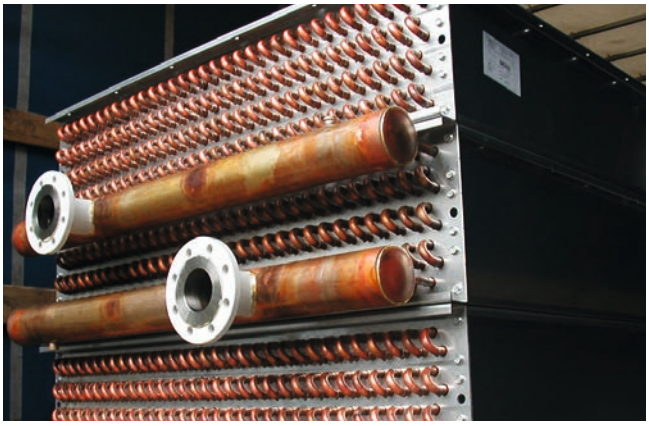

OSB-Strands

# Heat sources

The greatest benefit of the belt dryer is its use of low-temperature heat sources, which are frequently available as waste heat.

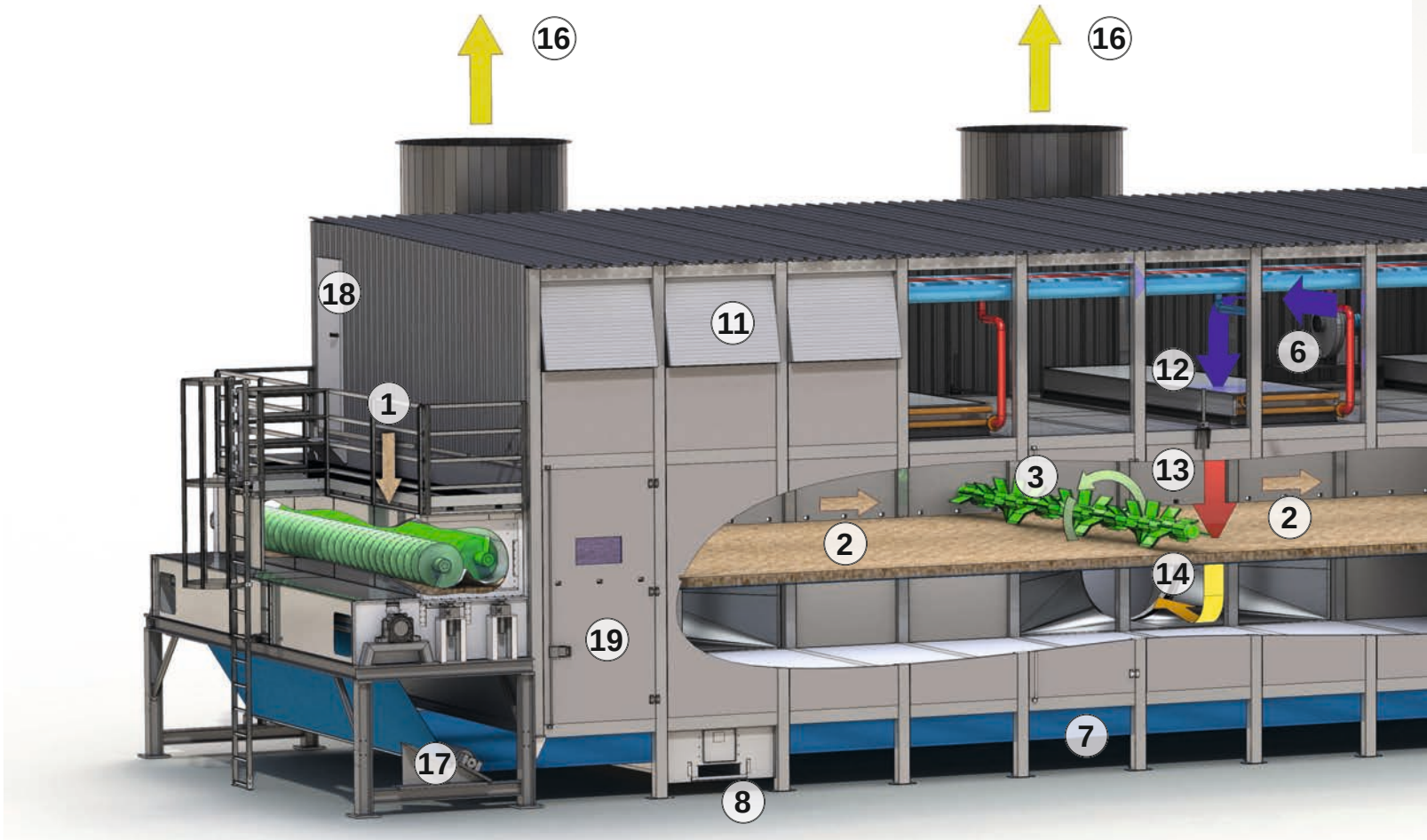
- It makes sense to use heat sources with low temperatures from 30˚C in the belt dryer
- With the use of multi-stage heating circuits, various heat sources can be combined in the belt dryer

Conventional (typical) heat sources include (are):
- Hot water from cogeneration
- Hot water from flue gas condensation
- Low-pressure steam
- Waste heat from paper production

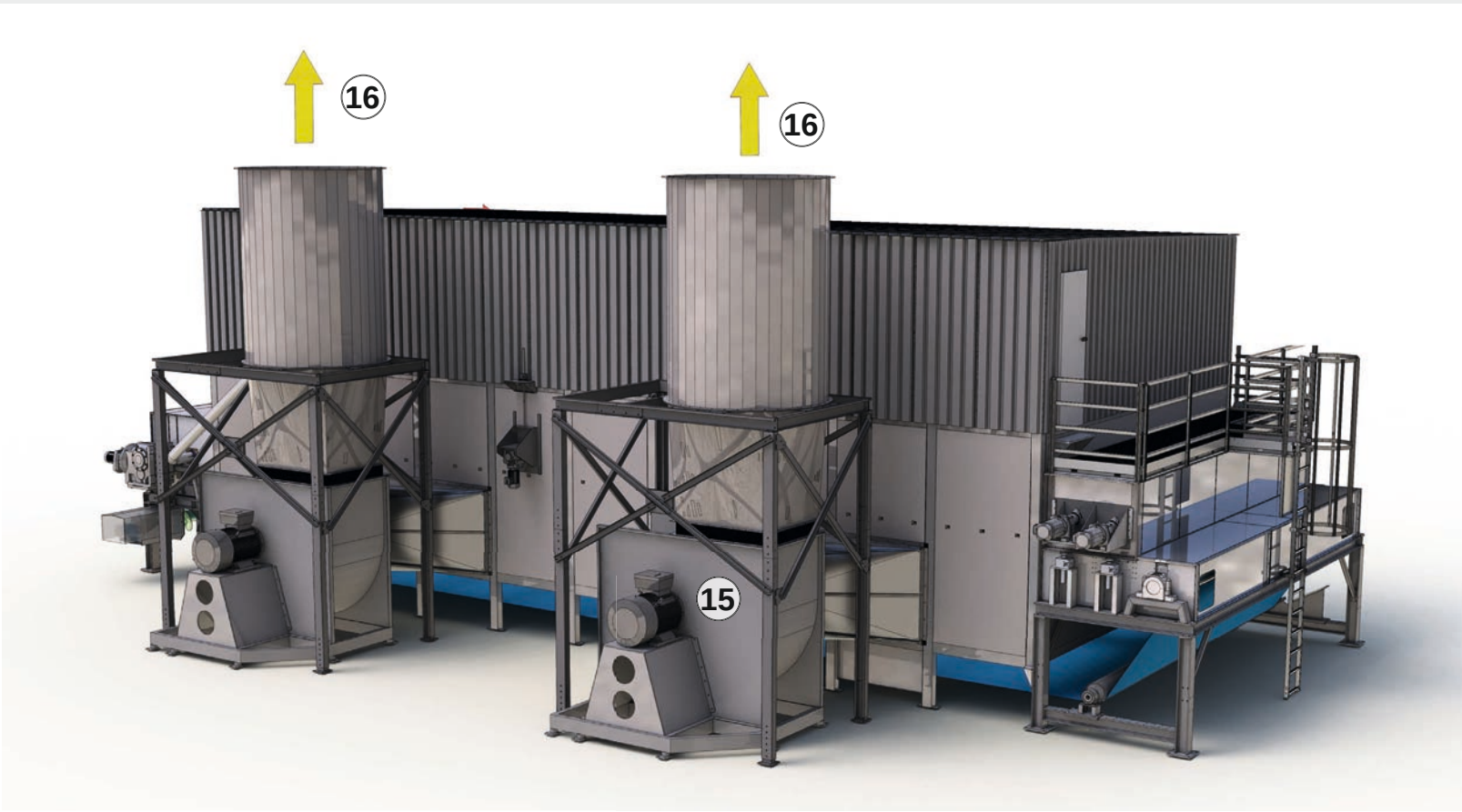


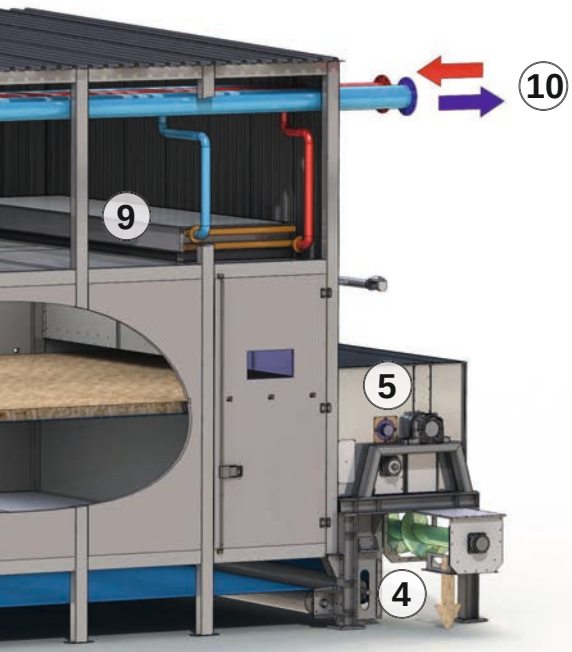
**Characteristic features of our dryer lines**

- Product turning device for an uniform final moisture and energy-saving ventilation of the product
- Multivent system with multiple directly coupled, low-noise radial fans for continuous air distribution with minimal pressure loss and noise emissions
- Guaranteed low dust emission values in accordance with the German Pollution Control Act (BImSchG)
- Modular line system, which can be easily expanded at a later time
- Low thermal and electrical consumption values by optimally synchronized components
- Design in three various belt widths for individual adaptation according to customer requirements
- Inspection doors for easy access to dryer inside
- Insulated dryer body
- A closed construction enables outdoor installation at temperatures down to -40°C and beyond.



## Construction



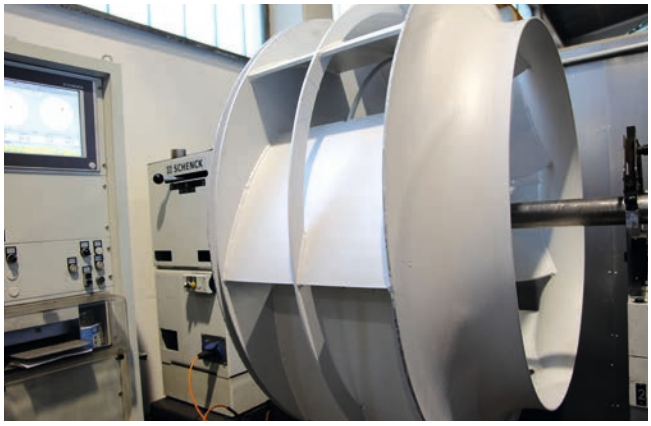




1 = feeding station
2 = product layer
3 = turning device
4 = discharge screw
5 = belt cleaning system (dry)
6 = fan for belt cleaning system
7 = web belt
8 = belt cleaning system (wet)
9 = heat exchanger
10 = heat supply
11 = fresh air intake
12 = fresh air
13 = heated air
14 = exhaust air
15 = exhaust air fan
16 = exit air
17 = belt alignment
18 = access housing for heat generation
19 = door for inspection

# Qualität – Made in Germany

The core of our philosophy is own production. In order to react flexibly to customer requests, meet with customer lead time best we offer our wide range of production. Our production process begins with the raw material, which is processed with CNC-controlled machine tools. A particular feature of the production is the low-weld construction, which enables a long construction type of the drying lines. The materials which are used are stainless steel, aluminium and galvanised material - which makes subsequent painting as anti-corrosion protection entirely unnecessary.

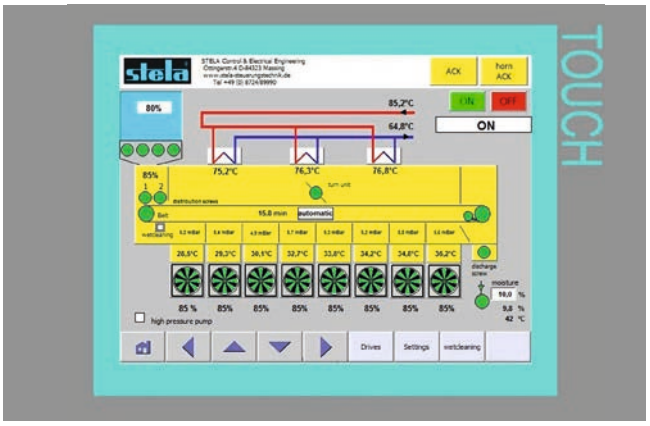
Service is a major emphasis at our company. Since our customers are production operations, shut-downs cost money. Problems are solved by a mobile service team - whether by telephone or on-site visits. This is an additional advantage of our production depth: necessary spare parts can be provided immediately.

# Control technology

With our own control and electrical department, we can flexibly address customer requirements. With the highest quality claim, we offer you a broadly diversified portfolio of electrical engineering, automation technology, process visualisation, maintenance, switchgear construction and electronic MSR assembly from one location. Based on our ambition quality standards,….

Our services include: Set-up and wiring of EMC-appropriate switchgears; power distribution; low-voltage distribution up to 3200 A; measurement, regulating and control cabinets; PLC and PLS cabinets, control and display panels; production in accordance with DIN/VDE, EN; equipment of the lines according to ATEX; tailored implementation of customer requests; conversion and expansion of switchgears; compensation systems...




# Worldwide references

Project: Södra Cell
Sweden
Type: BT 1/6200-49,5
Product: Bark

Project: Graanul Invest
Estonia
Type: 2x BT 1/6200-30
Product: Sawdust

Project: BIOENER
Uruguay
Type: BT 1/6200-48
Product: Sawdust and Wood chips

# Worldwide references


Project: Arauco
Chile
Type: BT 1/6200-61,50
Product: Bark


Project: Mondi Frantschach GmbH
Austria
Type: BT 1/6200-42
Product: Bark

Project: RWE/German Pellets
Germany
Type: BT 1/6200-48
Product: Sawdust

# Worldwide references

Project: Nature´s Flame
New Zealand
Type: BT 1/6200-52,5
Product: Sawdust


Project: Ruderatshofen Futtertrocknung e. G.
Germany
Type: BT 1/6200-33
Product: Wood chips, Bark, Grass, Straw


Project: Stelmet
Poland
Type: BT 1/6200-30 and BT 1/6200-24
Product: Sawdust

# Worldwide references

Project: Pfeifer Holz GmbH
Germany
Type: 4x BT 1/6200-36
Product: Sawdust

Project: German Pellets
Germany
Type: 2x BT 1/6200-22,5
Product: Sawdust

Project: Imal
Italy
Type: BT 1/6200-43,5
Product: OSB-Strands

# reference list
# low temperature belt dryer for wooden biomass

Project: I-PAN
Italy, Coniolo
Type: BT 1/6200-43,5
Year: 2012
Product: OSB-Strands
Dryer output capacity:
9,6 t/h from 56,8% - 3%

Project: Södra Cell
Sweden, Mönsteras
Type: BT 1/6200-49,5
Year: 2012
Product: bark
Dryer output capacity:
26,6 t/h from 60% - 45%


Project: Ante Holz
GmbH & Co KG
Germany, Rottleberode
Type: BT 1/6200-15
Year: 2012
Product: sawdust
Dryer output capacity:
5,0 t/h from 50% - 10%

Project: S.C. Holzindustrie
Schweighofer
S.R.L. Rumania, Radauti
Type: BT 1/6200-58,5
Year: 2012
Product: sawdust
Dryer output capacity:
17,0 t/h from 50% - 10%

Project: Dalkia UK,
Great Britian, Chilton
Type: BT 1/2700-13
Year: 2012
Product: wood chips
Dryer output capacity:
7,0 t/h from 22,5% - 10%

Project: SIA Graanul Invest
Latvia, Ezerini
Type: 2x BT 1/6200-30
Year: 2012
Product: sawdust
Dryer output capacity:
per 8,5 t/h from 50% - 10%

Project: Juwi Bio GmbH
Germany, Bad Arolsen
Type:
BT 1/6200-15 (down)
BT 1/6200-9 (above)
Year: 2012
Product: sawdust
Dryer output capacity:
4,4 t/h from 50% - 10% (down)
2,5 t/h from 50% - 10% (above)

Project: Juwi Bio GmbH
Germany, Dotternhausen
Type: BT 1/6200-19,5
Year: 2012
Product: sawdust
Dryer output capacity:
6,7 t/h from 47% - 9%

Project: Arauco
Chile, Valdiva
Type: BT 1/6200–61,5
Year: 2012
Product: bark
Dryer output capacity:
46,0 t/h from 64% - 49%


Project: Mayr-Melnhof
Czech Republic, Paskov
Type: BT 1/6200-28,5
Year: 2012
Product: sawdust
Dryer output capacity:
10,0 t/h from 50% - 10%


Project: University of British Columbia Canada, Vancouver
Type: BT 1/2700-14
Year: 2012
Product: wood chips and bark
Dryer output capacity: 2,1 t/h from 50% - 25%

Project: Ponlar Sa Uruguay, Rivera
Type: BT 1/2700-12
Year: 2012
Product: sawdust
Dryer output capacity: 1,8 t/h from 55% - 15%

Project: BioEnergo s.r.o.
Slovakia, Ruzomberko
Type: 2x BT 1/6200-27
Year: 2012
Product: sawdust
Dryer output capacity:
6,5 t/h from 50% - 10%

Project: AGO AG
Germany, Wunsiedel
Type: BT 1/6200-12
Year: 2012
Product: sawdust
Dryer output capacity:
3,5 t/h from 50% - 10%

Project: Hekotek
Estonia, Jüri
Type: BT 1/6200-34,5
Year: 2011
Product: sawdust
Dryer output capacity:
12,0 t/h from 53% - 11%

Project: Moderator d.o.o
Croatia, Udbina
Type: BT 1/6200-13,5
Year: 2011
Product: sawdust
Dryer output capacity:
5,0 t/h from 45% - 10%

Project: Graanul Invest
Estonia, Helme
Type: 2x BT 1/6200-30
Year: 2011
Product: sawdust
Dryer output capacity:
per 8,5 t/h from 50% - 10%

Project: BioEner
Uruguay, Riviera
Type: BT 1/6200-48
Year: 2011
Product: sawdust and
wood chips mixture
Dryer output capacity:
21,0 t/h from 50% - 20%


Project: Sägewerk Schwaiger
Germany, Hengersberg
Type: BT 1/6200-33
Year: 2011
Product: sawdust
Dryer output capacity:
10,0 t/h from 50% - 10%

Project: EKO Energy GmbH
Germany, Rothenburg/OL
Type: 2x BT 1/6200-22,5
Year: 2011
Product: sawdust
Dryer output capacity:
per 7,5 t/h from 50% - 10%

Project: Ets JUNG Albert
France, Berling
Type: BT 1/2700-8
Year: 2011
Product: sawdust
Dryer output capacity:
1,2 t/h from 50% - 10%

Project: Kokapas trades
Grupa Lativa, Bērzaune
Type: BT 1/6200-12
Year: 2011
Product: sawdust
Dryer output capacity:
4,0 t/h from 50% - 10%

Project: Loher Raumexklusiv GmbH, Germany
Wallersdorf- Haidlfing
Type: BT 1/6200-12
Year: 2011
Product: sawdust
Dryer output capacity:
3,2 t/h from 50% - 10%


Project: Aboltina buvuznemums AG Ltd.
Latvia, Madonas
Type: BT 1/6200-16,5
Year: 2011
Product: sawdust
Dryer output capacity:
3,6 t/h from 50% - 3%

Project: Mondi
Frantschach GmbH
Austria, St. Gertraud
Type: BT 1/6200-42
Year: 2010
Product: bark
Dryer output capacity:
26,4 t/h from 53% - 37%


Quellenangabe „Holzkurier/Schnaubelt“

Project: Energiepellets
Germany, Hosenfeld
Type: BT 1/6200-18
Year: 2010
Product: sawdust
Dryer output capacity:
5,5 t/h from 50% - 10%


Project: Baust Holzbetriebe
Germany, Eslohe-Bremke
Type: BT 1/2700-11
Year: 2010
Product: sawdust
Dryer output capacity:
1,6 t/h from 50% - 10%


RWE Erndtebrück
Germany, Erndtebrück
Type: BT 1/6200-48
Year: 2010
Product: sawdust
Dryer output capacity:
17,5 t/h from 50% - 10%

Project: German Pellets
Germany, Wismar
Type: 2x BT 1/6200-22,5
Year: 2010
Product: sawdust
Dryer output capacity:
per 6,5 t/h from 50% - 10%

Project: EVO
Energieversorgung
Offenbach AG
Germany, Offenbach
Type: BT 1/6200-19,5
Year: 2010
Product: sawdust
Dryer output capacity:
6,0 t/h from 50% - 9%

Project: Torkapparater Sweden, Stockholm
Type: BT 1/6200-19,5
Year: 2009
Product: sawdust
Dryer output capacity: 12,2 t/h from 50% - 26%

Project: Bioenergie Aschaffenburg Germany, Aschaffenburg
Type: BT 1/6200-18
Year: 2009
Product: sawdust
Dryer output capacity: 5,8 t/h from 50% - 10%

Project: Sägewerk
Schwaiger
Germany, Hengersberg
Type: BT 1/6200-9
Year: 2009
Product: sawdust
Dryer output capacity:
2,8 t/h from 50% - 10%


Project: Bayerwald Pellet
Germany, Regen
Type: Extension from
BT 1/2700-10 to
BT 1/2700-16
Year: 2009
Product: sawdust
Dryer output capacity:
2,1 t/h from 50% - 10%

Project: Schweighofer Rumania, Sebes/Alba
Type: Extension from BT 1/6200-25,5 to BT 1/6200-37,5
Year: 2009
Product: sawdust
Dryer output capacity: 11,6 t/h from 50% - 10%


Project: Compactec (Intrinergy)
Germany, Straubing
Type: BT 1/6200-19,5
Year: 2009
Product: sawdust
Dryer output capacity: 7,5 t/h from 50% - 10

Project: H. u. H. Pellets
Austria, Stainach
Type: BT 1/6200-15
Year: 2009
Product: sawdust
Dryer output capacity:
6,0 t/h from 50 % - 10%

Project: ECB mbH
Germany, Heidelberg
Type: BT 1/6200-30
Year: 2009
Product: sawdust
Dryer output capacity:
8,0 t/h from 50% - 9%


Project: Ameco Rumania, Gheorgheni
Type: BT 1/6200-16,5
Year: 2009
Product: sawdust
Dryer output capacity: 6,0 t/h from 50% - 10%

Project: Nature´s Flame New Zealand, Taupo
Type: BT 1/6200-52,5
Year: 2009
Product: sawdust
Dryer output capacity: 12,0 t/h from 60% - 10%

Project: Barlinek GZRM
Ukraine, Winniza
Type: BT 1/6200-12
Year: 2008
Product: sawdust
Dryer output capacity:
4,4 t/h from 50% - 10%


Project: Tartak – „Olczyk“
Poland, Krasocin
Type: BT 1/6200-28,5
Year: 2008
Product: sawdust
Dryer output capacity:
8,0 t/h from 50% - 10%

Project: Stora Enso Timber Sweden, Grums
Type: BT 1/6200-36
Year: 2008
Product: sawdust
Dryer output capacity:
10,0 t/h from 52% - 10%

Project: BEN BioEnergie Germany, Buchholz
Type: BT 1/6200-25,5
Year: 2008
Product: sawdust
Dryer output capacity:
8,0 t/h from 48% - 8%

Project: Stora Enso
Russia, Nebolchi
Type: BT 1/6200-12
Year: 2008
Product: sawdust
Dryer output capacity:
3,6 t/h from 50% - 10%


Project: Pelletproduktion
Sachsen-Anhalt Süd
Germany, Heidegrund
Type: BT 1/6200-30
Year: 2008
Product: sawdust
Dryer output capacity:
9,5 t/h from 50% - 10%


Project: WestPellets
Germany, Titz-Ameln
Type: BT 1/2700-13
Year: 2008
Product: sawdust
Dryer output capacity:
1,6 t/h from 50% - 10%


Project: Stelmet
Poland, Jeleniow
Type: BT 1/6200-30 and
BT 1/6200-24
Year: 2007/2008
Product: sawdust
Dryer output capacity:
10,0 t/h & 8,0 t/h
from 50% -10%

Project:  Krekula & Lauri
Sweden, Tärendö
Type: BT 1/2700-14
Year: 2008
Product: sawdust
Dryer output capacity:
2,0 t/h from 50% - 10%

Project: Trocknung
Ruderatshofen
Germany, Biessenhofen
Type: BT 1/6200-33
Year: 2007/2008
Product: wood chips,
bark, gras, straw
Drying capacity:
8,0 - 10,0 t/h
Water Evaporation

Project: Pröbstl Germany, Fuchstal
Type: BT 1/6200-22,5
Year: 2007
Product: sawdust
Dryer output capacity:
8,0 t/h from 50% - 10%


Project: Finvest Croatia, Gerovo
Type: BT 1/6200-10,5
Year: 2007
Product: sawdust
Dryer output capacity:
3,6 t/h from 50% - 13%

Project: HVT GmbH
Germany, Dittersdorf
Type: BT 1/6200-10,5
Year: 2007
Product: sawdust
Dryer output capacity:
3,6 t/h from 50% - 10%

Project: EPC GmbH
Germany, Torgau
Type: 2x BT 1/6200-28,5
Year: 2007
Product: sawdust
Dryer output capacity:
2 x 9,0 t/h from 50% - 10%

Project: Pfeifer Holz GmbH
Germany, Uelzen
Type: 2x BT 1/6200-33
Year: 2007
Product: sawdust
Dryer output capacity:
30,0 t/h from 42% - 3%

Project: German Pellets
Germany, Herbrechtingen II
Type: 2x BT 1/6200-22,5
Year: 2007
Product: sawdust
Dryer output capacity:
per 6,5 t/h from 50% - 10%

Project: Mayr-Melnhof
Austria, Leoben
Type: BT 1/6200-22,5
Year: 2007
Product: sawdust
Dryer output capacity:
8,5 t/h from 50% - 10%

Project: Ziegler
Germany, Plößberg
Type: BT 1/6200-40,5
Year: 2007
Product: sawdust
Dryer output capacity:
13,5 t/h from 50% - 10%

Project: Schweighofer
Rumania, Sebes
Type: BT 1/6200-25,5
Year: 2007
Product: sawdust
Dryer output capacity:
8,0 t/h from 50% - 10%

Project: Pfeifer Holz GmbH
Germany, Unterbernbach
Type: 4x BT 1/6200-36
Year: 2007
Product: sawdust
Dryer output capacity:
50,0 t/h from 50% - 3%

Project: Hasslacher
Preding Holzindustrie
GmbH Austria, Preding
Type: BT 1/6200-22,5
Year: 2007
Product: sawdust
Dryer output capacity:
8,5 t/h from 50% - 10%

Project: German Pellets
Germany, Ettenheim II
Type: 2x BT 1/6200-22,5
Year: 2006
Product: wood chips
Dryer output capacity:
per 6,5 t/h from 50% - 10%

Project: ERDA Belgium, Bertrix
Type: 2x BT 1/6200-27
Year: 2006
Product: sawdust
Dryer output capacity: per 16,0 t/h from 50% - 10%

Project: Delhez Belgium, Dison
Type: BT 1/6200-33
Year: 2006
Product: wood shavings
Dryer output capacity: 12,0 t/h from 50% - 10%

Project: UET Choren
Germany, Freiberg
Type: BT 1/6200-12
Year: 2006
Product: wood chips
Dryer output capacity:
4,5 t/h from 35% - 10%

Project: Sägewerk
Schwaiger
Germany, Hengersberg
Type: BT 1/6200-33
Year: 2006
Product: sawdust
Dryer output capacity:
10,5 t/h from 50% - 10%

Project: Firestixx
Salzburg-Pellet
Produktion GmbH
Austria, Abtenau
Type: BT1/6200-16,5
Year: 2004
Product: sawdust
Dryer output capacity:
5,0 t/h from 50% - 10%

Project: Holz Schiller GmbH
Germany, Regen
Type: BT 1/2700-10
Year: 2004
Product: sawdust
Dryer output capacity:
1,5 t/h from 50% - 10%

Projekt: Baust Holztechnik GmbH Germany, Eslohe-Bremke
Year: 2003
Type: BT 1/2700-12
Product: sawdust
Dryer output capacity: 2,0 t/h from 50% - 10%

Project: Pollmeier Germany, Malchow
Type: BT 1/2700–13
Year: 2003
Product: sawdust
Dryer output capacity: 2,4 t/h from 45% - 8%

# Low-temperature sewage sludge belt drier

# STELA - Low-temperature sewage sludge belt drier

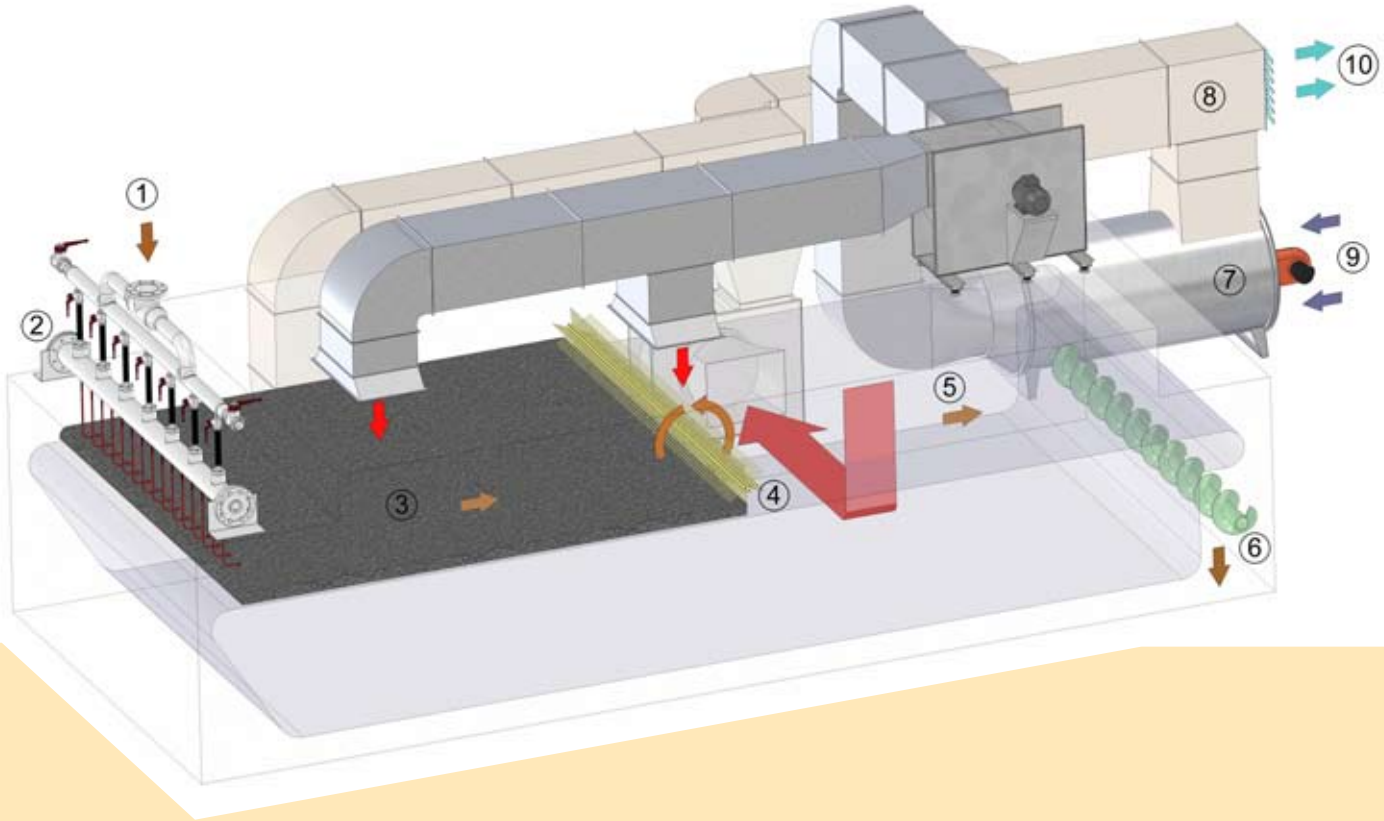
STELA is a medium-sized family-owned enterprise with an experience of more than 40 years in the technology of low-temperature drying.

With the STELA sewage sludge drier, the most various sludges are dried in a reliable, energy-saving and dust-free way to DS contents up to a dry substance of 95 %.
The mechanically dewatered sewage sludge is extruded on a purpose-built granulator. Subsequently, the product falls directly onto a perforated conveyor belt and forms a pile with good ventilation. The product is brought into the drier tunnel, where hot air flows through it drying it efficiently.

This process avoids mechanical product stress as far as possible

**Decisive characteristics of our drying plants**

- product turning device for a constant final moisture and easy ventilation of the product
- low thermal and electrical energy consumption by means of a proven air circulation system and optimally synchronized components
- drier sizes individually adaptable to the particular conditions and designed in three different belt widths for individual adaptation to the customer demands




1 = product infeed
2 = granulator
3 = product
4 = turning device
5 = web belt or stainless steel belt
6 = discharge screw
7 = hot air generation
8 = circulation air system
9 = fresh air
10 = exhaust air

## STELA - Low-temperature sewage sludge belt drier

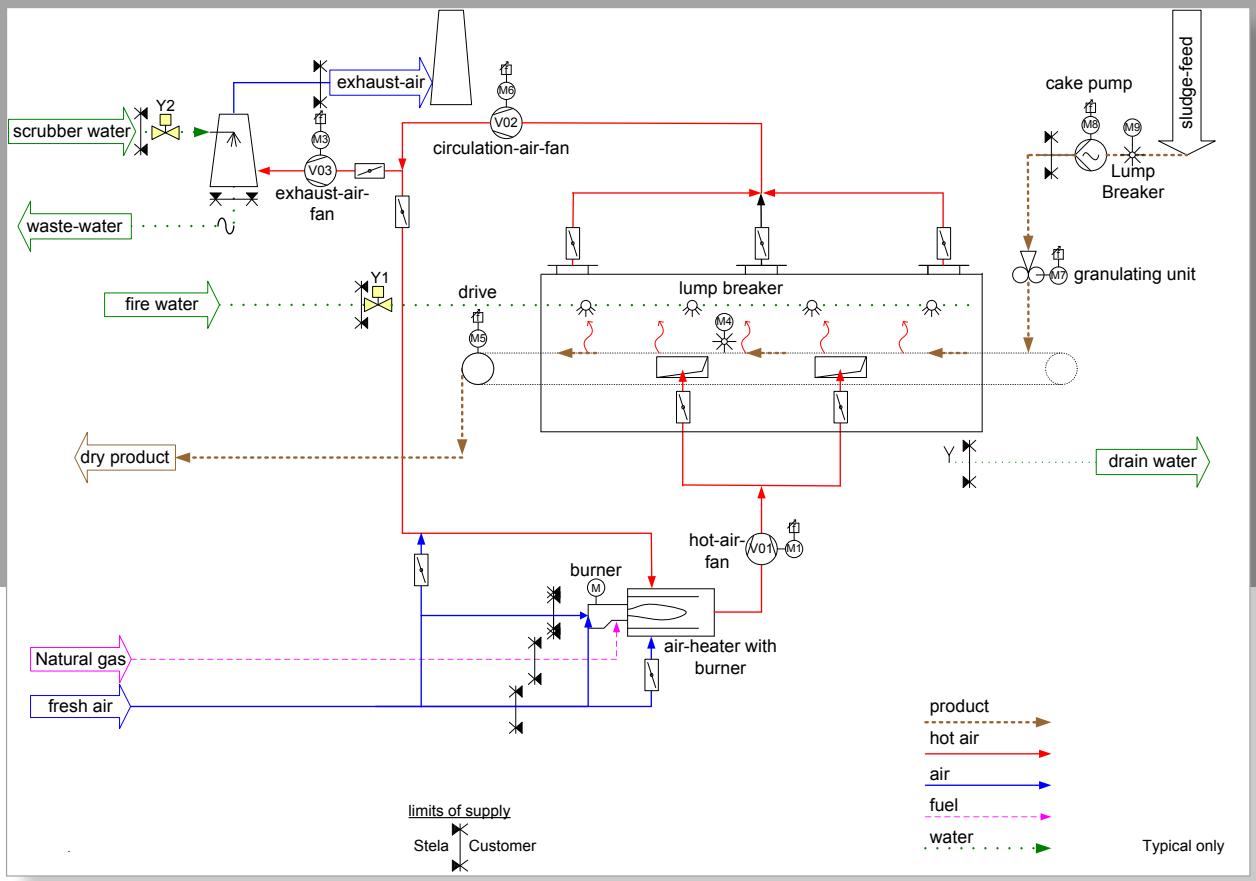
Type: PBT 1/2500-17, water evaporation 1.000 kg/h

Type: PBT 1/2500-12, water evaporation 1.250 kg/h

Type: PBT 2/2500-24, water evaporation 3.000 kg/h

- water evaporation rates of 0.2 – 6 t/h or more
- more than 400 belt driers in the most various sizes installed all over the world
- single-belt drier or two-belt drier depending on the location
- exhaust air scrubber for every plant size
- turnkey belt driers including exhaust air conditioning
- special granulating unit without product remixing
- use of low-caloric heat
- reliable and approved drying technology
- high-quality and flexible order processing on schedule due to in-house production by qualified STELA staff

## flow sheet

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