Bystronic glass

Living for the Future

Many good reasons why,
with us, you have a partner
for the future.

www.bystronic-glass.com

Living for the Future

Resource conservation and energy reduction are global challenges – that have been for sometime. We have therefore made ecological issues one of our priorities in order to fulfil our responsibility for future generations.

Glass processing requires a lot of energy. Not only is the procurement of energy becoming increasingly more expensive, but at the same time, we wish to make an active contribution to environmental protection through conservative use.

What is positive about this: Through ecological orientation, we have succeeded in making many processes in the manufacture and operation of our plants economically more efficient. Furthermore, you produce products with clear added value. We are happy about what we have achieved so far, but believe more can be achieved.

We will continue our efforts in this respect to achieve better results in the future.

Bystronic glass – we think ahead

The ecological value-added chain

The ecological value-added chain

To be decisive, environmental management must be implemented at all levels of the value-added chain. Here, we include:

- **The end product** – ultimately, the product that you produce,
- **The production process** at your company, plus
- **The manufacture of the components and plants** at our company.

Only, if all 3 stages have been integrated into environmentally-friendly concepts will glass processing be sustainable and effective from an ecological point of view. In future also, we will continue integrating ecological findings and new processes in yours and our own production.

Based on 17 examples, we wish to show you what solutions have already been implemented in our company today.

The end product

1

Insulating properties and long life are the factors that are important for window, façade and automotive glass from an ecological point of view. In this regard, we can contribute the following:

Unique: You can now produce no-foil thin-film photovoltaic modules directly on our TPS® insulating glass lines. This procedure requires considerably less energy than conventional methods. The result is a frameless glass/glass module that can be integrated into building façades like insulating glass which not only saves, but even generates energy.

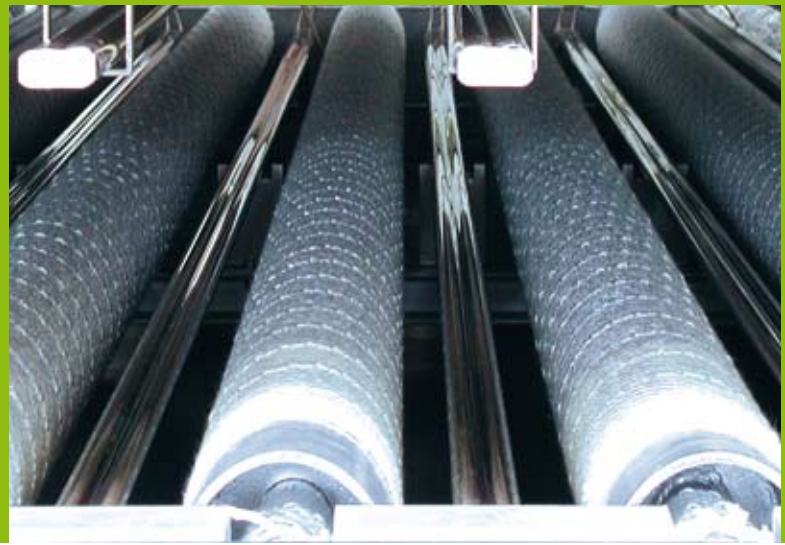
2

Exclusively at Bystronic glass: On our plants, you can process all commonly used high insulating “warm edge” spacer systems, as double or triple insulating glass. In general, the important feature of warm edge systems is the ‘up to -0.3’ better heat transfer coefficient. This shows the great importance that we attach to efficient use of the resource energy.

3

On our laminated glass production lines, you can use a wide variety of films for sun and sound protection. When sun protection films are used, the heat stays outside and the degree of air conditioning is lower. In the case of sound protection films, it is possible to use thinner lites to achieve the required noise insulation values. Thinner lites have the advantage that they can be produced with less energy. It is that simple.

The production process 4



This is obviously the place where most resources can be saved over the lifetime of a plant. The combination of the especially long life of our components, results in very low overheads and contributes significantly to saving raw materials.

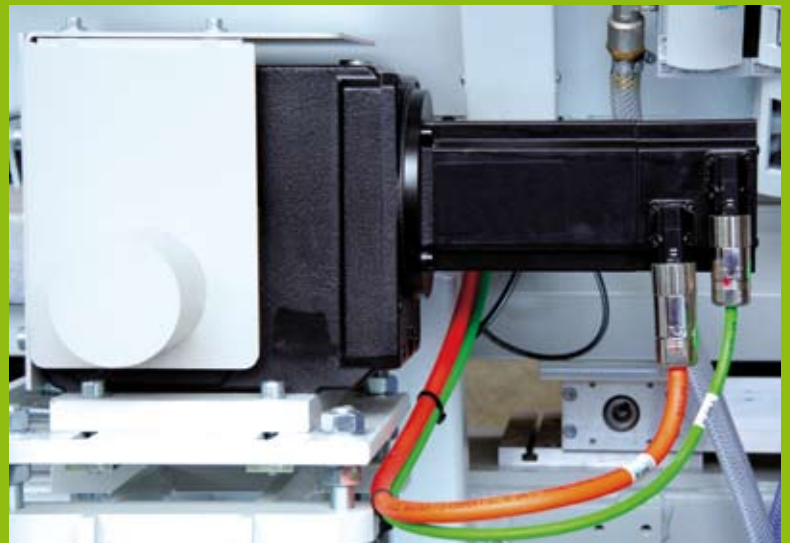
Something only we offer: Using the two-radiant heater technology in the heating zone of our patented furnace system, we can save up to 30% energy in the production of laminated glass.

- Circulating air radiators ensure a constant temperature inside.
- The film radiators heat only the film and are reduced to 5% power when not in use.

5

In photovoltaic module production, we replace the vacuum laminators by a pre-nip with press rollers.

- Energy saving up to 50%
- Cycle time reduction, you produce your parts at double the speed
- Low space requirement, you only need to operate a small area
- Significantly reduced complexity of the plants



6

We preferably use hydraulic and electric drives as these consume up to 7 times less energy compared to the use of pneumatic systems. However, this also means that our plants can be operated at significantly less cost.

7

What is temporarily not in use does not have to be driven. Using shared drives in the production of laminated glass and insulating glass, we ensure that only those conveyor units are running which carry glass at the specific moment. All the others are motionless.

8

We simply switch off all hydraulic power units that are not used for laminated glass production.

9

If there is no glass to be washed in the washing machine during the production of laminated glass and insulating glass, the ventilation flaps of the blower close. The result: 25% energy saving.

10

If we wish to operate clean room areas efficiently, the inner climate must be kept as constant as possible. We therefore equip our laminated glass production lines with access locks to reduce any interfering outside influences when entering these to a minimum. In addition, a 100 mm insulation ensures energy-saving operation.

11

We have drastically reduced water consumption in insulating glass production. We can achieve this by using a closed water circuit with disc filter system. All in all, consumption is reduced by up to 15 times.

12

During deceleration at the drives of the automotive glass plants, we convert kinetic energy into electrical energy and feed it back into the network. This produces energy savings of up to 20%.

13

Our consultants will assist you in optimizing your logistics and therefore significantly improving the throughput of your plants in some cases. Because something that runs over shorter distances needs less energy.

14

We design machines and plants to last as long as possible. This is guaranteed by the selected components, as well as the availability of spare parts and service on site.

Plant production

15

Last but not least, we use resource-conserving production and ecologically valuable concepts in our production.

In the manufacture of plants for photovoltaic module production, we use a significantly less complex plant which requires much less space in our manufacture. Less space means a smaller area to be operated. And a lower complexity means less parts to be produced. All in all, we reduce our energy consumption.

We have optimized all processes in purchasing and in manufacture to avoid residual material and waste as far as possible. For instance, the aluminum profiles used by us do not generate residual material. And it goes without saying that we separate waste and recycle potential recyclables.

We, at Bystronic glass, have set up cross-functional teams. These are respectively made up of experts from the areas processes, purchasing and production who ensure that for every project ecology is also considered.

Key

Key

Ecological

Only at Bystronic glass

Innovation

Service/Advice

Disconnection

Energy saving

Low-maintenance

Reduced consumption

Long life

Heat transfer coefficient

Speed