Wet Flaking Line
SRC

SRC KNIFE RING FLAKER

SRC
Knife Ring Flaker

SRC is an advanced **flaking machine** offering the **lowest energy consumption** and **highest capacity** on the market, processing up to 18t/h BD.

Its **innovative design**, featuring a **wobble disc distribution system**, ensures **optimal chip distribution** across the entire length of the knife, maximizing cutting efficiency and flake uniformity.

Compared to competitors, **SRC reduces power consumption by up to 30%**, significantly lowering **operating costs, wear part expenses**, and **dust emissions**, all while maintaining a **consistent flake thickness** for superior product quality.

Knife ring flaker

Technical features

- **Knife ring flaker** designed for high-quality particleboard production
- **Patented wobble spreader disc** for optimal chip distribution inside the machine
- **Independently driven eccentric disc** to enhance precision and efficiency
- **Optimized chip distribution** for **maximum knife cutting edge utilization**, reducing **energy consumption** and **wear costs**
- **Extensive research** to determine the ideal **cutting edge and knife configuration** (e.g., 54 knives)
- **Automated oil lubrication system** for main bearings to minimize maintenance
- **High-precision rotor** with counterknife presetting system
- **Feeding door with air cleaner** to remove heavy pollutants

Benefits

- **Homogeneous flake granularity and precise wood cutting** to enhance particleboard's physical and mechanical properties
- **Optimized edge cutting** reduces **glue consumption**
- **Very low specific energy consumption** for cost-effective operation
- **Consistent wear part consumption**, ensuring predictable maintenance costs

Different configuration according to needs

Knife ring flaker ideal for producing:

- High quality flakes for PB - Particle Board
- Flat flakes for SPB - Super Light Board
- Core layer for OSB - Oriented Strand Board

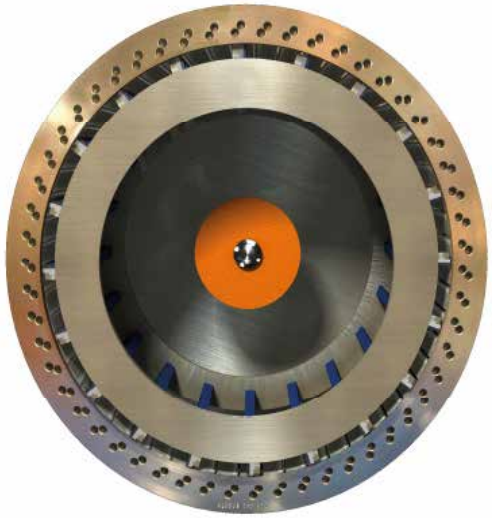
INCREASE IN PRODUCTION CAPACITY

REDUCTION OF ENERGY CONSUMPTION

IMPROVE MATERIAL QUALITY

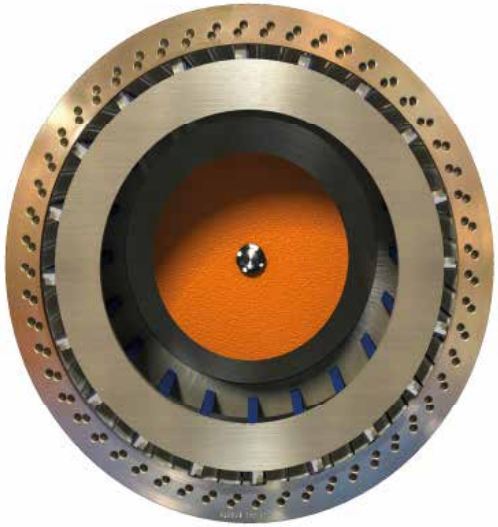
Distribution technology

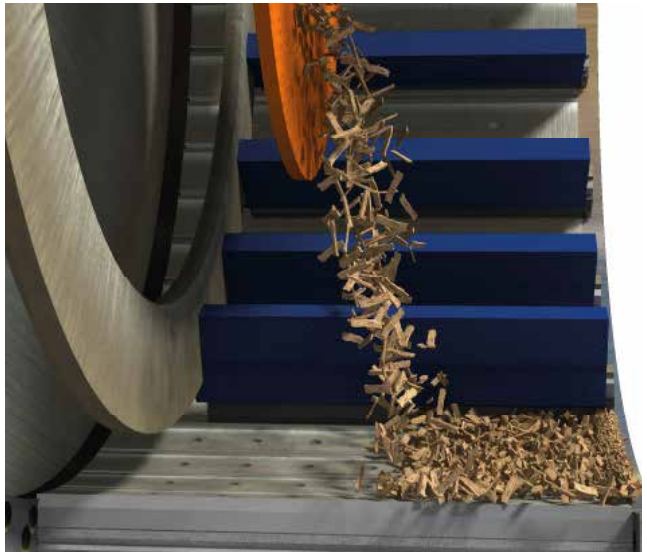
TRADITIONAL FLAKER



DISTRIBUTION DISC TOO SMALL

- Machine overloaded at knife ring rear side
- Flaking capacity reduced by 20-30% + uneven wear of knives and knife ring components





DISTRIBUTION DISC TOO BIG

- Machine overloaded at knife ring front side
- Flaking capacity reduced by 20-30% + uneven wear of knives and knife ring components

- It is impossible to find the right diameter of the disc!
- The wider the machine, the bigger the problem

Distribution technology

TRADITIONAL FLAKER

UNEVEN KNIFE WEAR

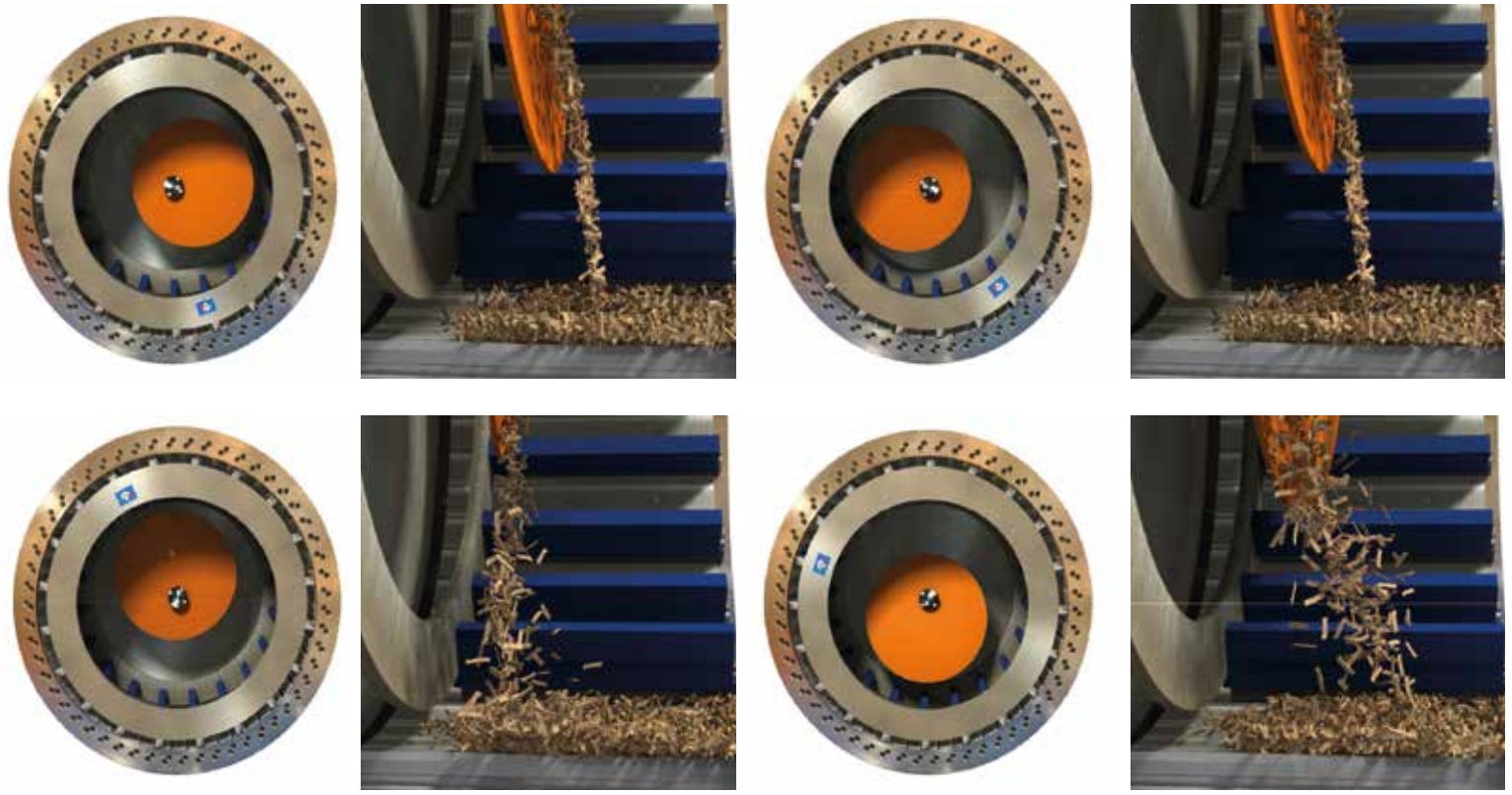
- Rapid drop in the quality of the flakes produced = toothpicks instead of flakes
- Much higher maintenance costs for knives + wear plates

Distribution technology

GLOBUS FLAKERS

WOBBLE DISC PATENTED

- The wobble spreader is an eccentric and inclined disc
- Separate drive at variable speed allows fine tuning
- Wood chips are uniformly spread across the flaking ring



BENEFITS ARE IMPRESSIVE:

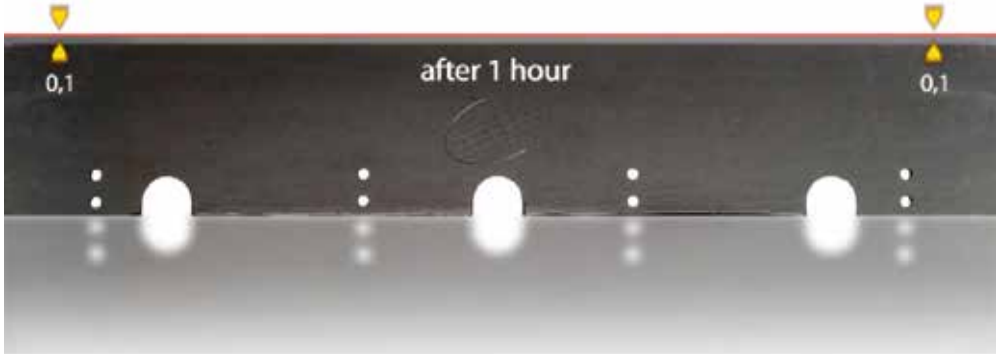
- 20-30% greater flaking capacity
- Much better flake quality
- Less electric power required
- Lower costs for wear parts, i.e. knives, wear plates, etc

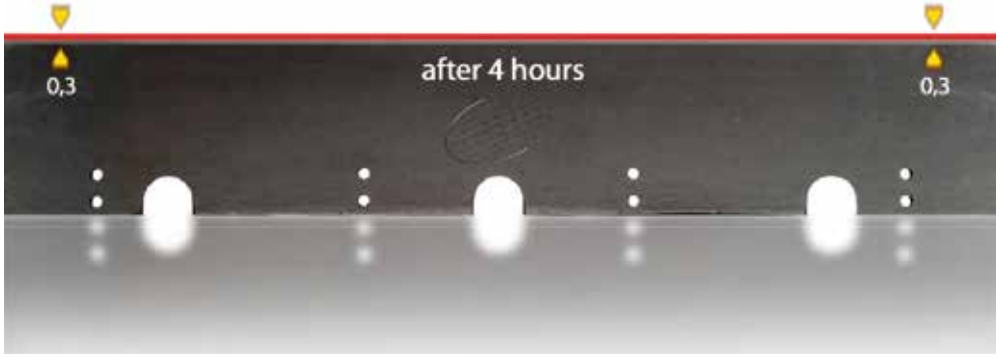
Distribution technology

GLOBUS FLAKERS

WOBBLE SPREADER REDUCED AND EVEN WEAR

- Thinner flakes
- Lower maintenance costs for knives + wear plates





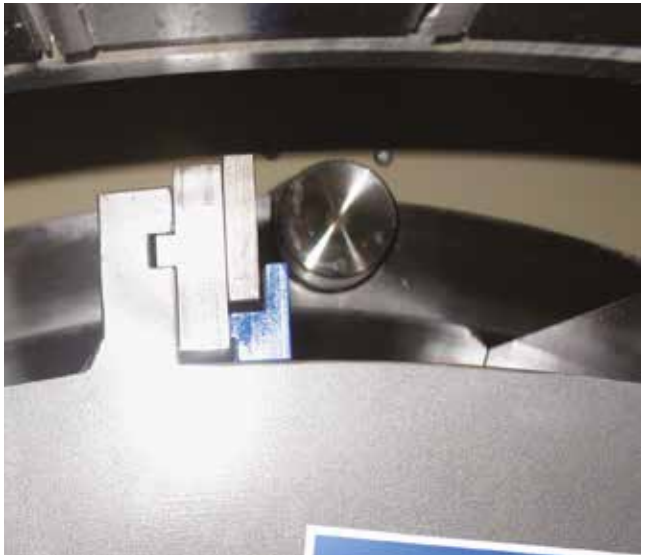
Feeding system

Feeding unit with magnetic drum

Air Cleaner ACG for stone and foreign objetcs rejecting

Technical details

- Door lock with safety device
- Driving group with counter shaft



- Easy replacement of wear parts
- Counterknife presetting

Technical details

HYDRAULIC GROUP

HYDRAULIC POWER PACK FOR RING EXTRACTION AND FORCED LUBRICATION:

- Bearing forced lubrication
- Oil level sensor
- Temperature control of the bearing and on the tank
- Cooling fan for lubrication unit

Pre-hydraulic and electrical connection

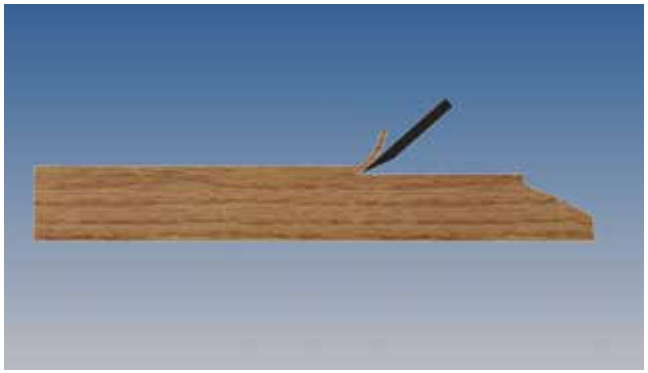
Belt for magnetic part collection

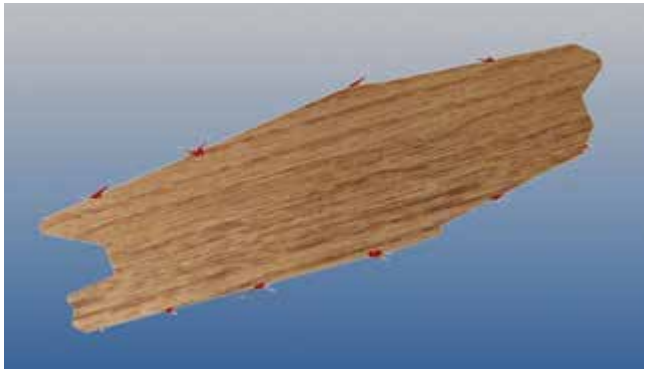
Rotor estraction device

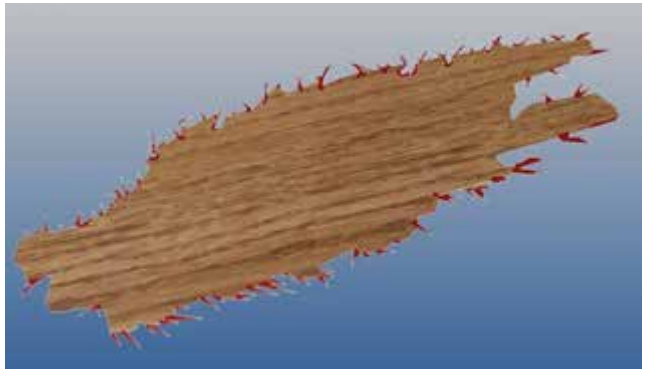
Knife ring support

Guide for support

Cutting principle







Adding knives means increase the cutting angle.
Wider cutting angle = Wood scraping instead of wood cutting.
As well as, a wrong cutting angle during the process produces bad flakes and increases the dust quantity.

INCREASE IN PRODUCTION CAPACITY

REDUCTION OF ENERGY CONSUMPTION

IMPROVE MATERIAL QUALITY

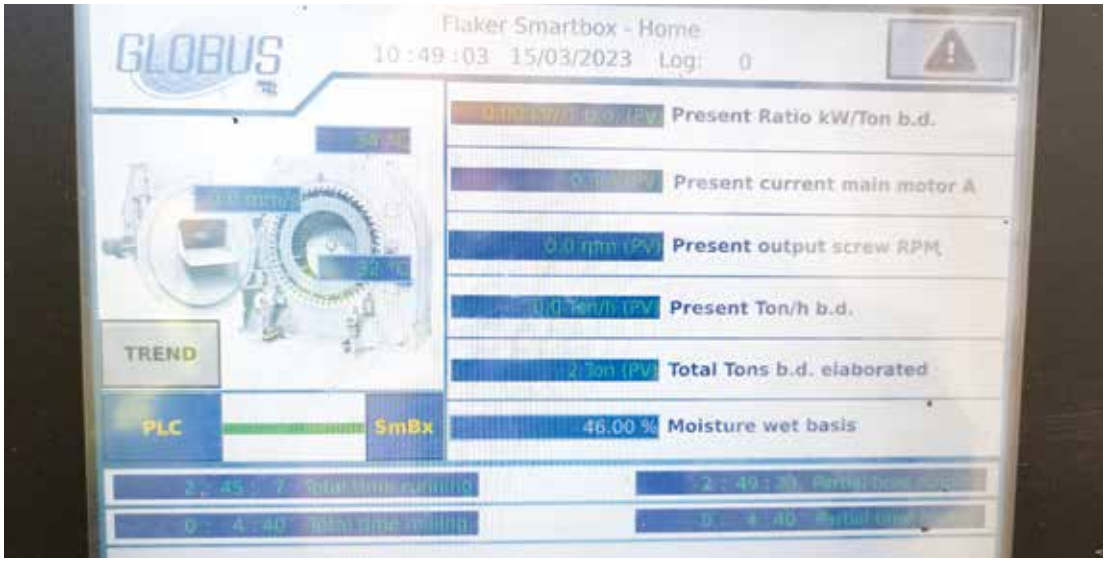
Integrated with

SMART BOX

The SmartBox reads and processes signals (analogue and digital) and is able to regulate the speed of the infeed screw according to the main motor of the flaker in order to obtain optimal energy and quality performances.

MAIN FEATURES AND ADVANTAGES:

- Automatic control of the infeed screw
- Maximize machine load
- Touch panel parameter programming directly on the flaker
- Digital PID adjustment
- Alarms to signal malfunctions
- Optimize flaking process
- Reduce specific energy consumption (kW / t / h)
- Overview of all installed sensors (temperature of the bearings, vibration control)
- Big size screen 10.1"
- Less cable, possibility to connect to the main PLC of the area via ethernet
- Remote assistance
- Continual control of the current absorbed by flaker with trends and data
- Possibility to connect to the ASR – Automatic Sharpening System



Integrated with

ASR SHARPENING ROOM

This innovative system, which has revolutionised the concept of knife sharpening, transforming knife sharpening into a fully automatic process that is closely monitored throughout all its various stages.
The system consists of a 6-axis robot, designed to carry out all the operations in a highly flexible manner and to handle an infinite number of sharpening
programmes and work process variants. The process commences with a unit which sprays the knife ring automatically with moving jets of water, after which it is brushed and dried with compressed air.
The knife ring is then placed in a dedicated, fully enclosed area where all the operations are carried out in safety without the need of any operator.
Each knife is removed automatically and then checked by an optical scanning system to determine the relative profile and how much material needs to be sharpened away.
All the operations are handled automatically and details on knives and wear plates condition are used to optimize the flaker performances.

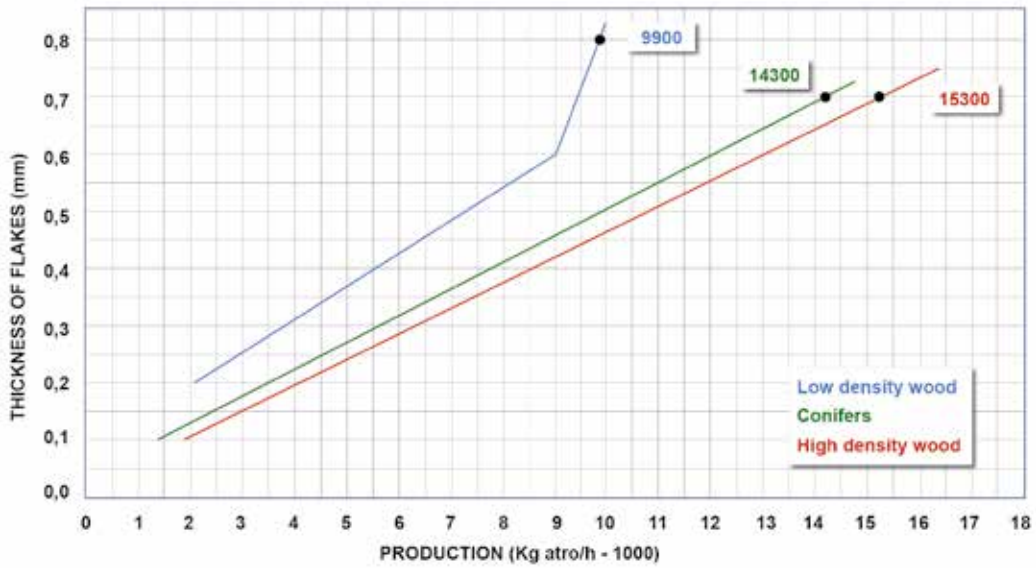
Integrated with

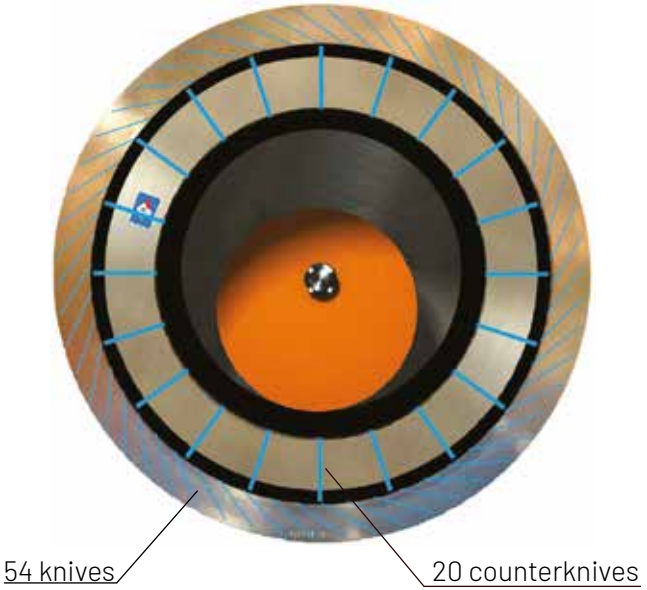
ASR SHARPENING ROOM

- All the sharpening operations are concentrated in a single enclosed chamber controlled by an independent automatic system
- Before entering the sharpening room, the knife ring is cleaned thoroughly by an automatic washing system
- The Globus sharpening system is based on a multipurpose manipulator programmable in 6 axes
- Before sharpening operations commence, the ring is to be cleaned properly by an automatic washing system
- A scanner system controls each knife profile to determine the exact amount of material that needs to be removed

- Operations are concentrated in a single enclosed chamber
- All the operations are controlled by an automatic system
- Four different program of sharpening
- Scan program to control knife profile

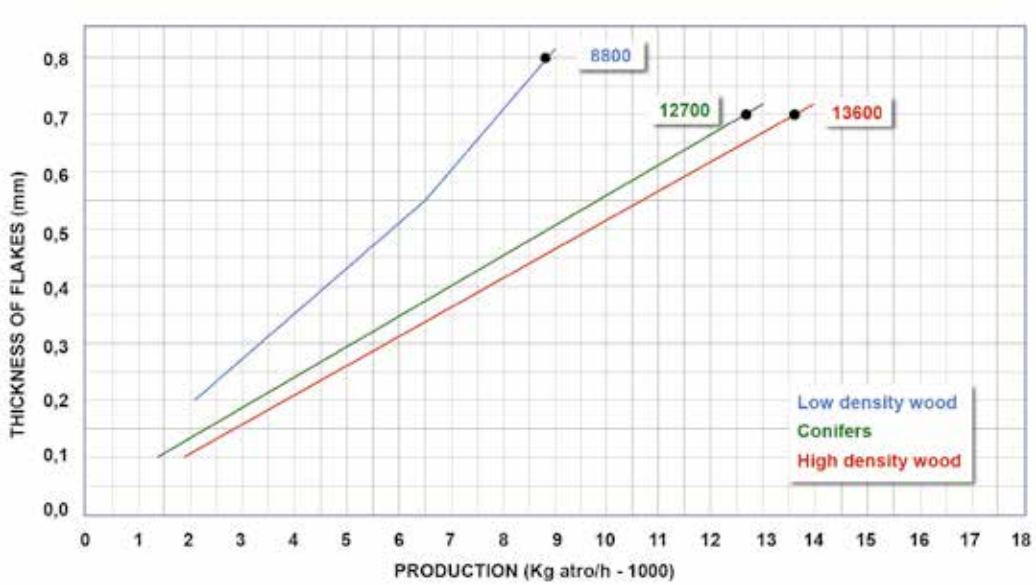
Flakes for PB - Particle Board with SRC 14.690 54-20

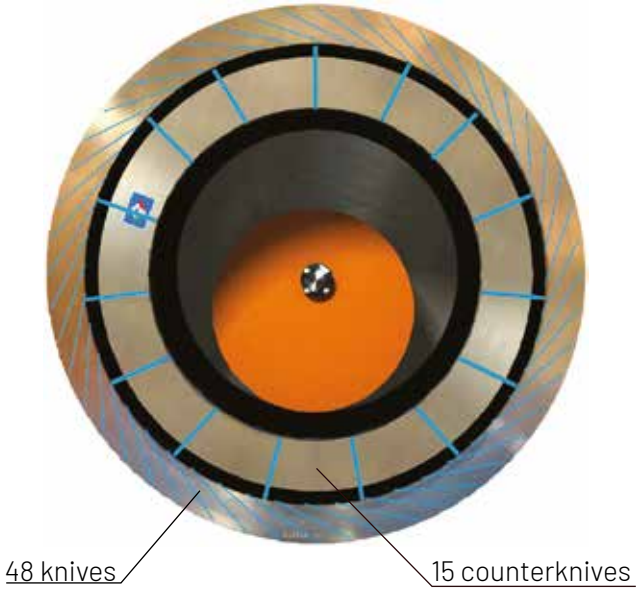




Capacity	Up to 18 t/h b.d.
Knife ring diameter	1400 mm
Knives	54
Counterknives	20
Knife dimensions	690 x 90 x 4 mm
Average power required	250 kW
Recommended motor	315 kW
Weight without motor	10000 kg

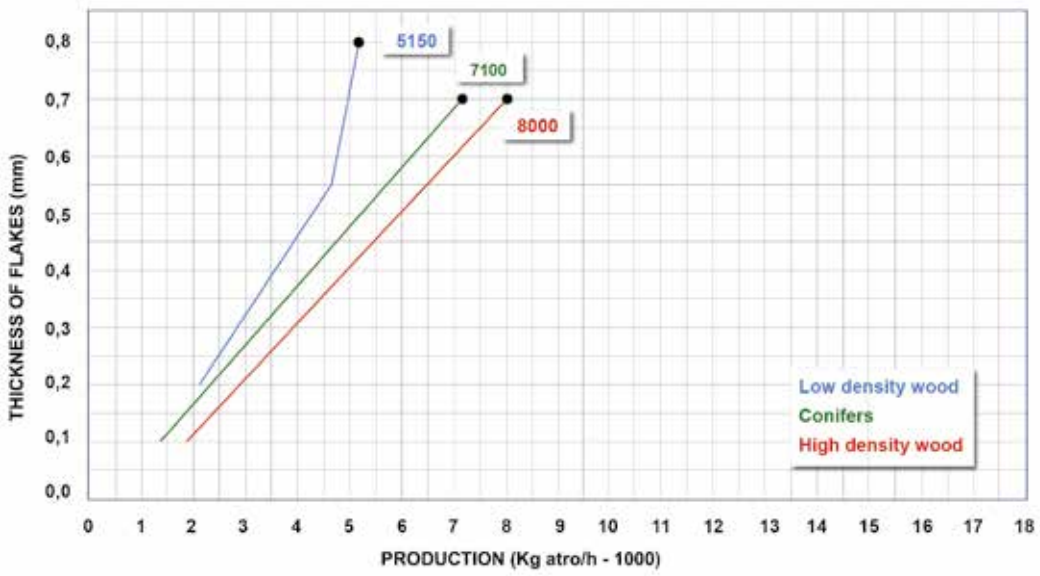
Flat flakes for SPB – Super Light Board with SRC 14.690 48-15

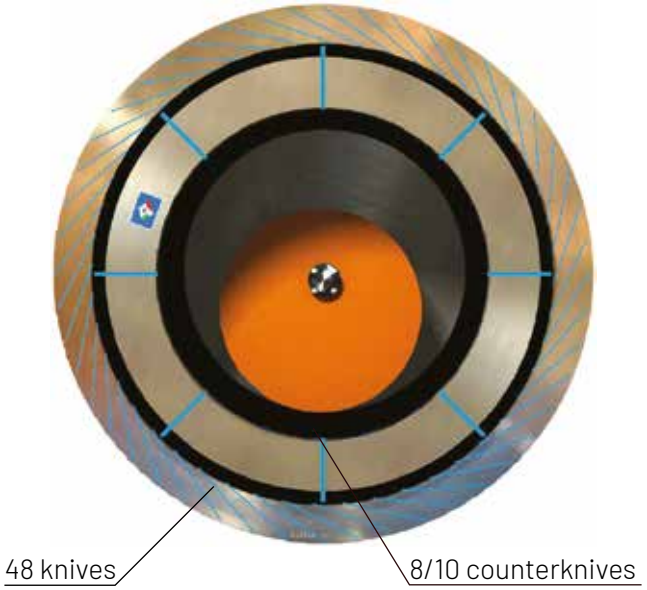




Capacity	Up to 13 t/h b.d.
Knife ring diameter	1400 mm
Knives	48
Counterknives	15
Knife dimensions	690 x 90 x 4 mm
Average power required	250 kW
Recommended motor	315 kW
Weight without motor	10000 kg

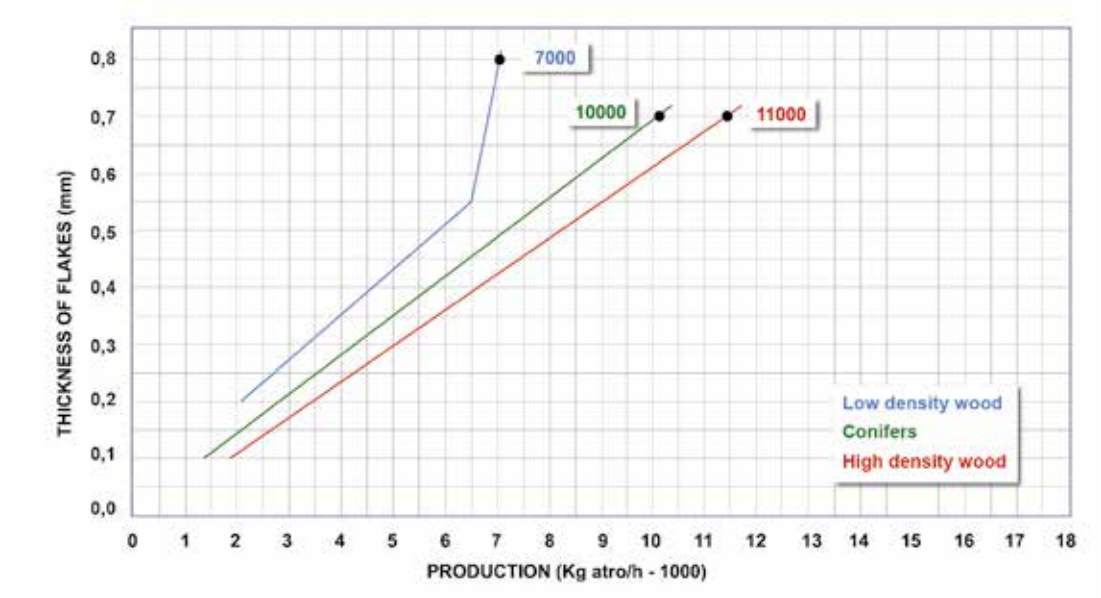
Core Layer for OSB with RSG 14.690 48-10

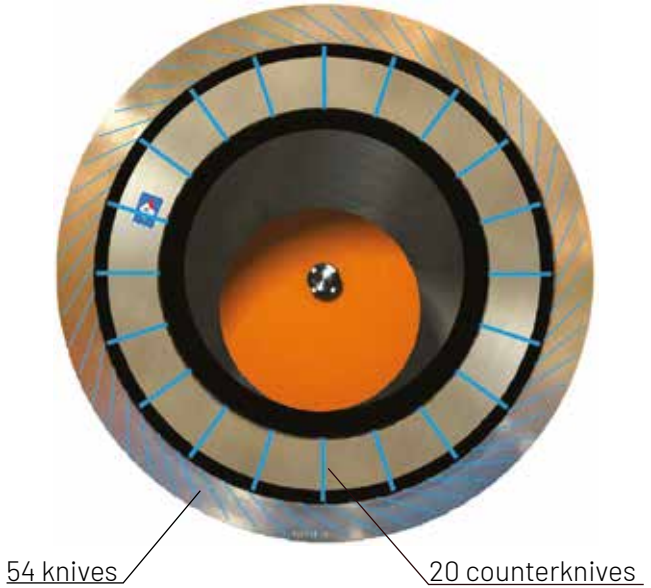




Capacity	Up to 12 t/h b.d.
Knife ring diameter	1400 mm
Knives	48
Counterknives	8 or 10
Knife dimensions	690 x 90 x 4 mm
Average power required	250 kW
Recommended motor	315 kW
Weight without motor	10000 kg

Flakes for PB - Lower capacity
SRC 14.490 54-20

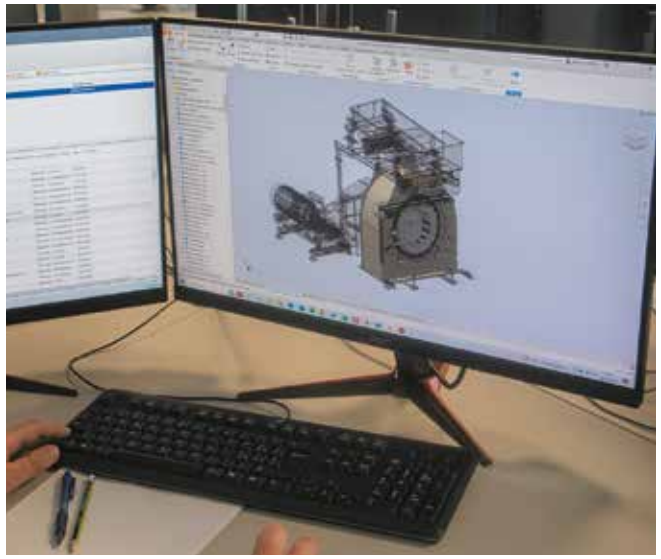




Capacity	Up to 10 t/h b.d.
Knife ring diameter	1400 mm
Knives	54
Knife dimensions	490 x 90 x 4 mm
Average power required	200 kW
Recommended motor	250 kW
Weight without motor	8500 kg

Prodotto in Italia

Our design and construction idea is based on the customer's needs and the material we need to grind.
Providing valid technological solutions is an integral part of our daily life.
Each component is designed and manufactured in Italy in our headquarters in Galliate, just 20 minutes from Milan.
Italy is a nation of great excellence in the field of technology and innovation. The spirit of research and the continuous pursuit for innovation are factors that have always characterized our growth and that have allowed us to become a reference in the world of woodworking machines.



IMALPAL Group

The IMALPAL Group is formed from the union of three major corporations, IMAL, PAL and GLOBUS, three well familiar names in engineering machinery and plants for the wood-based panel and recycling industries for over 50 years, and renowned worldwide for their long experience in the design and construction of complete plants and machinery to convert and transform raw wood-based materials and all kinds of waste in general into new ecological and eco-sustainable finished products. PSP and ITALSORT joined the group respectively in 2015 and 2020, completing the range of products.
Today the IMALPAL Group has further expanded its specialization and leadership into broader fields through new acquisitions and the continual research and development of new technologies, many of which have been patented.

The Group is able to offer tailor-made and turnkey solutions for the manufacture of machinery or complete plants for the production of PB\SPB, MDF\HDF, OSB\LSB\FOSB panels, insulation board, pellets, pressed pallets, pallet blocks, biomass energy plants, drying systems and power generation, as well as the treatment of industrial and municipal waste such as plastic, sludge and wood to maximize material recovery for the production of energy and minimize the waste to landfill sites. The systems and equipment manufactured by the IMAL-PAL Group are renowned worldwide for their top-quality construction and design, advanced software and process control and continual innovations to improve product quality and cut production costs. Over the last ten years however, in their constant endeavour to evolve and progress, the Group has adapted and applied their long experience, know-how and innovative solutions to design and develop technical solutions that are the Best Available Technologies acknowledged on a worldwide scale.

> IMAL, PAL and GLOBUS: three well familiar names in engineering machinery and plants for the wood-based panel and recycling industries for over 50 years

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