Professional 2.0-TLA-TL-TLC-TLF

TM - TB

pezzolato

# PROFESSIONAL EQUIPMENTS FOR THE FIREWOOD PROCESSING

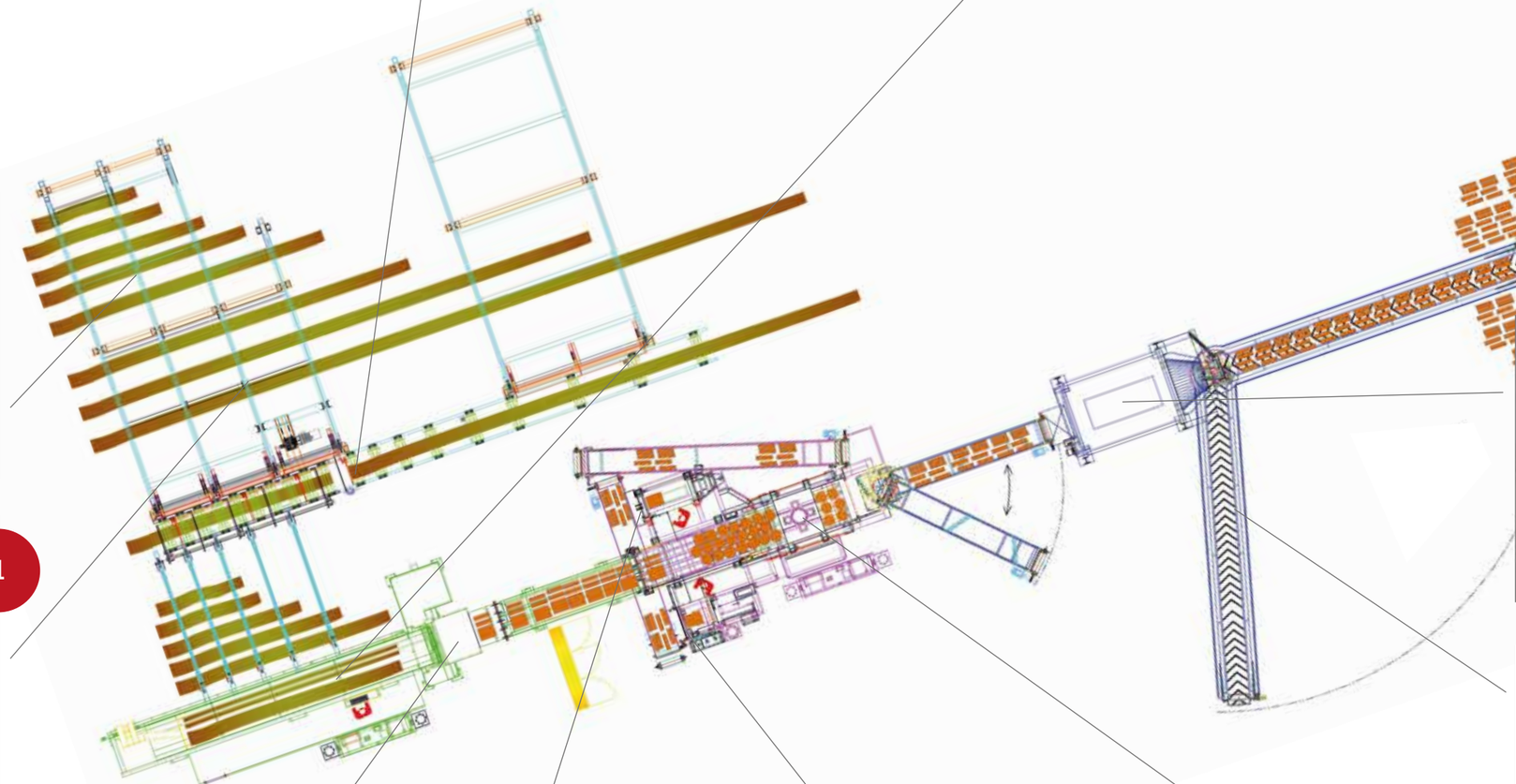
REDLINE

# DISC PROCESSORS

*With independent splitter installed in Georgia (USA)*

*Studied to produce firewood from hard wood logs with variable diameters from 10 to 70 cm and lengths up to 21 m* ***operated by 3 operators.***

1 - 4-chain log loader, 10 m length, for logs with maximal length 21 m
2 - 2-chain log loader, 10 m length
3 - Chain saw for the log section
4 - Cut group TLA 18, electric motor 75 kW
5 - Drum sieve for the cleaning of the processed material
6 - Unloading belt, 90° adjustable
7 - Vertical automatic splitting station TB 900, 40 tons, 22 kW, for diameters up to 90 cm
8 - Splitting station, 40 tons, 18,5 kW
9 - Splitting station, GENIUS grid, 30 tons, 22 kW
10 - Cut disc 1800 mm for processing logs with diameters up to 70 cm

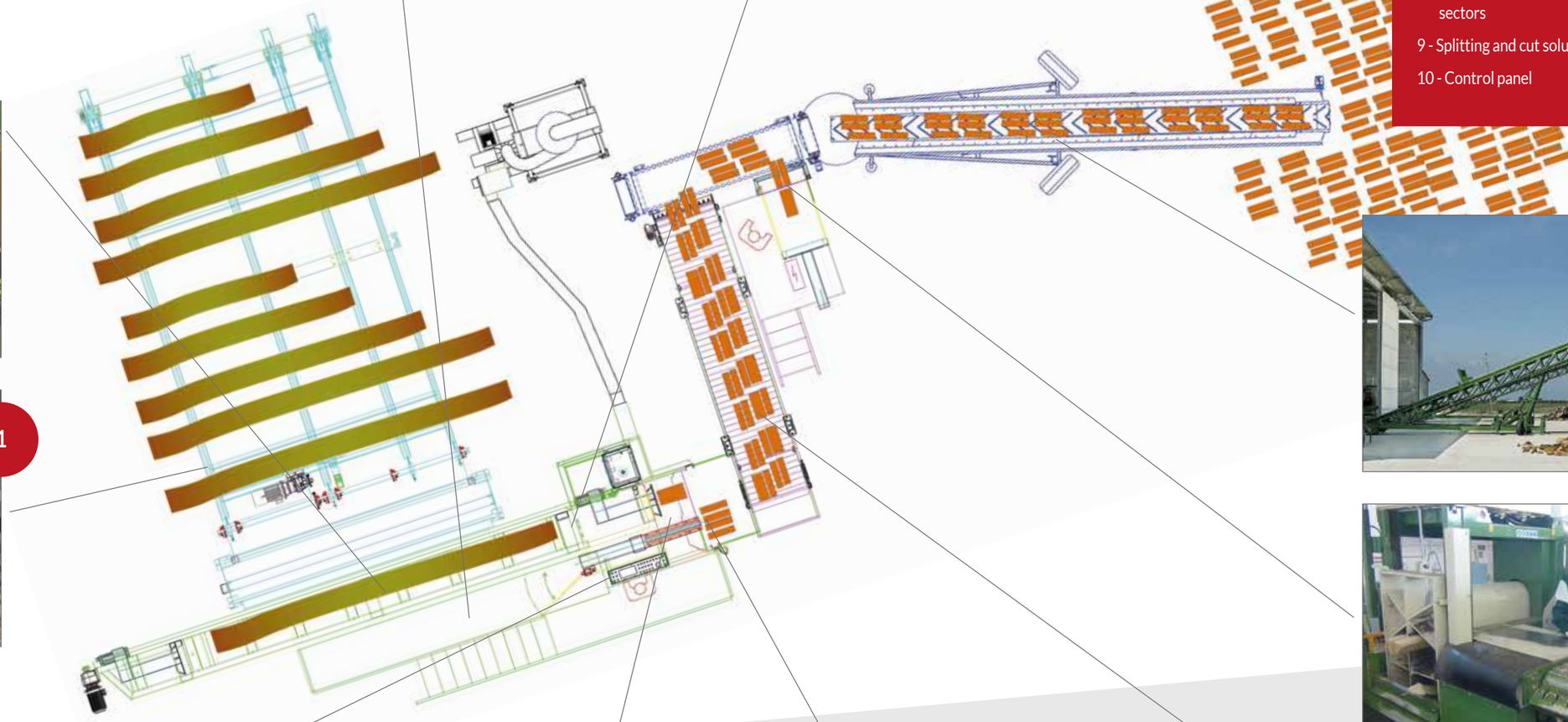


# DISC PROCESSORS

*With integrated splitter, installed in France (Rhône)*

***Operated by 1 or 2 operators according to the real configuration.***

1 - Log loader, length 8 m
2 - Feeding conveyor with loading dumpers
3 - TLC 1300, electric motor 37 kW, operator's platform with stairs
4 - Hydraulic chain wood blocking
5 - Conveyor belt for loading the processed wood
6 - Independent splitting station for refining the biggest logs
7 - S-shaped conveyor for collecting and transferring the processed wood
8 - Vertical development grid with two splitting sectors
9 - Splitting and cut solution by a single operator
10 - Control panel



# DISC PROCESSOR

*Customised equipment for firewood production, installed in Ukraine.*

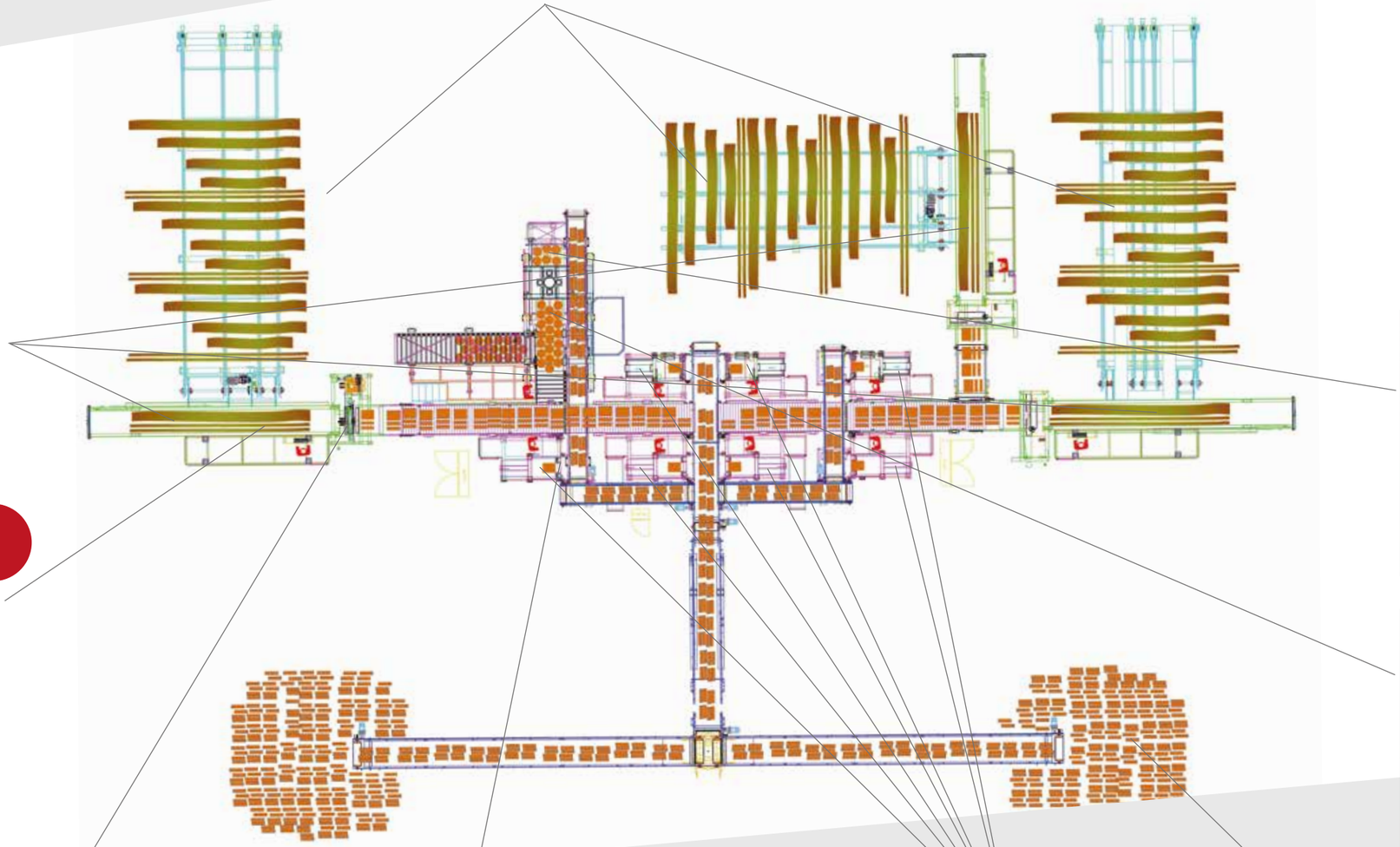
*Studied to produce firewood from hard wood logs with variable diameters from 5 to 59 cm and lengths up to 6 m for charcoal production.*

***Modular solution operated by 3 to 11 operators***

1

2

1 - N° 3 log loaders (N 2 4-chain log loaders, 10 m length + N° 1 5-chain log loader, 13 m length)
2 - Safety barriers to delimitate the working area
3 - Output material from TB 900
4 - Vertical automatic splitting station TB 900, 40 tons, 22 kW
5 - Storage area for the processed material
6 - N° 7 independent splitting stations (N°4 20 tons and N°3 32 tons)
7 - Horizontal splitting station, with automatic centering by means of photocells
8 - Hydraulic block system with mechanical jacks
9 - High performance feeding conveyor TLA 15
10 - N °3 cut stations TLA 15 - 55 kW



10

9

3

4

8

7

6

5

Professional 2.0

TLA 13

# Only cut

Firewood disc machines PROFESSIONAL 2.0, TLA and TL are the result of the technological development since the 80s, when Pezzolato started to produce the first firewood processors with high production capacity.

This machine is conceived to process mixed wood with different diameters and lengths.

From the control panel the operator can choose the cutting length, manually or in automatic; he can also operate the log loader.

Feeding with sawmill edgings

After cutting, the logs fall in a cumulating S-shaped conveyor with closed meshes, which transfers them in front of the wood splitter.

Two operators guarantee the machine highest productivity. One operator only, who cuts first and then splits, obtains anyway a good production.

All machines are provided with all safety devices in compliance with the current regulations. It allows processing wood in a reliable, safe and effective way and guarantees high production capacity.

Cumulating conveyor for cut material

Feeding with logs

Chain locking system. It work with every kind of bundles

Feeding with large diameter logs (TLA)

Feeding with large bundles of mixed material (TLA)

TLC 1000

TLC 1300

# Cut and split

The machines range called TLC, TLF are characterized by the presence of the integrated wood splitter.

Their main features are the following:
- They are operated by one operator only
- They can work manually or totally in automatic
- Speed of the cutting cycle as the disc is equipped with a hydraulic drive

From the control panel the operator can choose, manually or in automatic, the cutting length, the splitting grid positioning, the rests shape; he can also operate the log loader.

Control panel

Cut and split configuration

Only cut configuration

By automatic cut, the splitting grid moves automatically according to the wood diameter to be split.

The very wide feeding conveyor makes these machines suitable to work not only the single log but also bundles of logs with heterogeneous diameters and shapes, which do not need to be split, with the simple exclusion of the splitting grid.

Working withTLF machine, the splitting phase is very quick thanks to the positioning of the splitter. Being that in lower position with respect to the disc, it makes the cut log fall directly, thus avoiding the cut wood transferring times.

The particular shape of the machine makes it easy for the operator to see and control any stage of the working cycle with no effort.

Adjustable splitting grid (TLF model)

Feeding conveyor and wood pusher (TLF model)

Cutting disc (TLF model)

## Options

- Lifting pusher with mechanical / pneumatic system (it is not automatic with feeding conveyor from 4800 mm)
- Loading dumpers, in order to process great dimension logs. They eliminate the excessive stress on the machine body
- Equipment elevation: it facilitates the maintenance and cleaning operations

Lifting pusher with mechanical/pneumatic system

Loading dumpers

Equipment elevation



- Mobile version of the equipment: it allows the processing of the wood in the forestry site directly
- Hydraulic proportional system with ramps, including a hydraulic pump for all the functions of the cutting group; optmized management of the stroke of the wood blocking and of the disc output
- Electric heaters for hydraulic oil for the machines which have to work in cold conditions (below 0 degrees)
- Dedicated configurations in order to install equipments with mechanisations also in narrow areas
- GSM/Ethernet router for remote assistance

Mobile version

Dedicated configurations

### *Professional 2.0*

| | | |
|---|---|---|
| Disc diameter with teeth in tungsten carbide: | mm | 1000 - 1100 - 1200 |
| Feeding conveyor width: | mm | 600 |
| Maximum inlet passage: | mm | 600 x 530 |
| Maximum log diameter: | mm | 400 - 440 - 470 |
| Maximum log passage: | mm | da 3000 a 6800 |
| Electric motor power: | kW | 30 - 37 |
| Minimum tractor power: | Hp | 70 - 80 |

### *TLA 13 - 15 - 18*

| | | TLA 13 | TLA 15 | TLA 18 |
|---|---|---|---|---|
| Disc diameter with teeth in tungsten carbide: | mm | 1300 | 1500 | 1800 |
| Maximum log diameter: | mm | 490 | 590 | 690 |
| Feeding conveyor width: | mm | 800 | 800 | 1000 - 1300 |
| Maximum inlet passage: | mm | 800 x 550 | 800 x 640 | 1000 - 1300 x 750 |
| Passaggio massimo tronchi standard: | mm | from 3400 to 6800 | from 3400 to 6800 | from 3400 to 6800 |
| Potenza motore elettrico: | kW | 45 - 55 | 55 - 75 | 75 -90 |

### *TL 1800 - 2000*

| | | TL 1800 | TL 2000 |
|---|---|---|---|
| Diametro disco con denti in metallo duro: | mm | 1800 | 2000 |
| Diametro massimo tronco: | mm | 700 | 800 |
| Standard maximum log passage:: | mm | from 3400 to 6800 mm | from 3400 to 6800 mm |
| Electric motor power: | kW | 55 | 75 |

## Options

- Hydraulic log turner, in order to position extremely crooked logs in the best way to cut them
- Wood-splitter's vertical cutting grid with two splitting sectors: the first one fixed with 2+4+6 or 2+4+8 folds and the second one with 8 or 12 or 16 or 18 or 24 folds, removable for maintenance operations and interchangeable.

Hydraulic chain wood blocking

Multi-sector grid

Hydraulic log turner



- Hydraulic chain wood blocking instead of the standard guillotine device (this is suggested in order to cut wood and bundles which do not need to be split)
- Operator's platform with stairs
- Short cut system (70-100 mm), last cut included
- Rear leveller for short wood
- Safety barriers to delimitate the working area
- Extra-charge for the feeding conveyor width 1300 mm for the feeding by crane

Safety barriers to delimitate the working area

Platform for control board with stairs

### *TLF 450*

| | | TLF 450 |
|---|---|---|
| Disc diameter with teeth in tungsten carbide: | mm | 1100 |
| Maximum log diameter: | mm | 430 |
| Maximum log passage: | mm | 3550 |
| Splitting force: | Ton | 20-27-32 |
| Maximum splitting length: | mm | 660 |
| Hydraulic splitting grid/wedge: | folds | on request |
| Electric motor power: | kW | 22 - 30 |
| Minimum tractor power: | Hp | 60 |
| Diesel motor power: | Hp | 67 |

### *TLC 1000/1100 - 1200/1300 - 1500*

| | | TLC 1000 - 1100 | TLC 1200 -1300 | TLC 1500 |
|---|---|---|---|---|
| Disc diameter with teeth in tungsten carbide: | mm | 1000 - 1100 | 1200 - 1300 | 1500 |
| Maximum log diameter: | mm | 400 - 440 | 460 - 510 | 600 |
| Maximum log passage: | mm | 3400 | 3400 | 3400 |
| Splitting force: | Ton | 20 - 27 | 25/32 - 32/45 | 70 |
| Maximum splitting length: | mm | 600 - 1050 | 600 - 1050 | 600 - 1050 |
| Hydraulic splitting grid/wedge: | folds | on request | on request | on request |
| Electric motor power: | kW | 22 - 30 | 30/37 - 37/45 | 55 - 75 |
| Minimum tractor power: | Hp | 60 | 60 | - |

TM - Gruppo di taglio

TB - Gruppo di spacco

# TM - Cutting unit

The wide availability of large diameter logs, not suitable to be processed by the sawmill industry, brought the company Pezzolato to develop a new equipment for high quality firewood by processing logs with diameters even larger than 1 meter.

This equipment is divided in: TM - CUTTING UNIT with a conveyor system to cut logs of any type.

The machine presents a large thickness (30 mm) feeding cradle which can support logs with a length of 6 meters (longer on demand) and a max. diameter of 120 cm.

The logs, by means of a rear pushing unit, are pushed onto the chain saw unit and blocked there before being cut by a hydraulic guillotine system. The chain saw unit, sliding vertically, is driven by an electric motor with a power up to 22 kW.

A step-measurement system allows the electronic setting of the cut logs length. After the cut, a tilting surface, hydraulically moved, skids the cut logs on the feeding chain of the second unit, TB - SPLITTING UNIT.

Feeding cradle with rear pushing unit

Tilting surface for for offloading cut logs

# TB - Splitting unit

TB - SPLITTING UNIT is equipped with an automatic vertical splitting system, able to process any type of logs, with a diameter range varying from 300 to 1200 mm and a heigth range varying from 250 to 500 mm.

This unit conceived to process large diameter logs has an adjustable pitch feeding and is driven by an electric motor 22 kW; the splitting power can be 40 or 50 tons.

The feeding chain is strong thanks to its closed links and has a length of 1600 mm (longer on demand).

By means of this chain, the cut logs pass through the action of the splitting wedge. The dimensions of the output wood can be set electronically, from the minimal measure of 70 x 70 mm to a maximum of 150 x 150 mm.

TB 900 machine produces 18/20 bulk cubic meters per hour of cut logs with following size: 90 x 90 mm; 250 mm height.

Wedge for automatic vertical splitting system

Firewood logs with regular size and minimum wastes

## Options

- From the pulpit the operator can control all operations of the sawing unit and all associated operations such as loading, splitting and offloading, controlling the entire process
- Electronic cut log measurement:

  - minimum size 70 x 70 m;
  - maximum size 150 x 150 mm.

Automatic cutting operation

Minimum log size 70 x 70 mm

Maximum log size 150 x 150 mm

- Special splitting wedge for producing kindling can be swapped with the standard wedge.
- Chainsaw unit slides vertically over chrome bars with hydraulic cylinder and proportional control in relation to the log diameter
- Wood clamping hydraulic guillotine with the sliding system on chromed bars

Kindling 20 x 20 mm

Horizontal sliding cut-off chain

Wood clamping hydraulic guillotine

### *TB - Splitting unit*

| | | |
|---|---|---|
| Minimum log diameter: | mm | 300 |
| Maximum log diameter: | mm | 900 (TB 900) - 1200 (TB 1200) |
| Electric engine power: | kW | 22 |
| Splitting force: | Ton | 40 (TB 900) - 50 (TB 1200) |
| Cut logs length: | mm | da 250 a 500 |
| Duty-cycles/minute (stroke 500 mm): | | 8 (TB 900) – 7 (TB 1200) |
| Cut logs minimum size: | mm | 70 x 70 |
| Cut logs maximum size: | mm | 150 x 150 |
| Kindling minimum size: | mm | 20 x 20 |
| TB 900 average production capacity in 8 hours working shift: | msr | 150 |

### *TM - Cutting unit*

| | | |
|---|---|---|
| Maximum log diameter: | mm | 1200 |
| Chainsaw electric motor power: | kW | 22,5 |
| Ancillary services electric motor power: | kW | 7.5 |
| Chainsaw bar length: | mm | 1600 |

# EQUIPMENT COMPONENTS

## Logs loader

Logs loader, electro-welded structure, hydraulically operated, with variable lengths according to the user's needs.

Depending on the type of wood to be processed, Pezzolato proposes the most suitable logs loader. It can be equipped with a variable number of chains, depending on the length of the material to be handled; with log separating system and with different loading system: C-shaped or with pushers or steps with alternating movement depending on the type of logs to be processed.

Logs loader with log separating system

C-shaped loading system

Logs loader with closing infills

Loading system with pusher

Logs loader without closing infills

Logs loader length 25 meters

3 chain logs loader for 1 meter length wood and mechanical banks for containing material



# EQUIPMENT COMPONENTS

## Accumulation and trasfert conveyors for cut wood

S-shaped conveyor to transport and accumulate the cut logs to the splitter, closed steel chain composed by high resistance metal link, pitch 100 mm, 1 m width.
Also available with increased lengths to contain more material and feed more splitting stations.

Rubber belt conveyor to transport the cut logs to the splitter, 4,5 m long, 80 cm wide.

S-shaped conveyor combined with TLC 1200

S-shaped conveyor combined with TLA 15

S-shaped conveyor combined with PROF. 2.0

Flat transfert conveyor

S-shaped conveyor combined with TLA 13

*Accumulation and transfert conveyors for cut wood*

| MODEL | Length* | Width | Material | Drive |
|---|---|---|---|---|
| **Transfert conveyor NAP45** | 4,5 m | 800 mm | rubber | machine hydraulics |
| **Accumulation and transfert conveyor NAS 45** | 4,5 m | 1000 mm | Chain composed by high resistance metal link | machine hydraulics |
| **Accumulation and transfert conveyor NAS 55** | 5,5 m | 1000 mm | Chain composed by high resistance metal link | machine hydraulics |

*Also available with increased lengths to contain more material and feed more splitting stations

# EQUIPMENT COMPONENTS

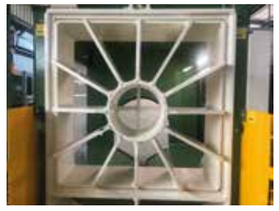
## Splitting stations

Regenerative system for cycle time reduction

Manual grid centering

Possibility of automatic grid centering by laser device which measures the log diameter. It allows to work entering the program to use in order to change folds, according to operator's requests; automatic start of the splitting cycle.

Security-light-fence in order to speed up the loading with double startup system, hand and foot controls included.



Removable for maintenance operations and interchangeable splitting sector with 10 or 12 or 16 or 18 or 24 folds

GENIUS WEDGE splitting grid designed to obtain the firewood calibration in one single step, optimising logs diameter and minimising waste

11 Ton splitting station, 2+4 folds grid

20 Ton splitting station, 2+4+6 folds grid

32 Ton splitting station, 2+4+6+16 folds grid

### *Independent wood splitting stations*

| MODEL | | 11 TON | 20 TON | 27 TON | 32 TON | 40 TON | GENIUS WEDGE |
|---|---|---|---|---|---|---|---|
| Maximum splitting passage*: | mm | 520 | 710* | 710* | 710* | 710* | 550 |
| Maximum splitting diameter: | mm | 400 | 550 | 550 | 550 | 550 | 450 |
| Splitting force: | Ton | 11 | 20 | 27 | 32 | 40 | 30 |
| Electric motor power: | kW | 7,5 | 15 | 15 | 18,5 | 18,5 | 22 |
| Cycle time: | s | 4 | 4 | 4,5 | 4,7 | 5 | 4,7 |

*Possibility of increasing the wood splitter passage up to 1100 mm



# EQUIPMENT COMPONENTS

## Vertical splitting stations

**TB 600 - 900 -1200**
Automatic vertical splitting system to process wood logs of any kind.

Automatic feeding control for the regulation of the log dimensions.

**VS 60**
Manual hydraulic wood splitter with bowed wedge with 4 orbital knives to obtain 5 firewood blocks per cycle

Automatic vertical splitter TB 900

VS 60 - Bowed wedge with 4 orbital knives

Kindling produced by TB 900 splitter

VS 60 - Double manual hydraulic control

Automatic vertical splitter TB 600

### *Vertical splitting stations*

| MODEL | | TB 600 | TB 900 | TB 1200 | VS 60 |
|---|---|---|---|---|---|
| Minimum log diameter: | mm | 300 | 300 | 300 | - |
| Maximum log diameter: | mm | 600 | 900 | 1200 | 700 |
| Splitting force: | Ton | 30 | 40 | 50 | 20 |
| Cut logs length: | mm | from 250 to 500 | from 250 to 500 | from 250 to 500 | max 500 |
| Electric motor power: | kW | 18,5 | 22 | 30 | 18,5 |
| Kindling minimum size: | mm | 20 x 20 | 20 x 20 | 20 x 20 | - |
| Maximum log size: | mm | 150 x 150 | 150 x 150 | 150 x 150 | - |
| Duty-cycles/minute (stroke 500 mm): | n° | 10 | 8 | 8 | - |

# EQUIPMENT COMPONENTS

## Conveyors for transferring and loading the processed material

Big thickness, vulcanized rubber.

Fixed frame in electro-welded structure

Driven by the hydraulics of the machine

Trailer with caster wheels

Flat conveyor for one splitting station

Slewing gear for fixing the conveyor to the floor

Flat conveyor for two splitting stations

Driven caster wheels hydraulically operated

### *Loading processed material conveyors*

| MODEL | | NE 60 | NE85 | NE100 | NE120 |
|---|---|---|---|---|---|
| Length: | m | 6 | 8,5 | 10 | 12 |
| Width: | mm | 500/600* | 500/600* | 500/600* | 500/600* |
| Maximum discharge height: | m | 3 | 4,2 | 4,8 | 5,4 |

* Recommended for logs long 500 mm

### *Transfert processed material conveyors*

| MODEL | | NPT3 | NPT4 |
|---|---|---|---|
| Length: | m | 3.5 | 5 |
| Width: | mm | 600 | 600 |



# EQUIPMENT COMPONENTS

## Cleaning systems

**ROTARY DRUM SCREEN**
Drum screener in electrowelded structure with hydraulic gear box. The machine is positioned with an inclination of 5 °. Inclination ensures that with no screw conveyor but only using rotary movement, the material moves towards the discharge area after being perfectly screened.
It's suitable for cleaning any quantity of material received each passing.

**CLEANING ROLLERS**
Cleaning rollers separate bark and residual sawdust from the logs. They can be applied to the conveyor belts carrying cut and split material.

Drum screener with 1800 mm drum diameter

Cleaning rollers combined with TB 900

Output logs without bark and residual sawdust

Cleaning rollers combined to loading conveyor

Drum screener with feeding hopper

### *Drum screener*

| MODEL | | 1400 A | 1400 B |
|---|---|---|---|
| Drum screener diameter: | mm | 1400 | 1800 |
| Drum lengh: | mm | 3200 | 3200 |
| Useful working length: | mm | 2500 | 2500 |
| Cleaning bar spacing: | mm | 40 | 40 |
| Electric motor power: | kW | 5 | 7,5 |

# EQUIPMENT COMPONENTS

## Saw-dust aspirator and pallet packer

**SAW-DUST ASPIRATOR**
Saw-dust aspirator for distancing the dust from the machine. It can be single or complete with the scraps separator and the collecting system in “big-bags” type.

**AUTOMATIC PALLET PACKER**
Machine to pack the cut and split firewood on Europallets or on pallets 1000 x 1000 mm.
Fit for any conveyor; suitable for hand loading. Hydraulic system for the handling of the pallet: it compacts the product inside the bag and makes it steady for an easyy handling.

Single aspirator

Pallet packer with electric motor drive

Pallet packer with machine hydraulics drive

Aspirator with collecting system in “big bags”

Pallets done by Pezzolato pallets packer

### *Saw-dust aspirator*

| MODEL | | AS3 | AS4 | AC4 |
|---|---|---|---|---|
| Electric motor: | kW | 3 | 4 | 4 |

### *Automatic pallet packer*

| MODEL | | 7501E | 7501G | 7502E |
|---|---|---|---|---|
| Drive: | | 3 kW electric motor | Cut/split machine’s hydraulics | Cut/split machine’s hydr + electric motor 1.1 kW |
| Pallet dimensions: | $m^3$ | 1,6 | 1,6 | 2 |
| Overall dimensions: | cm | 150 x 225 | 150 x 225 | 150 x 225 |

## Custom equipments

Attention to the customer and collaboration with specialized distributors around the world have both allowed us to achieve and consolidate our strong know-how and have given us a better understanding of industrial user needs.

Pezzolato has been designing, building and delivering large, fully customized systems for over twenty years.

# PROFESSIONAL SOLUTIONS BUILT TO LAST

www.pezzolato.it

Il progresso e la costante ricerca possono apportare nel tempo modifiche a dati tecnici e descrizioni contenute in questa brochure, senza che Pezzolato SpA possa darene preavviso agli interessati.

artbrain.it

RIVENDITORE

TM+TB | 05-2019 | ITA

Pezzolato Officine Costruzioni Meccaniche S.p.a.
Via Provinciale Revello 89, 12030 Envie (CN) - ITALIA
Tel. (+39) 0175 278077 - Mail: info@pezzolato.it