



PROFESSIONAL EQUIPMENT
FOR THE FIREWOOD PROCESSING



REDLINE



Customised industrial firewood production plant

Pezzolato has been designing, building and delivering large, fully customized systems all over the world since the mid 1980s.

The attention paid to customer feedback and the collaboration with specialised distributors around the world have enabled Pezzolato to achieve and consolidate strong know-how and an ever better understanding of the needs of industrial users.





Customised industrial firewood production plant

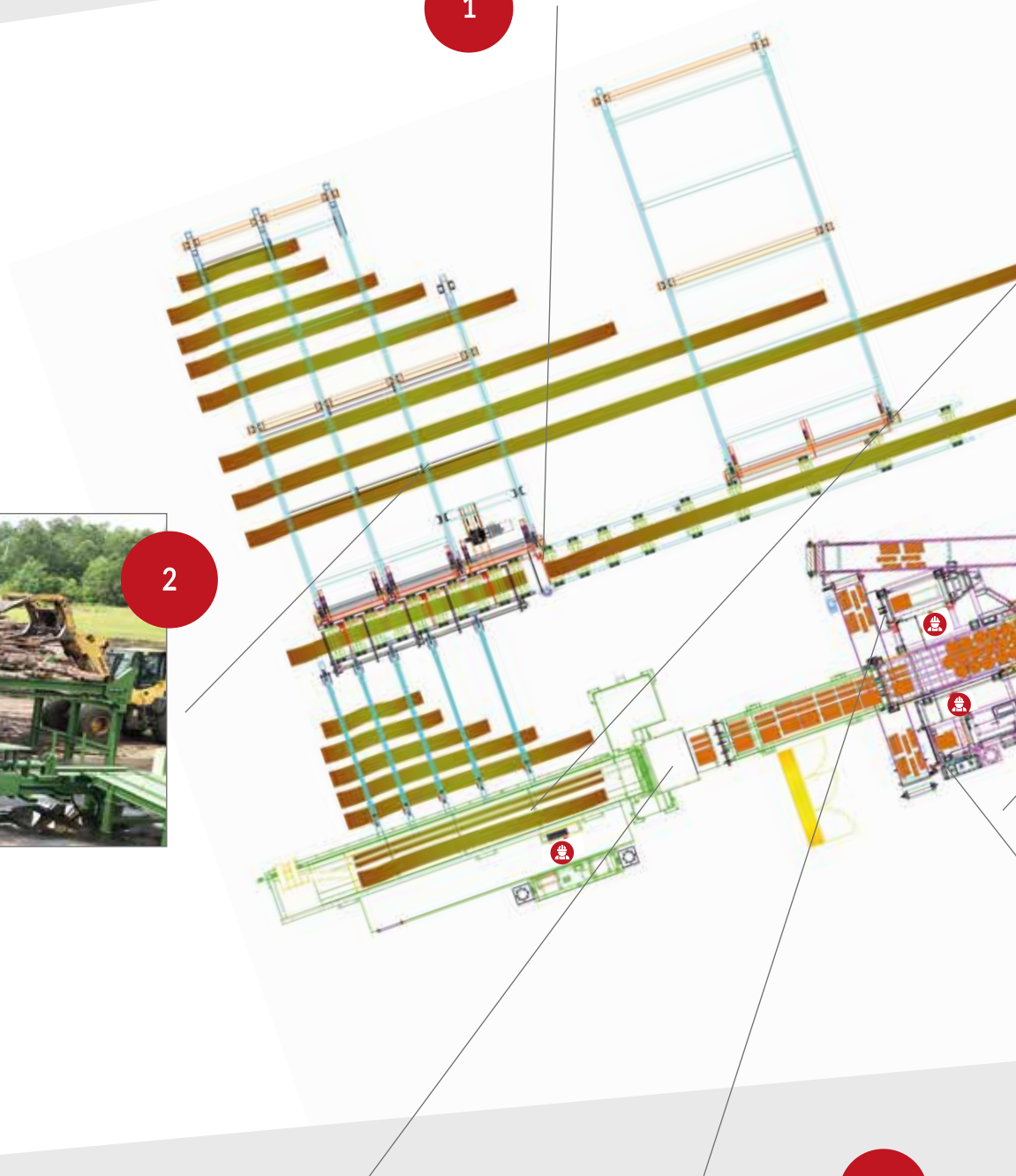
Industrial machinery with independent log splitter, designed to produce firewood from hardwood logs with diameters ranging from 10 to 70 cm and lengths up to 21 m, with three operators.



1



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3



4



9

1 - Chain saw for sectioning logs

2 - 4-chain log loader, 10 m in length

3 - Cut disc 1800 mm for processing log diameters up to 70 cm

4 - Splitting station, GENIUS grid, 30 tons, 22 kW

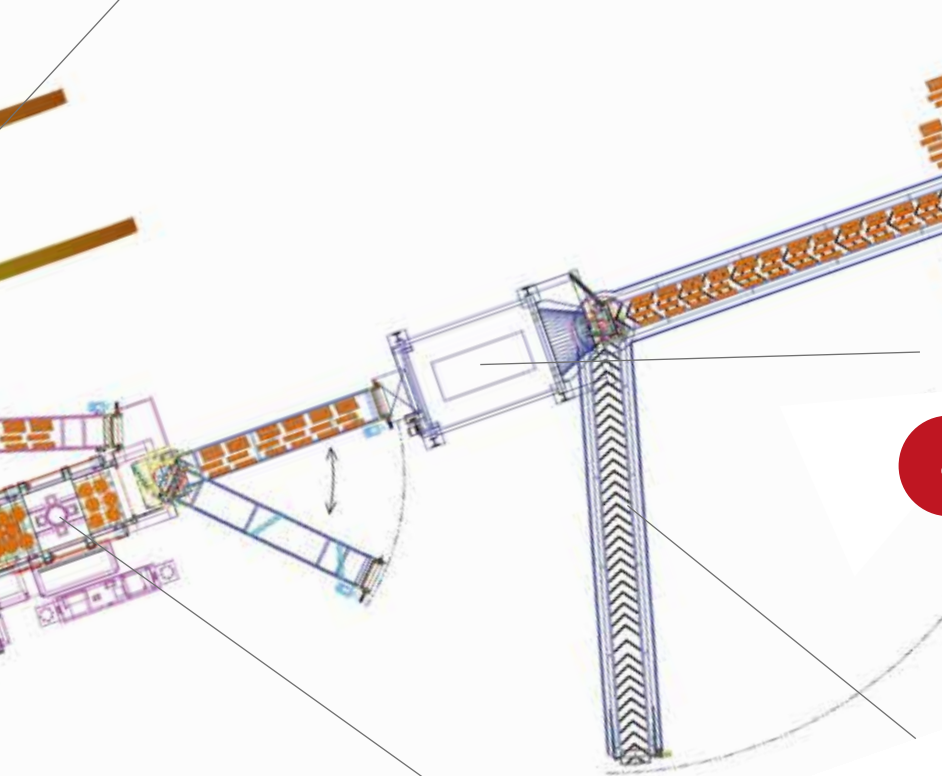
5 - Horizontal splitting station, 40 tons, 18,5 kW

6 - Vertical automatic splitting station TB 900, 40 tons, 22 kW, for diameters up to 90 cm

7 - Unloading belt, 180° adjustable

8 - Drum sieve for the cleaning of the processed material

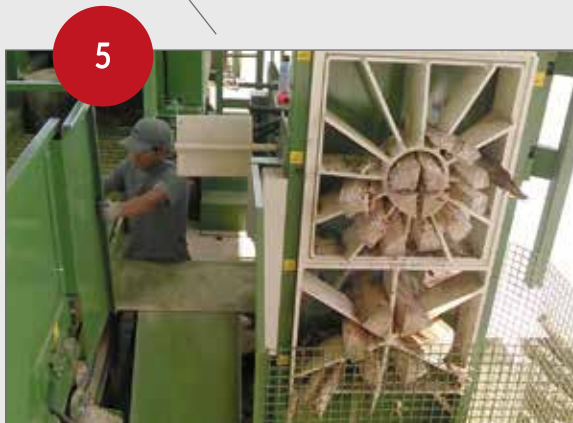
9 - Cut group TLA 18, electric motor 75 kW



8



7



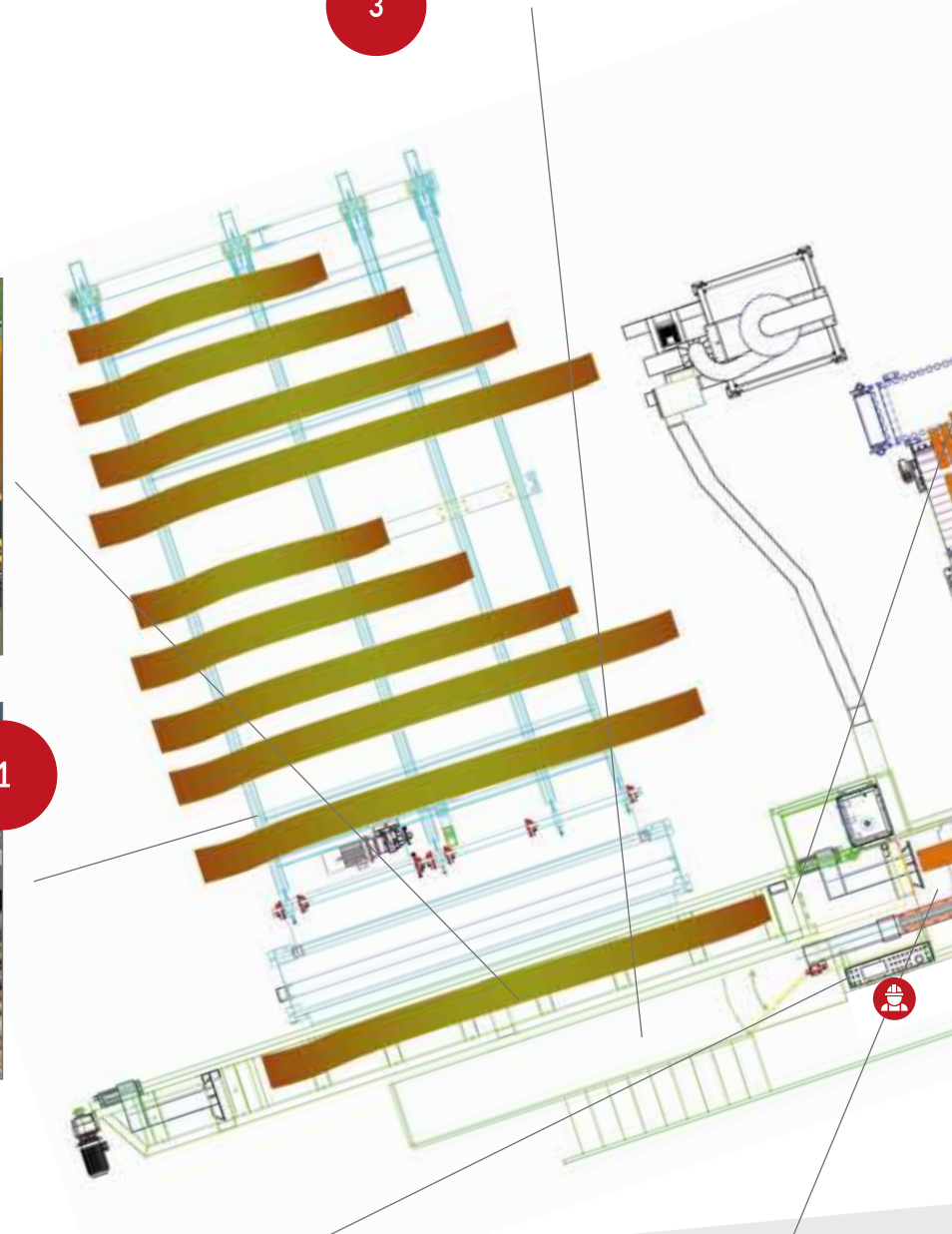
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Customised industrial firewood production plant

Industrial machinery with integrated log splitter, designed to produce firewood with the use of a variable number of operators from one to three, depending on the configuration.





1 - 4-chain log loader, 8 m in length

2 - Feeding conveyor with loading dampers

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 processing large diameter blocks

7 - S-shaped conveyor for collecting and transferring the processed wood

8 - Vertical grid with two splitting sectors

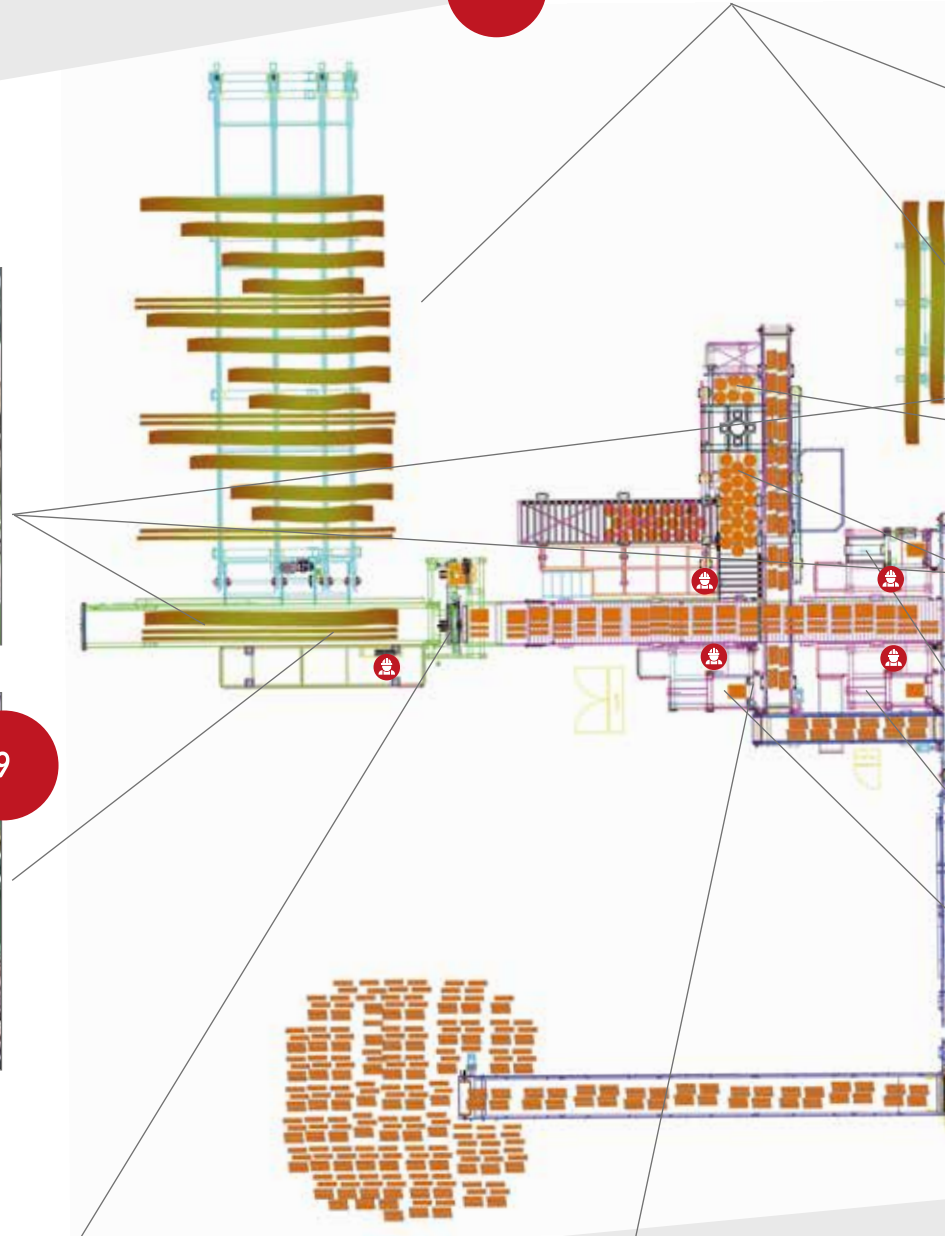
9 - Splitting and cut solution by a single operator

10 - Control panel



Customised industrial firewood production plant

Modular solution from 3 to 11 operators.
Designed to produce firewood from hardwood logs ranging from 5 to 59 cm in diameter and up to 6 m in length, for the production of charcoal.





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 protect 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

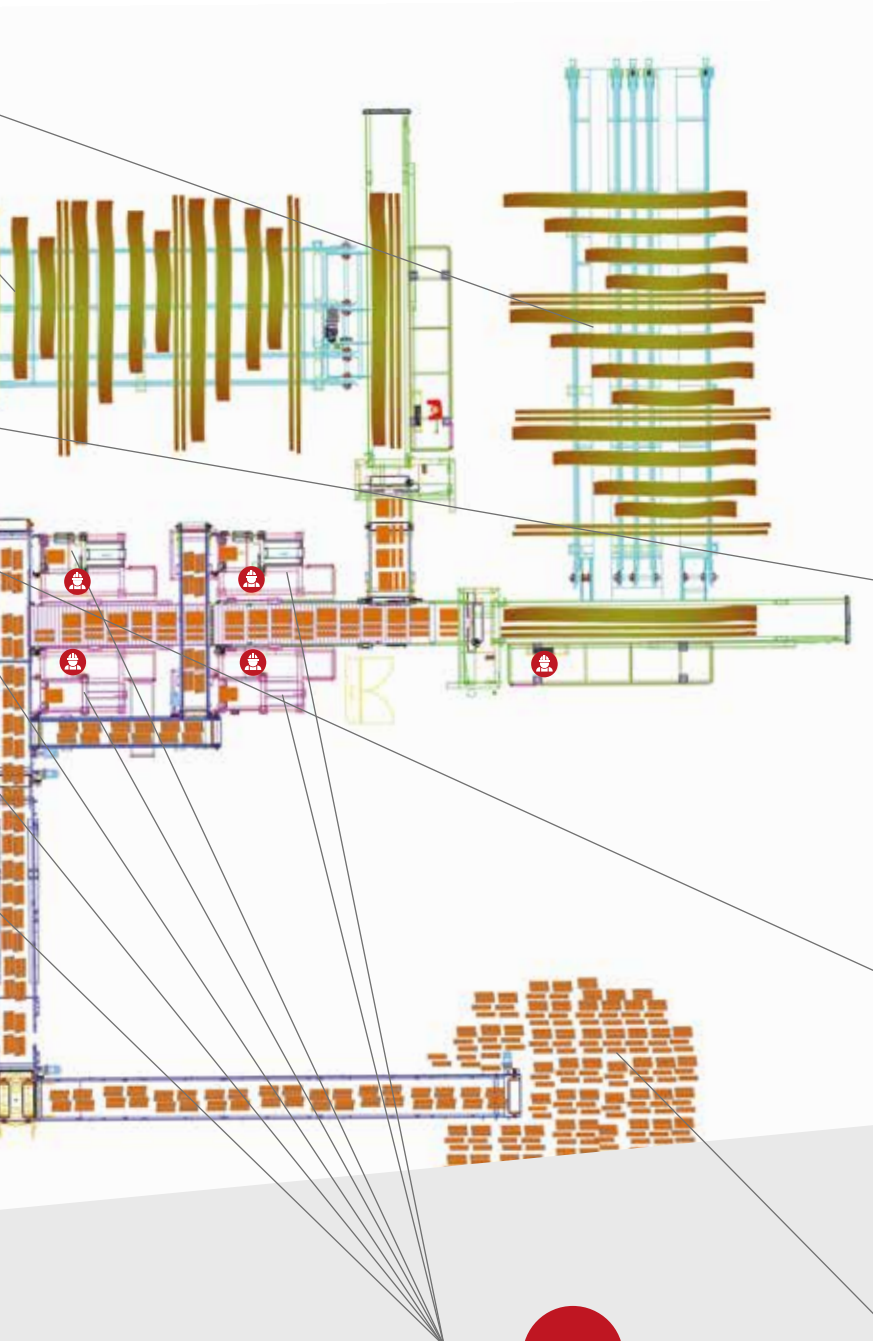
6 - N° 7 horizontal independent splitting stations (N°4 20 tons and N°3 32 tons)

7 - Safety photocells and laser centering for automatic splitting grid positioning

8 - Hydraulic block system with mechanical jacks

9 - High performance feeding conveyor TLA 15

10 - N°3 cut stations TLA 15 - 55 kW, liftable pusher



3



4



6



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Equipment components and accessories

Log loaders and timber storage/transfer belts for cut wood.

Log loaders with electro-welded structure, hydraulically driven, with variable lengths according to customer requirements. Depending on the type of wood to be processed, Pezzolato proposes the most suitable log loader, thanks to its know-how and on the basis of solutions already developed, produced and installed worldwide over the years. The log loader can be equipped with a variable number of chains (depending on the length of the material to be handled); with half-moon loading systems; with pushers or with steps with alternating movement.

"S" belt - Defined belt with "S" structure for transporting and accumulating wood, once it has been cut, produced with a robust electro-welded structure, equipped with a concealed and protected chain made of high-strength metal mesh, one metre wide.



Logs loader with closing infills



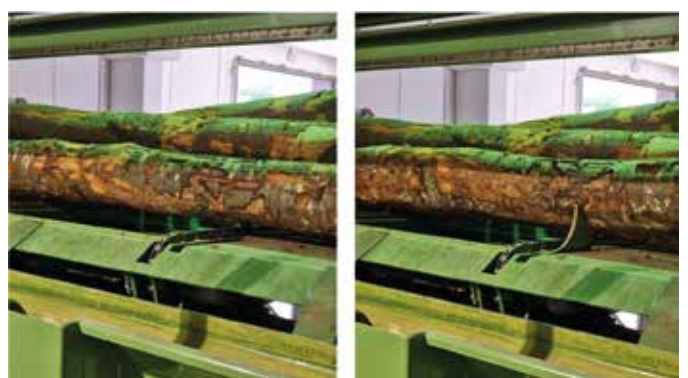
Half-moon loading system



Logs loader with closing infills



Loading system with step-feeder



Retractable step-feeder

► Accumulation and transfert conveyors for cut wood

	Length*	Width	Material	Drive
Transfert conveyor NAP45	Customizable	600/800 mm	Rubber	Hydraulics/electric
Accumulation and transfert conveyor NAS45	4,5 m	1000 mm	Chain composed by high resistance metal link	Machine hydraulics
Accumulation and transfert conveyor NAS55	5,5 m	1000 mm	Chain composed by high resistance metal link	Machine hydraulics

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

Equipment components and accessories

Loading and cleaning conveyors systems for processed wood

- ✓ Belts and conveyors for loading logs and cleaning systems.
- ✓ Thick vulcanised rubber band.
- ✓ Long life designed belts and conveyors.
- ✓ Tailor-made belts from 6 to 12 metres for discharge from 3 to 4.5 m high (for any amount of material).

DRUM SCREENER

Drum screener in electro-welded construction with hydraulic gear motor. The machine is positioned with an inclination of 5°. The inclination means that, without any auger, but only with the rotary movement, the material moves towards the outlet with perfect screening. Machine suitable for cleaning any amount of material received by passage (diameter 1.4 m) or for unloading with a shovel (diameter 1.8 m).

CLEANING ROLLERS

Hydraulically driven cleaning rollers for separating bark flakes and sawdust from logs. When combined with a PLC-controlled machine, electronic control with "no stress" system is available.



hydraulic orienting for fastened conveyor



hydraulic orienting for conveyor with wheels



Cleaning rollers for bark and residual sawdust



Drum screener for bark and residual sawdust

Equipment components and accessories

Independent splitting stations

- ✓ Regenerative system to reduce cycle time.
- ✓ Photocell protection device to speed up loading operations without compromising operator safety.
- ✓ Possibility of automatic grid centring with log diameter measuring laser. This option makes it possible to work by setting the splitting tool and choosing the programme to be used for the path change, depending on the operator's request; automatic splitting cycle start.



11 Ton splitting station, 2+4 folds grid



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



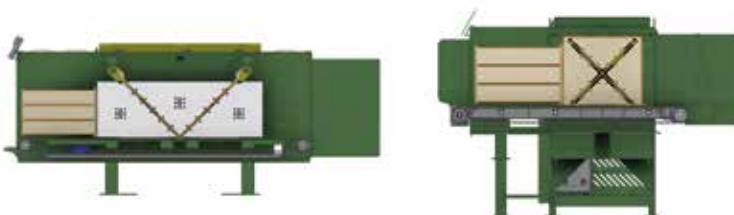
20 Ton splitting station, 2+4+6 folds grid



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



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



KX and KV automatic horizontal splitting system for processing logs of any kind.



KX650 steel belt.

Equipment components and accessories

Vertical independent splitting stations

TB 600 - 900 -1200

Automatic vertical splitting systems for processing logs of any kind.

Automatic feeding control for log size measurement.

VS 60

Manual hydraulic log splitter with curved wedge and four orbital knives for five billets per cycle.



Automatic vertical splitter



VS 60 - Bowed wedge with 4 orbital knives
VS 60 - Double manual hydraulic control



Kindling splitter

▶ Manual splitting stations

		▶ VS 60	▶ 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	700	400	550	550	550	550	450
Splitting force:	T	20	11	20	27	32	40	30
Electric motor power:	kW	18,5	7,5	15	15	18,5	18,5	22
Empty duty-cycles / minute (stroke 500 mm)*:	S	3,5"	4,5"	3"	3,5"	4"	4,3"	5,4"

* The cycle time may change in according to the diameter and hardness of the wood.

▶ Automatic splitting stations

		▶ TB 600	▶ TB 900	▶ TB 1200	▶ KX	▶ KV
Minimum log diameter:	mm	-	-	-	100	100
Maximum log diameter:	mm	600	900	1200	650	700
Splitting force:	Ton	30	40	50	20	20 + 20
Cut logs length:	mm	max 500	max 500	max 500	max 500	max 500
Electric motor power:	kW	18,5	22	30	22	30
Kindling minimum size*:	mm	20 x 20	20 x 20	20 x 20	-	20 x 20
Cycle time (stroke 500mm):	n°	10	8 up to 12	8	7	6

* The size can change in according to the log diameter and length and the type of load.



Log cutting units

The PROFESSIONAL 2.0, TLA and TL series disc machines are the technological result of a journey that began in the 1980s, when Pezzolato built the first plants for the preparation of firewood for large productions.

They are designed to process bundles of mixed wood with non-homogeneous diameters and lengths.

From the control panel the operator controls the log loader, sets the cutting length, and can set the machine to work in manual or automatic mode.



Feeding with sawmill edgings



Feeding with logs



Chain locking system. Efficient on all species of bundles



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, is also an option, based on production requirements.

All machines are provided with all safety devices in compliance with the current regulations. This configuration allows processing wood in a reliable, safe and effective way, which assures impressive production capabilities.



Cumulating conveyor for cut material



Feeding with large diameter logs (TLA)



Mechanical jacks locking system.



Log cutting and splitting units

The TLC, TLF range of machines is characterised by the integrated log splitter.

The integrated log splitter is designed to achieve maximum output by working log by log with just one operator.

With the simple exclusion of the splitting grid, these machines can also process smaller log bundles that do not need to be split.



Control panel



TLF - Cutting and splitting configuration



TLC - Cutting configuration



By choosing the automatic cut/split cycle, the splitting grid moves automatically according to the diameter of the log to be processed.

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

When working with TLF machines, the splitting phase is very fast thanks to the positioning of the log splitter directly in cascade with respect to the sawdisc, thus eliminating the time needed to transfer the cut log. The special geometry of the machine allows the operator to have a view and control of all work phases, without any additional effort.



TLC - Adjustable splitting grid



Lifting pusher



Loading deck



TL-K 650

This industrial plant consists of a TL650 cutting system that can be combined with two different types of splitting stations, the KX650 or the KV700. Introduced in 2022, it was designed to be a complete cutting-splitting system of small dimensions, but capable of processing large logs (650 to 700 mm diameter depending on the splitting station) and splitting logs producing firewood with a programmable section.

This plant is equipped with an automatic process for the elimination of waste during the cutting phase, has reduced energy consumption and an optimised cycle time in relation to the size of the logs to be produced. A solution that guarantees high productivity with a single operator.

TL650 – Cutting station

The TL650 cutting system, designed to work in semi-automatic mode with a single operator, is equipped with a SUPERCUT Hultdins 800mm saw unit with professional .404 chain, which ensures always precise cuts.

The log is pushed from behind by a feed arm. Adjustment of the cutting length (variably adjustable with a minimum end length of 220 mm) for logs up to a maximum diameter of 650 mm is carried out electronically, with the cut being ejected and the log then processed without residue or split by computer - an optimised method without a cut. PLC control is optional to make the processing totally

automatic and allow remote assistance via Ethernet router. With the PLC option, it is possible to install a hydraulic Rear log-pusher to support the last two cuts of the log, binding their correct positioning.

Another option: the lifting wood-pusher, which allows to anticipate as much as possible the loading of the new log to be cut in order to optimize the time and efficiency of the machine. The loading channel of the TL650 is equipped with two loading dumpers that support the fall of the logs in the cutting position. There is a spacious platform for the operator, with safety doors to protect the operating areas. The cutting unit is powered by a 30 kW electric motor.





KX 650 and KV 700 splitting stations

The KX 650 and KV 700 splitting stations are equipped as standard with PLC control, so that they can always work in automatic mode; they have a centralised lubrication system, which facilitates maintenance. In both solutions, the section of the firewood logs can be adjusted electronically as well as the splitting wedge movement, allowing the cycle time to be reduced.

In the KX 650 version, the mobile 'X'-shaped splitting wedge has a thrust force of 20 tonnes and it can process logs of variable lengths from 200 to 500 mm (minimum cross-section 50x50 mm). This unit, powered by a 22 kW electric motor, has a cushioned feed chain under the log splitter made of steel to better withstand wear and stress generated by splitting operations.

The KV 700 splitting unit is equipped with two mobile and independent splitting wedges, positioned in a 'V' shape, which allow logs between 150 and 500 mm in length to be processed. The unit is powered by a 30 kW electric motor and each wedge has a thrust force of 20 tonnes. The cross-section of the split logs can be adjusted electronically and, thanks to the presence of a specific optional arm, it is possible to quickly convert firewood production to fire starters with a minimum cross-section of 20 x 20 mm.

Last but not least: the log splitter feed belt is made of steel to better withstand wear and tear generated by splitting operations.



TL 650 - Control panel



K650 - Control panel



Equipment components and accessories

- ✓ Lifting wood-pusher with mechanical / pneumatic system.
- ✓ Loading dumpers, eliminate the excessive stress of large logs on the machine body during loading.

- ✓ Chain translator
- ✓ Equipment elevation: facilitates the maintenance and cleaning operations



Loading dumpers



Lifting pusher with mechanical/pneumatic system

- ✓ Mobile version of the equipment: allowing the processing of the wood in the forestry site directly

- ✓ Proportional hydraulic system with ramps, consisting of a variable displacement hydraulic pump with "Load Sensing" control system for all cutting unit functions and system accessories in general. Optimised management of stroke, timber clamping and cutting 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 equipment with mechanisations also in narrow areas

- ✓ GSM/Ethernet router for remote assistance



Mobile version



Dedicated configurations

► PROFESSIONAL 2.0

		► PROFESSIONAL 2.0
Disc diameter with teeth in tungsten carbide:	mm	1000 - 1100 - 1200
Feeding tube width:	mm	600
Maximum inlet passage:	mm	600 x 530
Maximum log diameter*:	mm	400 - 440 - 470
Maximum log passage:	mm	from 3000 to 6800
Electric motor power:	kW	30 - 37
Minimum tractor power:	Hp	70 - 80

► TLA

		► TLA 13	► TLA 15	► TLA 18	► TLA 20	► TLA 22
Disc diameter with teeth in tungsten carbide:	mm	1300	1500	1800	2000	2200
Maximum log diameter*:	mm	510	590	710	780	850
Feeding tube width:	mm	800	800	1000	1000	1000
Maximum inlet passage:	mm	800 x 550	800 x 640	1000 x 750	1000 x 820	1000 x 880
Maximum log passage (std):	m	from 3,4 to 6,8	from 3,4 to 6,8	from 3,4 to 6,8	from 3,4 to 6,8	from 3,4 to 6,8
Electric motor power:	kW	45 - 55	55 - 75	75 - 90	110-132	110-132

► TL

		► TL 650
Maximum log diameter (HARVESTER bar 800 mm)*:	mm	650**
Feeding tube width:	mm	650
Maximum log passage:	mm	3400
Electric motor power:	kW	30

* The splitting section can vary according to the diameter and length of the log and to the loading type.

** Available sawdisc Ø 1200 mm with teeth in tungsten carbide; maximum log Ø 470 mm.



Options

- ✓ Hydraulic log turner, to position extremely crooked and larger logs for cutting.

- ✓ 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 10 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



Safety barriers to delimitate the working area



Platform for control board with stairs

▶ TLF

		▶ 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

		▶ 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 (std):	mm	from 3400 to 6800	from 3400 to 6800	from 3400 to 6800
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	70	-

* The splitting section can vary according to the diameter and length of the log and to the loading type.



TM - Cutting unit

The ever-increasing supply of large-diameter logs that are not suitable for producing material for industry (saw-mills) led Pezzolato S.p.A. to create a plant that allows high quality firewood to be obtained by processing logs with a diameter of more than one metre.

The industrial machinery consists first of all of a cutting unit (TM) with a chain system to cut logs of any kind.

The machine has a thick (30 mm) feeding tube that can hold logs up to 6 m long and in the standard version up to 120 cm in diameter.

The logs, thanks to the action of a rear pusher, are brought to the log-cutting chain by a hydraulic guillotine system before being cut. The horizontally sliding saw chain operates with a vertical movement and is driven by a 22 kW electric motor. The length of the log can be measured using photocells, while the positioning of the cut, the descent of the chain and the ascent of the clamping and the cutting cycle can be controlled either manually or automatically.

The evacuation of the cut logs takes place by falling or with a hydraulic tilting table towards the splitting unit (TB).



Feeding tube with rear pushing unit



Log loader and damper arm



TB - Splitting Group

The splitting unit (TB) consists of an automatic vertical splitting system for processing logs of any kind with diameters ranging from 300 to 1200 mm and lengths of up to 500 mm.

The machine for large-diameter logs, with adjustable feed rate, is driven by an electric motor of 30 to 50 kW and the splitting force can be 40 or 50 tonnes.

The machine has a 1.6 m long, closed-link feed chain, which brings the logs under the action of the splitting wedge.

The size of the split log is set electronically and ranges from a minimum size of 70 x 70 mm to a maximum size of 150 x 150 mm, with a minimum variable depending on the size of the log.

The TB splitting unit in the 1200 mm version produces 21 cubic metres of solid wood per hour, considering 250 mm long logs with a cross-section of 100 x 100 mm.



Wedge for automatic vertical splitting system



Firewood logs with regular size and minimum wastes



Equipment components and accessories

- ✓ Raised platform with control panel: a single operator can perform all cutting/splitting operations and control the entire process.

- ✓ Electronic setting of the billet measurement: the splitting section is variable according to the length and diameter of the billet and together with the type of loading.



Automatic cutting operation



Log size: 150 x 150 mm



Kindling 20 x 20 mm

- ✓ Special wedge for fire-starter production, interchangeable with standard wedge.
- ✓ Cut-off chain with vertical movement on chrome-plated bars, with hydraulic cylinder and proportional control in relation to log diameter.
- ✓ Hydraulic "guillotine" log clamping, with sliding system on chrome-plated bars.
- ✓ Hydraulic motor for reduction of cut-off chain absorption peaks.



TM-TB - Control panel



Horizontal sliding cut-off chain



Wood clamping hydraulic guillotine

▶ *TM - Cutting unit*

		▶ TM 1200
Maximum log diameter:	mm	1200
Chainsaw electric motor power:	kW	22
Ancillary services electric motor power:	kW	7.5
Chainsaw bar length:	mm	1600

▶ *TB - Splitting Group*

		▶ TB 900	▶ TB 1200
Minimum log diameter:	mm	300	300
Maximum log diameter:	mm	900	1200
Electric engine power:	kW	22	30
Splitting force:	Ton	40	50
Cut logs length:	mm	max 500	max 500
Duty-cycles/minute (stroke 500 mm):	s	from 8 to 12	8
Kindling minimum size*:	mm	20 x 20	20 x 20

* The section may change in according to the diameter and length of the log and the type of load.



TM-TB 600

A fully hydraulic combined machine with an automatic vertical splitting station for processing logs with a diameter of up to 600 mm.

The TM 600 cutting apparatus consists of a feeding system with 3 motorised rollers (600 mm interaxis) and a toothed chain 1400 mm long, which conveys the material to the cut-off chain capable of cutting logs up to 600 mm in diameter.

The hydraulically-operated cut-off machine can cut logs with lengths ranging from 200 to 500 mm. The cut logs are transferred to the automatic splitting station (TB 600) by a 1400 mm long feed chain.





The automatic vertical splitting station (TB 600) is capable of processing logs of any diameter between 300 and 600 mm.

For the production of fire-starters, diameters of less than 300 mm are accepted, depending on the length (which can be as little as 50 mm).

The feeding is electronically controlled depending on the size of the log to be obtained (minimum size of fire starter 20 x 20 mm) and the pushing force of the log splitter is 30 tonnes.

Productivity, with a piston stroke of 500 mm, is 10 cycles per minute.

► *TM-TB*

	► TM-TB 600	
Feeding logs chain length	mm	1400
Driven rollers for feeding logs	n°	3
Maximum cutting diameter	mm	600
Minimum cutting length last cut	mm	200
Maximum cutting length	mm	500
Transferring cut logs infeed chain length	mm	1600
Maximum splitting diameter	mm	600
Minimum splitting diameter	mm	300
Splitting force	Ton	30
Kindling minimum size	mm	20 x 20
Electric engine power (2x)	kW	18,5



3-chain loading deck, 4 meters in length



Kindling production



VSP 60.60

Combined machine, fully hydraulic and with manual controls, for processing logs with diameters of up to 600 mm.

The cutting system consists of a solid 2000 mm long feed chain, which transports the material to the cut-off chain capable of cutting diameters of up to 600 mm. The hydraulically driven cut-off chain allows firewood logs with lengths ranging from 200 to 500 mm to be obtained. The cut logs are transferred to the splitting station by motorised rollers.



Photocell for automatic log length measurement



Chain saw



Motorized rollers table for transferring cut logs



The manually operated hydraulic double log splitter with a thrust force of 20 tonnes consists of a curved wedge with four orbital knives that allow five logs to be split per work cycle.

The maximum splitting height is 500 mm for diameters up to 700 mm. After the log splitter, the machine can be equipped with a belt to evacuate the processed material, with a loading capacity of up to 3.3 metres.

The machine is designed so that even a single operator, alternating between splitting and cutting operations, can achieve satisfactory results. With two simultaneous operators, productivity is simply outstanding!

► VSP 60.60

		► VSP 60.60
Length of toothed log feeding chain	mm	2000
Maximum cutting diameter	mm	600
Minimum cutting length	mm	200
Maximum cutting length	mm	500
Motorised rollers for moving cut logs	n°	12
Maximum splitting diameter	mm	700
Maximum splitting height	mm	500
Splitting force	Ton	20
Minimum power required from tractor	Hp	40
Electric engine power	kW	18,5
Diesel engine power	Hp	52



Wedge with 4 orbital blades producing 5 logs per cycle



Double manual hydraulic control for wood splitter Wedge

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DEALER

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