

FD 2200 - FD 2200 TS STAGES



**AGRIGARDEN MACHINES** 

# GRILLO designs and builds machine with man in mind, to transform work into pleasure

## **FD 2200** and



#### Grillo: a brand that guarantees reliability and solidity over time.

For over 60 years our company has been investing in innovation, perfecting our range of products, improving production technologies at our premises, enhancing both the customer and spare parts services. This made it possible for Grillo to deliver quality and reliability that guarantee the long-term value of each single machine.



## **FD 2200 TS**

#### Your best choice for professional green maintenance

The FD 2200 and FD 2200 TS are the maximum expression of technology and performance currently obtainable from any hydrostatic mower with grass collection.

They have permanent 4WD system, front cutting deck and spacious grass catcher with raised discharge height. Even the most demanding user will be satisfied with the quality achieved by these machines thanks to their modern, powerful, reliable and low-emission STAGE 5 engines, the 62 cm steering radius for the FD 2200 and 60 cm for the FD 2200 TS, their unique manoeuvrability, their excellent stability on slopes, the amazing cutting capacity of their front cutting deck combined with a collection system able to compact grass into the grass-catcher.



both the FD 2200 and FD 2200 TS have a high hourly output in large open spaces as well as in smaller

The stability on slopes is guaranteed by the carefully engineered weight distribution and by the

The new **STAGE 5** engines 4TNV88C and 3TNV88C protect health and environment by reducing emissions.

They are equipped with EGR valve and DPF particulate filter with replaceable cartridge.

Thanks to their advanced combustion technology, no other additives such as DEF/AdBlue are needed to reduce emissions.

These engines are equipped with an electronic fuel injection system, controlled via a BOSCH electronic control unit, to optimise consumption and performances.

This electronic control unit records, saves and sends all the engine parameters via CAN-BUS. In addition, these engines are designed for longer service intervals, reducing therefore machine downtime.



# FD 2200 - FD 2200 TS

### **High reliability**



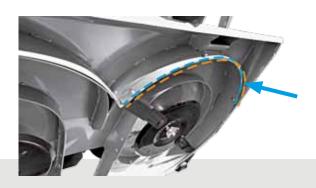




The grass-catcher of the **FD 2200** and **FD 2200 TS** feature a raised discharge height of respectively **230 and 250 cm** plus a rear overhang of respectively **30 and 50 cm**, allowing the operator to easily unload grass on trucks.

Their large wheels with "turf" profile help to reduce the scalping of the lawn even when the grass-catcher is full. The rear pivoting axle allows the operator to climb over sidewalks and kerbs while keeping the 4WD traction on uneven ground.

The FD 2200 and FD 2200 TS are suitable for any cutting conditions and are also ideal for collecting leaves.



Their cutting decks are equipped as standard with adjustable steel baffles to increase their suction capacity.

They are easily mounted on the cutting deck and are ideal to collect leaves and to clean up the lawn after scarification.



#### Not just a mower!

# FD 2200 - FD 2200 TS

The FD 2200 and FD 2200 TS can be equipped with a 160 cm all-purpose flail to thoroughly clean rough ground. The cutting height can be adjusted from 2 cm to 10 cm. This all-purpose flail is fitted with a rear anti-scalp roller, transmission with helical bevel gear for reduced noise emissions, and front solid puncture-proof wheels.

The flail is delivered as standard with 50 pairs of Y-shaped mulching blades (1) to thinly grind the grass.

A hammer blade kit (2) and a scarifier blade kit (3) are available as optional. It is also possible to combine blades (4) and (5) to cut and scarify at the same time.

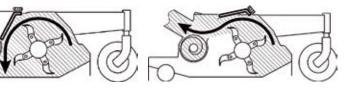






**REAR DISCHARGE** 

**COLLECTION** 



All-purpose flail 160 cm with collection, applicable on FD 2200 and FD 2200 TS. The operator can shift from collection to discharge mode in just a few seconds by changing the position of a bulkhead, with no need to replace the blades.

It is delivered as standard with hammer blades (2) for a better quality cut. The scarifier blade kit (3) is optional and it allows the flail to be transformed into a professional scarifier. Thanks to the possibility of mounting the scarifier blades together with the hammer blades (4), it is also possible to perform cutting and scarifying operations at the same time, deciding whether to collect or discharge the grass on the ground.



1 Flail blade-provided as standard 2 Hammer blade 3 Scarifier blade



Possible combinations for multi-purpose jobs



For the winter season, the **FD 2200** and FD 2200 TS can be equipped with a 175 cm orientable snow blade (+/-30°) with rubber end, hydraulically-operated, easy to handle and highly efficient.



Two cabins are available: one with heating for the FD 2200 and FD 2200 TS, and one with heating plus air onditioning for the FD 2200 TS.

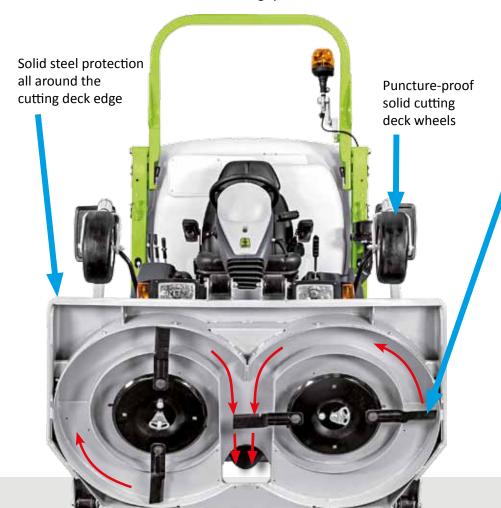
## **FD 2200**

### A well-done job and a flawless cut under any condition

The FD 2200 is fitted with a 155 cm cutting deck with collection, featuring a steel frame and anti-scalp wheels with bearings. The edge of the cutting deck is reinforced with 20 mm solid steel protection in order to eliminate wear issues from contact with kerbs and sidewalks.

The cutting deck is fitted with a cardan joint transmission and bevel gearboxes made of spheroid cast-iron with helical bevel gears in oil-bath. The blade holders are fastened to the hubs with bolts and lock plates to prevent loosening.

The blade hubs are equipped with dust seals to prevent oil gaskets from being damaged through accidental contact with plastic material or steel wire. The two robust cutting deck floating springs can be adjusted to reduce the ground pressure of the cutting deck wheels on the lawn and to increase the grip of the machine front wheels.



The blades are mounted on discs and are fitted with anti-shock retractable blade tips to protect the transmission from impacts with hidden obstacles.

## The blades are contra-rotating to collect all the cut grass.

The cutting deck can be easily tilted for inspection, transport and maintenance **WITHOUT** detaching the loading chute and the cardan joint.

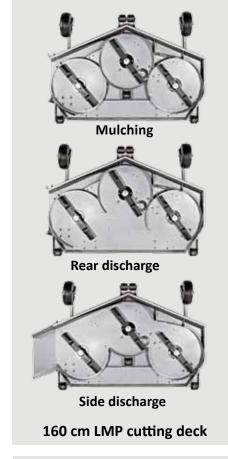
**The FD 2200** can also be fitted with a 160 cm cutting deck with triple function: mulching, rear discharge and side discharge.

This cutting deck is delivered with two sets of blades as standard.

The cutting height adjustment is simple and precise: it is carried out manually on the cutting deck via four pins and it ranges from 25 to 110 mm.

An optional kit to increase the cutting height up to **240 mm** is also available.

This kit is used under specific special conditions (e.g. for the cut of heather) and it is very much appreciated in some markets.



The 155 cm cutting deck is delivered with mulching kit as standard (picture below)



### Surprising collecting capacity and highly efficient discharge

## **FD 2200**



**Cutting and collecting with the FD 2200 is extremely efficient** thanks to its 400 mm diameter turbine, which delivers excellent performance even under the most demanding conditions and with tall wet grass.

It is made of special anti-wear steel with a 5 blade rotor to ensure greater efficiency and reduced noise.

This turbine is driven by a hydraulic motor and is equipped with an anti-shock protection valve.

It is fitted with double bearings in the front part and a grease point.

The air flow pushes the grass along the loading chute and compacts it inside the grass-catcher.

The turbine body is made of bolted parts that can be easily replaced if worn.

The turbine is driven hydraulically and it is independent of the PTO.

The FD 2200 is fitted with a 1200 litres grass catcher with a motorised baffle that distributes the cut grass to ensure an even filling.

The grass-catcher is lifted hydraulically up to 230 cm and has a rear overhang of 30 cm to allow unloading under any circumstance (e.g. to fill the box of a truck or lorry).

The grass catcher door is locked automatically through a lever.

## **FD 2200**

#### A solid and comfortable lawnmower

The Grillo **FD 2200** is equipped with a new generation **STAGE 5** Yanmar diesel engine 3TNV88C, 37 HP, three cylinders, mounted on hydraulic silent-blocks. It is liquid-cooled and fitted with a self-cleaning radiator equipped with an electric fan that reverses its rotation to remove any possible grass residues from the radiator. The fan rotation is reversed automatically through a sensor but can also be activated manually. The multi-disc PTO clutch is engaged hydraulically via an electric button and is equipped with a blade brake to ensure absolute reliability and maximum duration.



The PTO is engaged independently of the turbine.

The machine is also fitted with an **automatic timer.** This switches off the turbine a few seconds after the disengagement of the PTO, allowing the loading chute to be fully cleaned from any grass residue.

The driver's seat on the FD 2200 is ergonomic, the steering is hydraulic, the seat can be adjusted at different heights and inclinations, the forward pedal is power-assisted.

The whole system has been designed to avoid putting too much effort on the operator even after several working hours.

The FD 2200 is equipped with a spacious and comfortable adjustable seat with standard pneumatic suspension and armrests. Both the cutting deck and the grass-catcher controls are operated via hydraulic distributors with levers.

The lawn mower is also equipped as standard with a foldable roll-bar and a light kit approved for use on public roads.

Available on demand: comfort and heated cabin for greater visibility over the work area.

Blades and turbine disengage immediately when the grass-catcher is full to avoid clogging the loading chute.

Tilting the cutting deck for maintenance, sharpening and replacing the blades and cleaning are all carried out without removing the cardan joint and the loading chute between turbine and cutting deck.

Thanks to this system this machine is especially suitable for professional and intensive use, saving maintenance time and avoiding to put too much effort on the operator.



Seat with pneumatic suspension as standard feature

## Modern technologies and quality components

## **FD 2200**

The FD 2200 has successfully undergone rigorous tests to ensure that all its components, frame, cutting deck and transmission are totally reliable.

Cutting deck, turbine and frame are built in Italy by Grillo using the best materials and modern technologies to make a 100% controlled and high-quality product.

The grid inside the grass catcher can be removed for cleaning.







**Easy access** to the pre-filter, engine air filter, diesel filter and decanting device, hydraulic oil filters.

The battery, the belt tensioner and the PTO electro-hydraulic clutch are easily accessible.

The operator can easily reach the rear hydraulic components as well, such as the variable displacement pump and the gear pump.



The automatic stability control system engages and disengages the differential lock when necessary (the differential lock can also be engaged manually).

The engine compartment can be easily accessed. Lubrication points for routine maintenance are indicated on a label next to the driver's seat.



The radiator unit can be easily opened for inspection and cleaning and it automatically reverses the fan rotation to keep the whole grid clean and to ensure constant control of the temperature.

## **FD 2200 TS**

#### A top of the range product for a top-class job

The FD 2200 can also be fitted with a 160 cm cutting deck with triple function: mulching, rear discharge and side discharge. This cutting deck is delivered with two sets of blades as standard.



Mulching



Rear discharge



Side discharge

The FD 2200 TS can also be fitted with a 180 cm cutting deck with twin front wheels.



The FD 2200 TS is fitted with a 155 cm cutting deck with collection, featuring a steel frame and anti-scalp wheels.

The edge of the cutting deck is reinforced with 20 mm solid steel protection in order to eliminate wear issues from contact with kerbs and sidewalks.

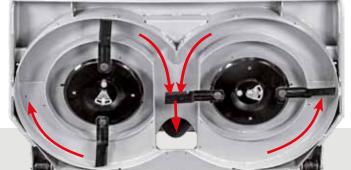
The cutting deck is fitted with a cardan joint transmission and bevel gearboxes made of spheroid cast-iron with helical bevel gears in oil-bath.

The blades are mounted on discs and are fitted with anti-shock retractable blade tips to protect the transmission from impacts with hidden obstacles.

The blades are contra-rotating to collect all the cut grass. The cutting deck can be tilted for inspection, transport and maintenance simply via a push button on the dashboard WITH NO NEED OF detaching the loading chute and the cardan joint.

Max. tilt angle: 52°







The tilting of the 155 cm cutting deck is performed hydraulically via a button on the dashboard.



The cutting deck height adjustment is simple, precise and hydraulically controlled via an electric button on the dashboard, allowing easy and continuous adjustment, with no need to get off the machine.

The cutting height ranges from a minimum of 20 mm to a maximum of 120 mm.

A lock valve keeps the chosen cutting position.



The 155 cm and the 180 cm cutting deck are delivered with a mulching kit as standard.

# Surprising collecting capacity even in extremely difficult conditions

## **FD 2200 TS**

The FD 2200 TS has successfully undergone rigorous tests to ensure that all its components, frame, cutting deck and transmission are totally reliable. Cutting deck, turbine and frame are built in Italy by Grillo using the best materials and modern technologies to make a 100% controlled and high-quality product.

The FD 2200 TS has a turbine with two pre-selectable working speeds to ensure a very high daily mowing capacity under the most demanding conditions such as with tall wet grass and to allow a reduction of noise and emissions under less demanding working conditions.

The turbine is driven hydraulically and it is independent of the PTO.

The variable displacement BOSCH pump is hydraulically servo-controlled to reduce pedal effort.

This pump is also equipped with two pressure valves (forward and reverse) set at 280 bar and two hydraulic filters: one inner filter and one outer filter with cartridge.

The wheels are driven by oversize, highefficiency hydraulic motors to ensure exceptional performance.



The FD 2200 TS is fitted with a 1400 litres grass catcher with a motorised baffle that distributes the cut grass to ensure an even filling.

The grass-catcher is lifted hydraulically up to 230 cm and has a rear overhang of 50 cm to allow unloading under any circumstance (e.g. to fill the box of a truck or lorry).

The grass catcher door is locked automatically through a lever.

## **FD 2200 TS**

### A solid and comfortable top of the range mower

The Grillo FD 2200 TS is equipped with a new generation STAGE 5 Yanmar diesel engine 4TNV88C, 47 HP, 2190 cc, four cylinders, mounted on antivibration supports. The engine is set at 2950 rpm to reduce noise and vibrations.

It is equipped with an oil-cooling system placed around the oil filter to ensure optimal temperature even in very demanding working conditions.

The engine cooling system is self-cleaning. The oversized suction cooling fan of the engine is driven by a hydraulic motor.



The dual water and oil **self-cleaning radiator** is protected against accidental impacts by an internal and an external grid, that can be removed for cleaning and maintenance.

A sensor automatically reverses the rotation of the fan to clean the intake grid when it becomes clogged with leaves, grass or dust.

The driving position on the FD 2200 TS is ergonomic and equipped with a pneumatic suspension to improve the operator's comfort on uneven ground.

The dashboard on the steering column has an LCD display, the data processing in CAN-BUS allows to rapidly and easily check all the machine and engine parameters while working.

All hydraulic services are comfortably activated via electrical push-buttons on the dashboard.

The foldable roll-bar and the light kit approved for use on public roads are delivered as standard.

Blades and turbine disengage immediately when the grass-catcher is full to avoid clogging of the loading chute.

**Tilting the cutting deck** for maintenance, sharpening and replacing the blades and cleaning are all carried out without removing the cardan joint and the loading chute between turbine and cutting deck. Thanks to this system this machine is especially suitable for professional and intensive use, saving maintenance time and avoiding to put too much effort on the operator.

Dashboard with LCD Display

Controls via electric buttons

Pneumatic suspension seat as standard feature







### **Quality components and diagnostic software**

## **FD 2200 TS**

The FD 2200 TS is equipped with a diagnostic software enabling the operator to handle safely all machine functions; it displays a warning in case the chosen function cannot be safely performed and carries out a diagnostic of possible anomalies allowing to identify in short time the component to be checked or repaired. All the engine working parameters and possible engine failures are monitored as well.

The data can be used by a diagnostic software to be stored and analysed for ordinary and extraordinary maintenance.

The engine compartment can be easily accessed. The lubrication points for routine maintenance are indicated in a label next to the driver's seat.

The radiator unit can be opened to make inspection and cleaning easier and it automatically reverses the fan rotation to keep the grid clean and to ensure constant control of the temperature (the reversing of the fan rotation can be also engaged manually by the operator if needed).





**Easy access** to the pre-filter, engine air filter and diesel filter and decanting device, hydraulic oil filters. The battery, belt tensioner and the PTO electro-hydraulic clutch are also easily accessible. The operator can easily reach the rear **hydraulic components** as well, such as the variable displacement pump and the gear pump.





The automatic stability control system engages and disengages the differential lock when necessary (the differential lock can also be engaged manually).

### **TECHNICAL DATA**

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	Engine EC (NRMM) STAGE V (EUROPE) EPA FINAL TIER 4 (USA)	Fuel tank capacity	Hydraulic oil tank	Drive	Transmission	Steering	Clutch	Speed	Steering radius	Differential lock	Wheels	Grass-catcher capacity
FD 2200	Yanmar 3TNV88C diesel engine, 1642 cc., kW 27.5 (max. 37 HP @ 3000 rpm), three cylinders, liquid-cooled via electric fan, equipped with automatic radiator cleaning system, air filter with 5" double safety cartridge.	50 L Average fuel consumption 4,6 L/H	25 L	4WD hydraulic transmission (permanent even on narrow steering radius)	Hydraulic transmission with four hydraulic motors on the wheels	Steering wheel plus hydraulic steering	PTO hydraulic clutch activated via electric button with blade brake	Continuously variable 0-20 km/h, servo-assisted Sauer pump with mechanical control	62 cm	Automatic and manual via button	Turf wheels Front wheels 24x12.00-12 Rear wheels 20x10.00-10	1200 litres hydraulic cutting deck lifting and hydraulic grass-catcher discharge
FD 2200 TS	Yanmar 4TNV88C diesel engine, 2190 cc., kW 34.3 (max. 47 HP @ 2950 rpm), four cylinders, liquid-cooled via hydraulic fan, equipped with automatic radiator cleaning system, air filter with 6" double safety cartridge.	50 L Average fuel consumption 5,7 L/H	25 L	4WD hydraulic transmission (permanent even on narrow steering radius)	Hydraulic transmission with four hydraulic motors on the wheels	Steering wheel plus hydraulic steering and hydraulic control of the forward pump	PTO hydraulic clutch activated via electric button with blade brake	Continuously variable 0-21 km/h, servo-assisted Bosch pump with hydraulic control	60 cm	Automatic and manual via button	Turf wheels Front wheels 24x12.00-12 Rear wheels 20x10.00-10	1400 litres hydraulic cutting deck lifting and hydraulic grass-catcher discharge

## **Linea FD Garden Professional**

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Grass-catcher discharge	Turbine and motorised baffle	Automatic devices	Brake	Cutting height	Cutting width	Seat	Steering wheel	Attachments	Hourly mowing capacity	Size & Weight
Discharge height 230 cm rear overhang 30 cm	Ø 400 mm engaged separately from the cutting deck via hydraulic motor equipped with an anti-shock safety valve  The motorised baffle ensures an even filling of the grass-catcher	Disengagement of both blades and turbine when the grass-catcher is full	Hydraulic service brake and parking drum brake	Adjustable manually at 25-35-50-60- 75-85-95-110 mm	1.550 mm	Seat with standard pneumatic suspension	Mounted on the steering column, height-and-side adjustable Light kit as standard	- 155 cm cutting deck with collection - 160 cm LMP cutting deck with side and rear discharge and mulching - 160 cm all-purpose flail - 160 cm all-purpose flail with collection - Scarifier blades kit for flail - Blade kit for flail - Hydraulic port for attachments - 175 cm pivoting snow blade with hydraulic control - Comfort cabin with heating	15.500 m²/h	With cutting deck Length: 3470 mm Width: 1620 mm Height: 1830 mm WEIGHT (with cutting deck) 1490 kg Without cutting deck Length: 2610 mm Width: 1380 mm WEIGHT (without cutting deck) 1270 kg
Discharge height: 250 cm rear overhang: 50 cm	Ø 400 mm, two working speeds, engaged separately from the cutting deck via hydraulic motor equipped with an anti-shock safety valve  The motorised baffle ensures an even filling of the grass-catcher	Disengagement of both blades and turbine when the grass-catcher is full  Digital display with rpm indicator and diagnostic analysis of both engine and micro-switches functions.  Automatic rpm reduction when PTO is engaged	Hydraulic service brake and parking drum brake	Hydraulic and continuous cutting height adjustment via button on the dashboard from 20 – to 120 mm	1.550 mm 1.800 mm	Grammer seat with pneumatic suspension as standard	Mounted on the steering column, height-and-side adjustable Light kit as standard	- 155 cm cutting deck with collection - 180 cm cutting deck with collection - 160 cm LMP cutting deck with side and rear discharge and mulching - 160 cm all-purpose flail - 160 cm all-purpose flail with collection - Scarifier blades kit for flail - Blade kit for flail - Hydraulic port for attachments - 175 cm hydraulic-controlled orientable snow blade - Comfort cabin with heater - Premium cabin with heating and air conditioning	16.500 m²/h	With cutting deck (1.550 mm) Length: 3640 mm Width: 1620 mm Height: 1990 mm WEIGHT (with cutting deck) 1656 kg Without cutting deck Length: 2810 mm Width: 1380 mm WEIGHT (without cutting deck) 1385 kg









#### Values that make the difference beyond the product



#### After sales service

The customer care service is aimed at giving fast and effective answers to our customers' requests.



#### **Guaranteed and** spare parts service A lifetime guaranteed value

High-quality components quickly available even for 30-year-old machines.

#### **Grillo dealers**

Grillo dealers will meet you with quality and courtesy to help you make the right choice according to your needs.



#### **GRILLO SPA**

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Dealer	