

**AYERDA**

**BAMFORD**

**Combine**  
**M 152**



First Class raw material combined with advanced technology and careful tests all backed by a long positive experience constitute the basis for high quality achieved by LAVERDA with the new range of Combines offering: big output capacity, dependability, handiness, comfort and capability to suit work under any farming conditions.

The M 152 is the first model in this range.

The M 152 Combine has been especially designed to meet the requirements of large farms and contractors and ensures the possibility of fully exploiting the short time available for harvesting.

A common feature with the M 112 and M 132 is given by the guarding of the outside mechanisms which has been accurately studied to comply with the international safety provisions.

Finally, the interchangeability of many important parts and mechanisms with the M 112 and the M 152 has constituted one of the major objectives of Laverda's designers with remarkable advantage both for reliability and for an improved availability of spare parts.



The operator's platform is in the best position to view the whole cutting platform. The comfortable seat has dampened suspension to suit the weight of the operator and is adjustable both vertically and horizontally. The angle of steering wheel is adjustable as well. A powerful centrifugal fan, which acts over the upper area of driver's platform, blows the dust away from the operator. All controls, situated within easy reach of driver, and a complete set of instruments ensure a steady control of the machine during work; in addition, an electro-acoustic signal warns the driver when clutches of tailing return auger and of the de-awner (if fitted) become engaged or when the clutch pedal is engaged while parking brake is still applied.





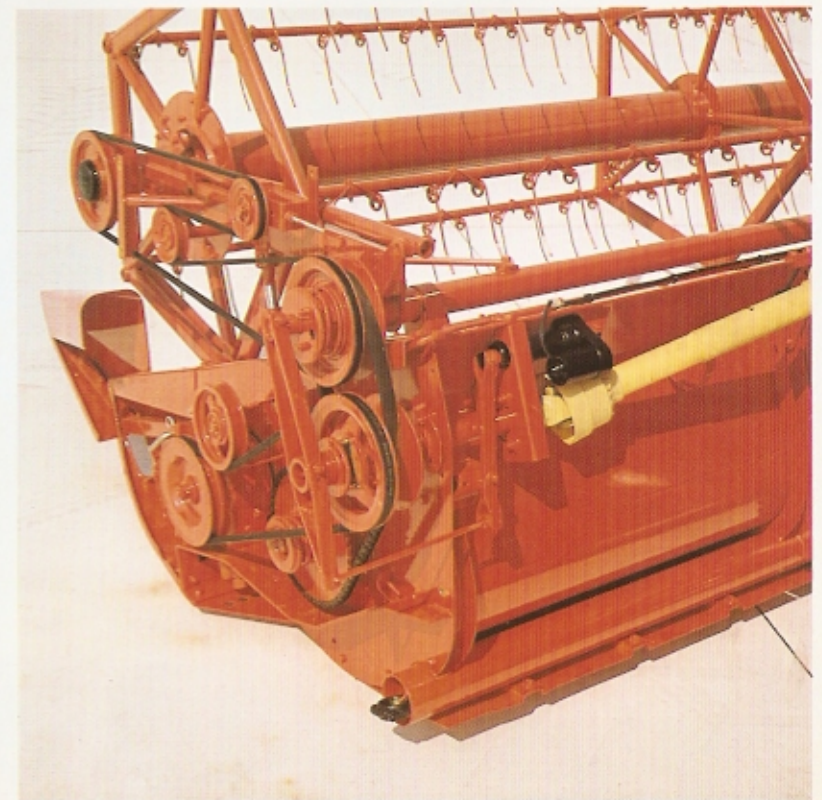
The cutting table is of new design. The knife drive has the wobble box in an oil bath, the knife runs at high speed and the ball joint has automatic adjustment of the backlash.

Five-bar reel with central big diameter tube, driven by an epicyclic unit; electrically controlled speed variator; hydraulically controlled fore and aft position of reel.

Feed auger with adjustable horizontal and vertical position.

Double bottom plate with cross tube which forms a rigid and sturdy frame. Multipurpose three-chain feeder house for wheat and maize, quick release system with p.t.o. shaft.

Screw type hydraulic couplings. Semi-automatic control mechanism for height of cut which makes the cutting table return the pre-established height



of cut. It is also possible to manually lower the cutting table beyond the pre-set limit. Double front p.t.o. for easy fitment of attachments such as the vertical sickle, etc.

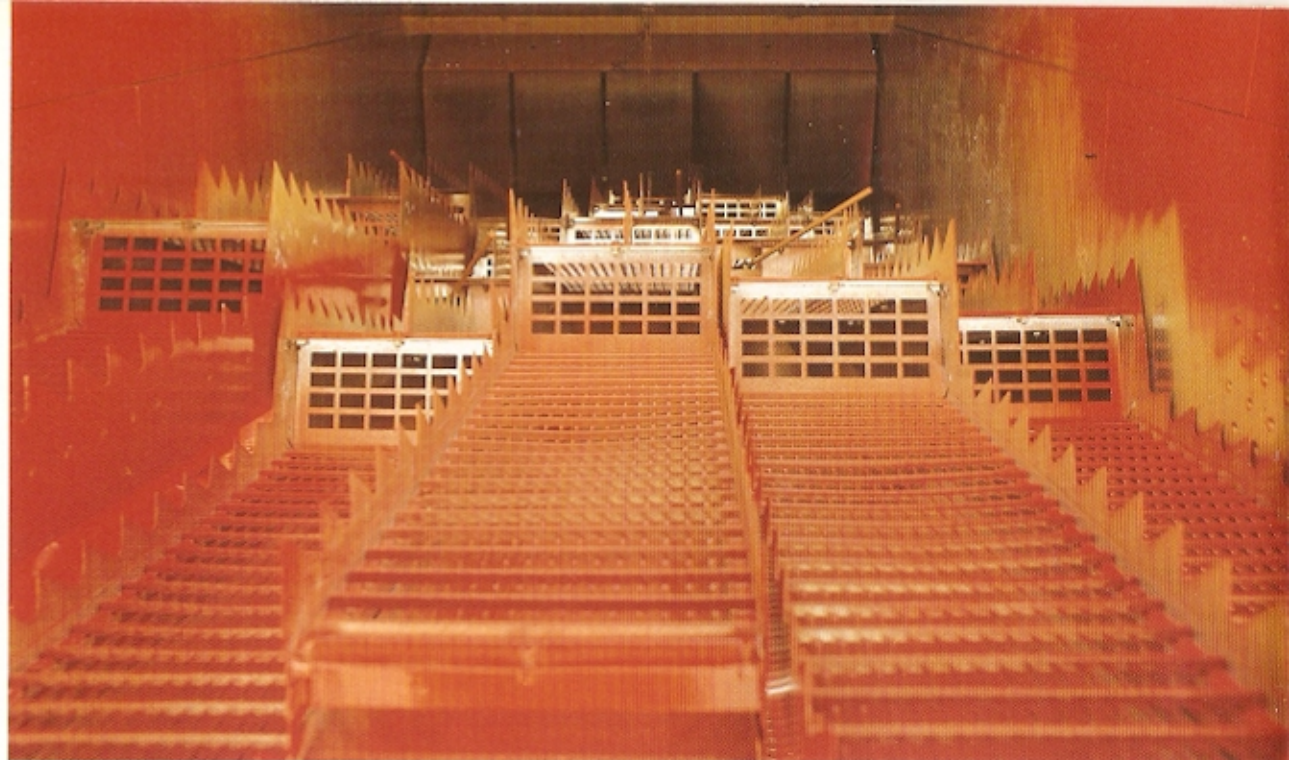
Extreme care has been devoted to all aspects of the design of the threshing mechanism in order to obtain perfect threshing combined with maximum separation and a regular flow of the crop. The speed of the big diameter drum and the clearance of the large surface concave are adjustable from the driver's seat, and these adjustments can be carried out whilst the combine is operating. The four-bar beater is placed in the best position to deflect the largest quantity of straw. The considerably long straw walkers, fitted with Graepel grates, are mounted on big throw crankshafts and their rotation speed is adjustable to suit the varied crop conditions.

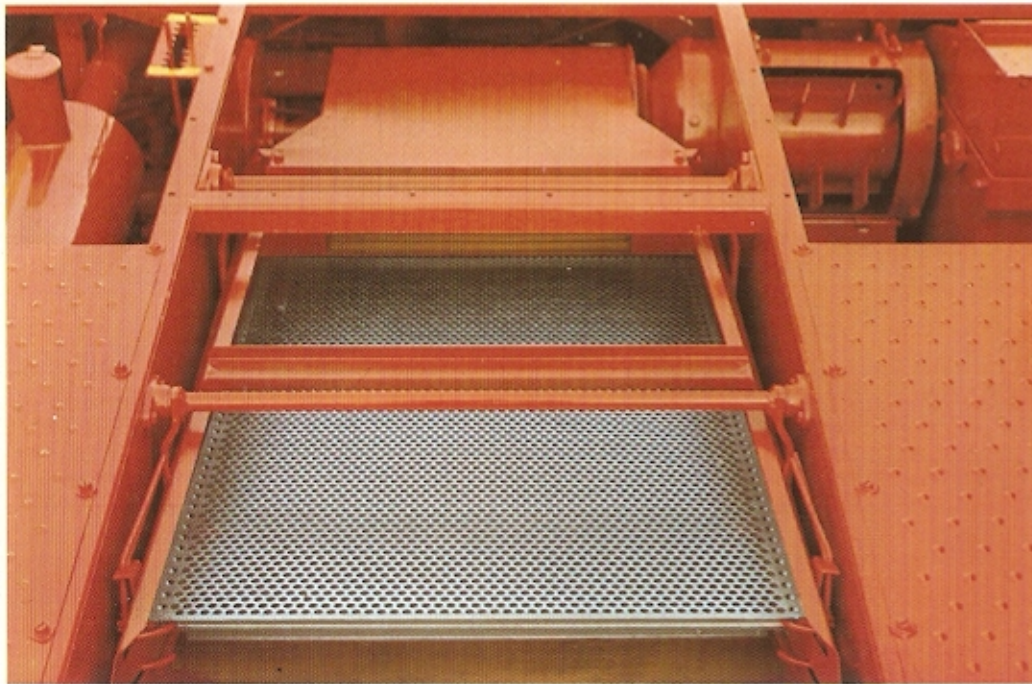
If required their action can be tridimensional as they are fitted with a device which moves the straw sideways in both directions and turns it over.

The air intake of the large diameter fan is perfectly guarded to prevent straw and weeds from entering the fan housing.

The fan, which has adequate capacity, blows wind over two sieves, the upper one being adjustable and the lower one being interchangeable. The large sieve area guarantees proper cleanliness of the grain with minimum loss. The wind adjustment, both direction and volume, as well as the adjustment of the sieve opening are operated at the rear of the machine enabling the operator to directly check the efficiency of the settings.

For most meticulous farmers, LAVERDA will, on demand, as an optional extra, equip the machine with a de-awner coupled with a secondary cleaning system: the de-awner is of the bar type and the secondary cleaner has a shaking pan.





The six-cylinder engine produces adequate power, even when used in the most difficult conditions, giving long life and consistent performance of the combine. The rotary type radiator cleaner ensures high efficiency and greatly simplifies maintenance. The radiator, in compliance with up-to-date techniques, is equipped with an air venting device and is of adequate size to ensure proper cooling action also under the highest temperatures.

The transmission from the engine to the threshing mechanism is obtained by means of a 4-section powerband belt which transmits all engine power and requires very little space. Transmission to the various mechanisms is by V-belts and is easily controllable, and, for the most important mechanisms, there are slip clutches.

The wheel transmission includes a speed variator driven by two belts and controlled by a double acting hydraulic cylinder, a single plate dry clutch, 3 forward and 1 reverse speeds, a 4 planet gear differential with hydraulic brakes, removable half shafts and final drive with gears running in an oil bath. The hydraulic equipment is operated by a double pump which ensures two fully independent circuits (one is for the hydrostatic steering only). The electrical equipment is complete and complies with the European Standard Provisions.



The hydrostatic drive is available as an optional extra. This consists of a variable displacement pump driven by a motor which, by means of flow of fluid under pressure, drives a fixed displacement motor connected to the gearbox.

This arrangement enables the driver to control the machine by simply operating one lever: when the lever is brought forward, the machine moves forwards. When the lever is brought to "0" position the machine will stop; it moves backwards when the lever is pulled towards the rear.

This system, besides offering great manoeuvrability, ensure also great safety especially when working on hillside as the drive wheels of the combine are connected to the hydraulic motor in all cases.



The capacity of the big grain tank (3400 litres) can, on demand, be increased by means of extensions to 4250 litres. The grain tank is filled by an auger which, from a high position, feeds the grain without damaging it to the centre, thus ensuring complete filling of the tank. The location of the grain tank has been designed to ensure an even weight on both wheels. The swing of the unloading auger is hydraulically controlled from the driver's seat and, when folded back, it perfectly suits the shape of the combine. The big capacity of the unloading auger facilitates emptying of the grain tank in a very short time. The unloading spout is 3.34 m above ground and enables loading into trailers with tall side boards to go on during operation.

The M 152 with maize head is a machine capable of very high daily outputs. The threshing mechanisms, the separation equipment and all pass throughs have been designed after consideration of the characteristics of maize crops such as the humidity content of kernels, the specific weight and the high yield. The M 152 with MAIS-C head with minor changes, can also be used in obtaining

maize paste "MAIS-MIX" as this combination has now been shown to be of great interest for zootechnical farms.

Also a proper set of sieves is available to obtain excellent results in harvesting alfalfa seeds, meadow clover, rape and other small seed crops.

The M 152 is also an exceptional rice harvesting machine thanks to its big - throughput capacity, to the thorough threshing obtained and also for its ability to operate on any rice field.

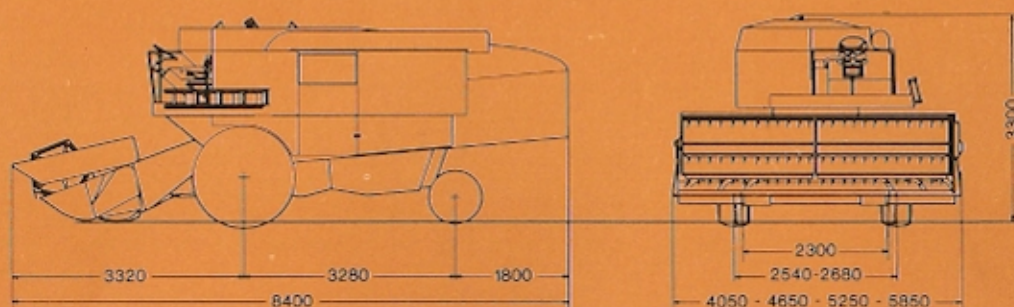
To convert the machine from "grain" to "rice" or vice-versa is simple and quick. The sturdiness of all components ensures long life of the machine with a very low rate of depreciation.



# Specifications

## CUTTING MECHANISM

Cutting width 3.60 m (12 ft), 4.20 m (14 ft), 4.80 m (16 ft), 5.40 m (18 ft). Cutting height min. 0.04 m, max 1.08 m, capability to cut 0.25 m below wheels level. Table lift controlled by two hydraulic cylinders with hydraulic and mechanical blocking device. Hydropneumatic dampers. Pick up reel with five tine bars. Lift, fore and aft movement hydraulically controlled; reel speed 15 to 66 rpm which electrically controlled variator. Cutting table with quick release system.



## On request

De-awner and secondary cleaner; paddle type de-awner; selector with two screens, area 1.36 sq.m. Total area of 1st and 2nd cleaning units 5.15 sq.m.

## GRAIN TANK

The feed auger delivers grain to center of tank and in high position. Capacity of grain tank 3400 l. Grain tank capacity with extension 4250 l. Hydraulic swing type unloading auger. Height of discharge spout 3.34 m.

## ENGINE

Six-cylinders Diesel engine. Power output (DIN 70020) 140 CV - 103 kW at 2400 r.p.m. Rotary type filter for radiator. Suction air filter of oil bath type.

## THRESHING MECHANISM

Drum with 8 rasp bars; width 1350 mm, diameter 600 mm. Mechanical speed variator driven by 2 V-belts. Concave with 11 bars adjustable from driver's place. Tailings return feed in front of drum.

## CLEANING MECHANISM

Five straw walkers; length 3.79 m with drawer type extension of 0.21 m, area 5.10 + 0.28 sq.m. Cloz or Petersen type adjustable upper sieve with comb type extension, sieve area 2.17 sq.m. Adjustable lower sieve or interchangeable screens with fixed size holes on request; sieve area 1.62 sq.m., total area of 1st cleaning system 3.79 sq.m. Big capacity fan controlled by variator.

## TRANSMISSION

to threshing mechanism by a four-section Powerband belt type B; to traction mechanism by means of V-belts with hydraulically controlled double acting variator. Single plate dry clutch, diameter 302 mm. 3 forwards and one reverse speeds. Hydraulically controlled disc brakes. Final reducers gears in oil bath. Front tyres 18.4/15-30 (on request 23.1/18.26). Rear tyres 11.5-15. Ground speed on normal wheels 1.7 to 22.7 Km/h (with oversize tyres 1.8 to 23.7 Km/h). Hydrostatic drive on request.

## DRIVER'S PLACE

on left hand side. Hydrostatic steering fitted to an adjustable tube. Steering wheel with adjustable angle. Instrument panel complete with: revs counter for drum, speedometer,

temp. gauge for coolant, gauge for engine lubricant, generator charge warning light, fuel reserve light, direction indicators light for combine and trailer. All controls within easy reach of driver. Seat with adjustable suspension. Vertical and horizontal adjustment of seat. Driver's cab on request.

## ELECTRICAL EQUIPMENT

12 Volt - 500 Watt alternator. 148 Ah battery. Horn. Switch which actuates horn when emergency brake is applied and clutch is engaged. Acoustic indicator warning the driver when trash container is full (only for machines equipped with 2nd cleaner). Electro-acoustic indicator warning the driver when slip clutches become engaged. All lights in accordance with the Standard European traffic provisions.

## HYDRAULIC EQUIPMENT

with double pump and two completely separate circuits (one circuit for hydrosteering only). 5-section hydraulic distributor.

## DIMENSIONS AND WEIGHTS

Overall length with cutting table and without mobile dividers, 8.40 m. Overall length without cutting table 6.52 m. Overall height 3.30 m. Overall height with grain tank extensions 3.45 m. Wheelbase 3.28 m. Front tread with standard wheels 2.54 m (with oversize tyres 2.68 m). Rear tread 2.30 m. Weight with grain tank empty and with 12 ft table approx. 7.100 Kg; with 14 ft table approx. 7.200 Kg.

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