

# Details that the professionals appreciate !

## An autonomous hydraulic group

The Ménart turners have an autonomous hydraulic group (as optional equipment on 3300 SP). This characteristic offers several advantages, namely the possible use of any tractor and since the machine is self-propelled, you do not need a creep gearbox on the tractor.

In addition, the machine can be used with several different tractors without risk of mixing the oils. The risk of heating of the tractor oil is also excluded.

We suggest the use of bio-degradable oil in order to avoid all risk of polluting the windrow material.

## From road position to work position

The driver can easily go from one position to the other from the driver seat of the tractor.

In road position the transport wheels are ideally situated at approximately 3/5 of the length of the machine, which:

- ☑ Provides a short wheel base to the combined unit of tractor-turner
- ☑ Allows easy access to hard to reach places
- ☑ Allows manoeuvring more easily (reduced turning radius)
- ☑ Reduces considerably the load on the tractor for a better stability on the road (even if the tractor is of medium power), eliminating the need for ballast on the front.

The geometry of the arms with the wheels was designed to allow transport wheels with larger diameter, which offers better support in bad conditions, and facilitates the entrance to the field/worksite.

## General characteristics

		3300 SP	4300 SP	4800 SP	5300 SP
Working width	(m)	3,30	4,30	4,80	5,30
Height under tunnel	(m)	1,70	1,80	1,90	2,00
Total width at work	(m)	6,20	7,20	7,70	8,50
driving by PTO shaft at	(rpm)	540	540	1.000	1.000
Length of the rotor	(m)	3,00	4,00	4,50	5,00
Diameter of the rotor	(m)	1,00	1,10	1,10	1,10
Number of paddles		28	40	44	50
Yield		120 to	150 to	200 to	500 to
	(m <sup>3</sup> /h)	1.100	1.500	1.750	2.000
Total dimensions : length	(m)	7,50	8,70	9,00	9,60
(for transport) width	(m)	2,50	2,55	2,55	2,55
Drive wheel tires		13,6 R 24	13,6 R 24	440/65 R 24	440/65 R 24
transport wheel tires		11,5/80-15.3	315/80-22.5	315/80-22.5	315/80-22.5
Remote controls		mechanical	electric	electric	electric
Autonomic hydraulic group		optional	standard	standard	standard
Rear hood		optional	standard	standard	standard

A large choice in tires is offered as original equipment from the factory. The 3300 en 4300 turners are standard equipped with tires 13.6 R 24. It are the tuners equipped with the larger wheels currently available on the market. Nevertheless it is possible to equip them with larger wheels as standard:

Michelin 440/65 R 24 type XM 108 • Alliance 600/50 x 22,5

The 5300 SP turner is basically equipped with 440/65 R 24, and can be equally equipped with larger wheels.

Please note the distinction between "work wheels" and "transport wheels". This allows one to limit the wear of the work tires, and to obtain more work hours in good conditions.

Safety devices are situated at every point on Ménart turners.

From the tractor connection right to the last point on the turner there are the following elements of built-in safety for the machine, the operator and the work area as well as for the transport mode.

The first drive shaft is equipped with a safety device against overload with automatic resetting. The second drive shaft is equipped with a free wheel.

The hydraulic pump is equipped with a safety valve (calibrated valve) which avoids overpressure in the hydraulic advancement circuit of the machine.

During the changing from work position to road position it is impossible to command retraction of the canopy cover and the lowering of the arms of the transport wheels. In addition the cylinders of the arms with wheels and the cylinder for the folding back of the drawbar are equipped with double piloted valves. This allows you to isolate the cylinders of the circuit, and to relieve the tubes from all overpressures.

Heavy curtains limit the projections to the front. They are not all aligned as some overlap to increase their efficiency in the area of the tractor. Road safety. Hinged road light equipment allows the lights at the desired height. During work the bar folds upward. Reflectors are placed every 3 m at the most, over the entire length of the machine, at both sides.

Alteration to the technical specifications can be done by MENART at any time without prior notice. Please cross check when ordering.

# Turners SP range



Ask for our documentation about the other machines constituting the composting "chain": PTO- or engine driven shredders, turners, screens, etc.



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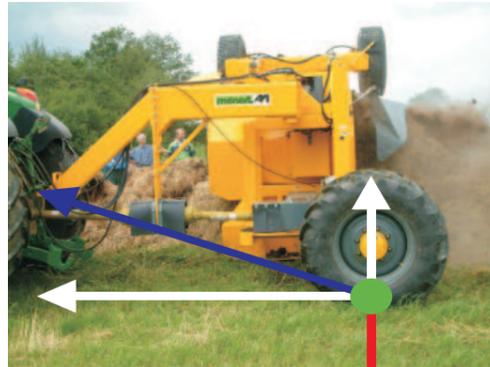
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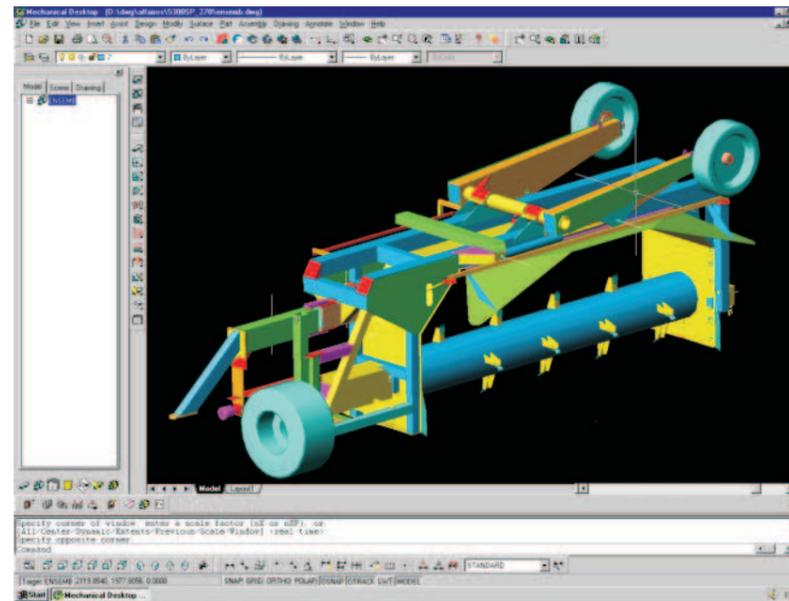
# the range of Ménart PTO turners - For the composting of manures, green waste, and other organic matter.



The Ménart windrow turners driven by Power Take Off (PTO) are called "SP" because they are of the type "Self Propulsion". The SP models are part of a range of other self-propelled turners primarily used for the composting of green waste, other organic waste, or for the treatment of polluted soils. They benefit from a long and successful tradition. The models 4300 and 5300 are available in diesel engine drive version, with 2 or 4 wheel-drive, or with tracks, the latter two being diesel engine driven.



The wheels of the turner are selfdriven by an on-board gearbox, allowing the tractor and turner to go over the entire length of the windrow. Since the machine is attached higher than the axle of its drive wheels, and as the wheels are placed slightly to the back, the turner will take a part of the weight of the tractor rearward to increase its grip. And the more effort put into the pushing, the more the load transfer will increase. In other words, by "taking the load off" the tractor, the machine transfers the weight of the tractor onto itself. This particularity allows increase of its grip to the ground. This point is necessary to allow it to cross over the windrow from one end to the other. These particularities of the Ménart SP turners offer the advantage that they can be used with standard agricultural tractors of medium power. On the other hand, the wheels pass at a certain distance of the windrow and this way there is less risk that they slip on rainwater or leachate that may be present.



The Ménart CAD products are developed with the help of the program Solid Works. These allow us to design the machines in an evolutionary way. This way every part or element of the machine has its own characteristics. If our R&D decides to modify the characteristic of a single part, the CAD program recalculates all the plans, and remakes the drawings (in 2D and 3D) in function of the new parameters introduced. Another software program (Nastran) for the calculation of the finished elements, allows greater control and prevents the risk of any deformation and breaking of the machine which would be due to too strict specifications.



**Remote control box:**  
On models 4300, 4800 and 5300 SP (and as optionally equipment on the 3300 SP), the hydraulic functions (draw-bar, retraction of the transport wheels, rear hood, and regulation of the height of the working position) are controlled by the first row of switches. The lever allows control of the movement of the drive wheels in forward and reverse in a progressive and continuous way. Two switches allow control of each drive wheel independently in free or engaged position and a third switch causes a blocking of the differential.

Remote control of model 3300 SP



The control cable works on a hydraulic plunger pump with varying output. By modifying the position of the platform the output of the pump increases, increasing the advancement speeds.



Two planetary, hydraulic reduction-motor groups assure the movement of the left and right drive wheels. These are provided to support the great vertical loads, as well as for high traction efforts.



The turners of the SP range benefit from a generously dimensioned transmission. An angle gearbox with two exits drives the hydraulic control pump (optional on 3300 SP) of the drive wheels on one side, and the rotor on the other.



The very large bearings assures a stable and constant position of the rotor, allowing it to absorb the higher loads. They are equipped with self-aligning bearing and conical double row of rolls with muff chuck.



The 5300 SP model benefits from a double swiveling gearbox. The 4800 and 5300 SP models are driven at 1.000 rpm. They are equipped with a reducer gearbox, left at the lower side of the photograph.

The Ménart turners benefit from a long experience acquired with green waste composting clients, so the rotor is equipped with paddles and not with knives. The paddles obviously need more power, but the quality of the work is much better. Not only is the material broken up and mixed, but the aeration is greatly enhanced allowing better quality and greater yield. In addition the paddles are placed and arranged in a way to remake the windrow with optimum form for further turning and improved composting.



As an option, the Ménart turners can be equipped with a device allowing the composter to inject and mix liquid manure during the turning phase (tube not delivered).



As an option, the Ménart turners can be equipped with a device allowing to roll up and unroll a "fleece" cover on the windrow