PLAISANCE EQUIPEMENTS

Wheeled equipment
VARIOTRAC
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About company

Company PLAISANCE EQUIPEMENTS was created in 1976 by Mr. Plaisance and right now is French leading company of mulching equipment.

Thanks to the experience, hard work and customer’s feedback PLAISANCE EQUIPEMENTS have wide range of mulching equipment with great efficiency which could be mounted on tractors (forestry mulchers, stump grinders, stone crushers) and self-propelled machines (wheeled and tracked) as well.

All equipment are designed in order to be simple and useful for any type of works and conditions. Wheeled machines VARIOTRAC are reliable and sure equipment which have high efficiency characteristics of work and crossing capacities combining with excellent speed.

As manufacturer PLAISANCE EQUIPEMENTS could also provide specially designed and handmade solutions following customer’s specification. Our team of professional could make real all specific customers’ requests.
2. General characteristics

a. General range of wheeled machines

Self-propelled machines Variotrac are available in different powers (HP) from 165 HP to 440 HP. In standard the wheeled machine Variotrac is delivered with forestry mulcher for branch, trees, stumps mulching.

<table>
<thead>
<tr>
<th>Model</th>
<th>VT 200</th>
<th>VT 300</th>
<th>VT 400</th>
<th>VT 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>Cummins QSB4,5</td>
<td>Cummins QSB6,7</td>
<td>Cummins QSM11</td>
<td>Caterpillar C13</td>
</tr>
<tr>
<td>Power (HP)</td>
<td>165</td>
<td>270</td>
<td>403</td>
<td>440</td>
</tr>
<tr>
<td>Type of wheels</td>
<td>18-4/26</td>
<td>18-4/26</td>
<td>23-1/26</td>
<td>23-1/26</td>
</tr>
<tr>
<td>Turning radius (mm)</td>
<td>2150</td>
<td>3100</td>
<td>3100</td>
<td>3200</td>
</tr>
<tr>
<td>Moving speed</td>
<td>40 km/h</td>
<td>40 km/h</td>
<td>40 km/h</td>
<td>40 km/h</td>
</tr>
<tr>
<td>Working speed</td>
<td>10 km/h</td>
<td>10 km/h</td>
<td>10 km/h</td>
<td>10 km/h</td>
</tr>
<tr>
<td>Weight including attachment (kg)</td>
<td>7 700</td>
<td>8 700</td>
<td>12 400</td>
<td>13 800</td>
</tr>
<tr>
<td>Dimensions (m)</td>
<td>L x W x H</td>
<td>6,30 x 2,30 x 2,75</td>
<td>6,50 x 2,30 x 3,01</td>
<td>8,00 x 2,70 x 3,10</td>
</tr>
<tr>
<td>Type of attachment</td>
<td>BF 401-1800</td>
<td>BF 501-2000</td>
<td>BF 601-2200</td>
<td>BF 601-2200</td>
</tr>
</tbody>
</table>

Options:

- Winch
- Fire suppression system
- Rear view camera
- Reversing fan
- Heating system for engine
Variotrac R is one of modifications of wheeled range of products. There are three types of machines like this. The main difference of Variotrac R machine is the lateral arm with hydraulic mulcher or disks saw on it. This model is perfect for side clearance with the possibility to much cut elements with front mulcher.

<table>
<thead>
<tr>
<th>Model</th>
<th>VT 300 R</th>
<th>VT 430 R</th>
<th>VT 440 R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>Cummins QSB6,7</td>
<td>Cummins QSB6,7</td>
<td>Cummins QSM11</td>
</tr>
<tr>
<td>Power (HP)</td>
<td>270</td>
<td>270</td>
<td>403</td>
</tr>
<tr>
<td>Type of wheels</td>
<td>18-4/26</td>
<td>23-1/26</td>
<td>23-1/26</td>
</tr>
<tr>
<td>Turning radius (mm)</td>
<td>3100</td>
<td>3200</td>
<td>3200</td>
</tr>
<tr>
<td>Moving speed</td>
<td>40 km/h</td>
<td>40 km/h</td>
<td>40 km/h</td>
</tr>
<tr>
<td>Working speed</td>
<td>10 km/h</td>
<td>10 km/h</td>
<td>10 km/h</td>
</tr>
<tr>
<td>Weight including attachment (kg)</td>
<td>9 800</td>
<td>13 100</td>
<td>13 800</td>
</tr>
<tr>
<td>Dimensions (m)</td>
<td>6,50 x 2,30 x 3,01</td>
<td>8,00 x 2,70 x 3,10</td>
<td>8,00 x 2,77 x 3,15</td>
</tr>
<tr>
<td>Model</td>
<td>BF 501-2000</td>
<td>BF 601-2200</td>
<td>BF 602-2200</td>
</tr>
<tr>
<td>Disks saw</td>
<td>4</td>
<td>2 disks or 4 disks</td>
<td>2 disks or 4 disks</td>
</tr>
</tbody>
</table>

Options:

- Winch
- Fire suppression system
- Rear view camera
- Reversing fan
- Heating system for engine
3. Mechanical specification

   a. Type of mechanical transmission

All machines VARIOTRAC have 100% mechanical transmission through clutch. This give the possibility to get all power on the PTO shaft and as consequence on rotor of the mulcher.

Advantages of mechanical transmission:

✓ All power goes to the rotor
✓ More efficient use of resources (fuel)
✓ Simplicity in maintenance
✓ Less heating due to less amount of hydraulic parts
✓ Avoiding risks of contamination of the hydraulic system for working head
✓ Possibility to use different type of attachments working from PTO 1000 t/min
4. Hydraulic specification

a. Type of hydraulic transmission

*Hydraulic pumps*: those pumps are used only for moving and accessories movement of the machine as the machine has mechanical transmission.

*Additional pumps*: this pump gives the possibility to compensate the losses of hydraulic system in main pumps.

*Pump for accessories*: this pump is used for additional movements (lifting, hydraulic door, hydraulic grab).

*Clutch pump*: this pump is used to create the pressure for disks.
5. Moving and working of the machine

Wheeled machine Variotrac has hydrostatic transmission for moving with max speed of 40 km/h between sites and 10 km/h in work. The machine also has the potentiometer which could set up the minimum or maximum speed of moving without power loses.

In order to get maximum efficiency in work and to avoid any risks of damages of mechanical transmission the Variotrac machine has *Suptronic* system. This system allows the automatic regulation the moving of the machine regarding the load on mulcher head. That is why is the machine works with big trees the moving will be automatically lower (even if the operator try to push the pedal). As soon as the big trees are mulched the machine will automatically start to move faster.

**Wheels positions:**

- 2 drive wheels for road moving
- 4 drive wheels for best crossing capacities
- Crab positions of wheels for difficult access areas.

**Breaks:**

Breaks work with pedal which act on the front and back axels at the same time. The breaks system is integrated to the wheels hubs.

Park break act immediately after stopping of the machine and switching off of contact key, this avoids any possibility of random moves.
6. Cab

a. Description and characteristics, control space

Cabs are all certified following Falling Object Protective Structure FOPS and Rollover Protective Structures ROPS.

Cab includes:

- Tilting system for maintenance.
- Side emergency window.
- Soundproofing with high-density foam.
- Thermal insulation with inside covering.
- Heating system 6 KW.
- Air conditioning with openings for blowing of front window.
- Pressurised system in order to avoid dust inside (RESPA).
- Sun protection for front window.
- Lights: 2 front lights, 2 back lights, 2 side lights
- Fire extinguisher and a refrigeration compartment.
- Screen for rear view camera, radio, Bluetooth

- Variotrac R model has cab with side panoramic view for better vision of working area.
b. Check-up and maintenance

Variotrac models have CUMMINS or CATERPILLAR diesel engines. Different type of power is available (from 165 hp to 440 hp,) and this gives the possibility to accomplish different types of works. All engines have the electronic injection system and turbocharger.

- All parts have easy and simple access.
- Cab has electric engine for lifting and also manual pump.

CUMMINS or CATERPILLAR engines have 2 year or 2000 working hours of warranty from the manufacturer and this warranty is provided through network of the manufacturer. All maintenance on engines are performed by CUMMINS or CATERPILLAR technical staff.
7. Attachment

a. Forestry mulcher

Forestry mulcher is manufacturer in high quality and resistance steels. The structure is reinforced with HARDOX 450 plates. The forestry mulcher has belt transmission. The hydraulic grab and hydraulic door is include. The grab provide the possibility to choose the direction of throwing of trees.

<table>
<thead>
<tr>
<th>Model</th>
<th>BF 401-1600</th>
<th>BF 501-2000</th>
<th>BF 601-2200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of rotor</td>
<td>1800 mm</td>
<td>2000 mm</td>
<td>2200 mm</td>
</tr>
<tr>
<td>Gearbox</td>
<td>300 h.p.</td>
<td>300 h.p.</td>
<td>500 h.p.</td>
</tr>
<tr>
<td>Transmission</td>
<td>2 x 5 belts</td>
<td>2 x 5 belts</td>
<td>2 toothed belts</td>
</tr>
<tr>
<td>Number of hammers</td>
<td>40 (OF6)</td>
<td>50 (OF6) / 85 (OF5)</td>
<td>55 (OF7) / 96 (OF3)</td>
</tr>
</tbody>
</table>
Other mulchers

Stone crusher

Stone crusher is another type of attachment for Variotrac machines. This attachment is mainly used in agricultural field for stone crushing. It is also possible to use it for ski slopes, industrial vineyards, in preparing the ground for stabilization.

Stump grinder

Stump grinder is used for mulching roots and stump working deep in the soil up to (50 cm). The attachment provides the possibility to prepare the soil for agricultural use.

Biomass harvester

Different type of attachment is biomass harvester. This mulcher allows mulch and collect the shipped wood and put it directly to the truck. That is why after biomass collecting the shipped wood could be taken off or used again in green energy purposes.