Speed, quality and intensity

ATLAS
AO, AM
AGRONOMIC ADVANTAGES OF THE MACHINE

- The disc cultivator is designed for various kinds of stubbles and loosening to a depth of 16 cm.
- Work without clogging even in situations with high amounts of post harvest residue including corn.
- The versatility of the machine which can be used for soil preparation prior to seeding, sowing the intercrop and mixing liquid manure with the soil.
- The possibility to work in drought like conditions thanks to the aggressive positioning of the discs to the soil. A spacing of 25 cm between the discs enables you to work in very humid conditions as well.
- The fine crumbing effect created by the high speed of the machine and fast circumferential speeds of the tightening rollers leaves you with a flat and clot free field.
- The use of the machine in conventional husbandry systems (after ploughing), and in minimisation systems.

BEDNAR ATLAS is a compact short disc cultivator with a robust design and is suitable for both the newer minimisation systems in soil cultivation (cultivating large amounts of plant residue) as well as for traditional farming, where it is used as a plough. The size of the discs 620×6 mm enables you to cultivate to a depth of 16 cm whilst mixing intensively. The ruggedness of the machine, aggressive position of discs as well as the size and shape of the discs, enables the Atlas to effortlessly cultivate very heavy soils with huge amounts of crop residue.

The main advantages of Atlas disc cultivators are their enormous daily output, top quality work, comfort and user friendliness, high work rates and last but not least the fact that they are easy to run thanks to the small number of greasing points. Serrated 620 mm large concave discs with a 6 mm thick wall located in a maintenance-free axial roller bearing form the foundation for top of the range work and a long lifespan.

Wide scale usage throughout the entire season

The Atlas cultivator’s structure enables the machine to be deployed for a variety of uses throughout the entire agricultural season. Its versatility is made possible thanks to the amount of organic matter that can pass through the machine (the frame has a high clearance of 67 cm, the distance between the rows of discs is 110 cm and the spacing between the discs is 25 cm). The material flows fluently and does not clog whilst intensively mixing the soil with cut crop residue. The Atlas can be used for the first shallow stubbles shortly after the harvest, for second deeper stubbles and for incorporating large amounts of post-harvest residue including maize. The machine is also an excellent tool for the incorporation of livestock manure, green manure and the cultivation of perennial grasslands. Due to the smooth levelling effect of the short disc cultivator concept, the machine is also a more than capable ally for seedbed soil cultivation.

“...The Atlas is a cultivator, which thanks to its technical design, can be used for various types of work practically over the course of the entire season. This allows you to really get the most out of your investment and therefore maximises its investment value for you. The Atlas has been designed with a goal in mind which can be summed up by the words versatility, maintenance-free and quality work.”

Ladislav Bednar
Savings benefits:

- **quality cultivation in a single pass** – quality cutting and the incorporation of huge amounts of crop residue in a single pass as opposed to many passes
- **high working speeds** – the work is done faster making it easy to keep to the agrotechnical deadlines and deliver better preparation for sowing machines
- **the ability to work in difficult conditions** – the technical design of the machine enables you to work in extreme conditions caused by factors such as high moisture or drought
- **a lesser amount of passes** – helps to eliminate soil compaction and thus facilitates the principles of sustainable agricultural development

**You can use the ATLAS:**

**In conventional ploughing systems** – when used for traditional ploughing it is recommended to disc the lots at least once before using the plough. Capillarity will be interrupted – humidity leakage from the soil is prevented and at the same time the crop residue cut and partially incorporated. The decay process of crop residue is faster and more effective.

**In minimisation systems** – working with crop residue is essential for soil cultivation in minimisation systems. The structure of the Atlas consisting of discs measuring 620x6 mm with an aggressive cutting and plough angle guarantee perfect incorporation. The quality cutting and mixing of crop residue and soil creates a homogenous material. Working with crop residue has been made easier and cheaper.

**HIGH TROUGHPUT**

- **cultivation depth**: 12 cm
- **number of passes**: 1
- **working speed**: 12–14 km/h
- **fuel consumption**: 8 l/ha

**DEMONSTRATION ON GRAIN STUBBLE FIELD**

- **cultivation depth**: 12 cm
- **number of passes**: 1
- **working speed**: 12–14 km/h
- **fuel consumption**: 8 l/ha

**DEMONSTRATION ON RAPE STUBBLE FIELD**

- **cultivation depth**: 15 cm
- **number of passes**: 2
- **working speed**: 10–12 km/h
- **fuel consumption**: 10–12 l/ha

**DEMONSTRATION ON CORN STUBBLE FIELD**

- **cultivation depth**: 12 cm
- **number of passes**: 1
- **working speed**: 12–14 km/h
- **fuel consumption**: 8 l/ha

**“A winner on any terrain”**

**ATLAS Utilisation**

**ATLAS Benefits**

**SPACING BETWEEN THE DISCS 25 CM**

The 25 cm spacing between the discs ensures smooth work without clogging including in humid conditions with a large amount of surface material.

**RUGGED STRUCTURE**

The Atlas is a rugged type of disc cultivator. A central 3-beam frame with torque inflexibility, massive attachments of discs or tines, discs measuring 620x6 mm prepares the machine for quality work irrespective of drought.
Rugged structure

Using quality material and over-dimensioning makes exposed places the domain of the Atlas. The increased torque inflexibility of the main frames extends the long service life of key parts of the machine. The actual heart of the machine is formed by tines with a disc with switching force in a vertical direction of 200 kg up to a maximum of 320 kg. Slowly increasing the force to the deviation of the disc lowers the load and lessens the wear of the bearing houses, screw connections, pins and the actual frames of the machine. These technical characteristics significantly prolong the service life of the working units, the main and in particular side frames of the machine.

Quality work in all conditions

Two rows of aggressively positioned discs open the soil and ensure intensive high quality mixing of crop residue and soil. The Atlas is also capable of mixing high amounts of crop residue with soil or livestock manure thanks to the weight of machine and placing the discs at an angle of 17°. The most suitable to penetrate the soil with maximum turning and mixing of soil with surface material irrespective of humidity. In extremely dry conditions the discs easily penetrate the soil as well due to the position of the discs and the overall weight of machine. The Atlas is a versatile tool for your business.

Machine performance

“You will maximise the speed and quality of the soil cultivation”
A-DISCS: A new dimension in work quality

Specially shaped disc of 620 mm on diameter and a wall thickness of 6 mm with significantly increased cutting and mixing compared to the classic notched discs. A-discs are approximately 11 cm from the edge of the profile and completed with a big number of blades on the circumference for the easy incorporation of big amounts of crop residue or livestock manure.

Thanks to the sharp blades on the circumference that cut large amounts of crop residue, including sturdy stems, effectively after which further work is made easier. Its profiled shape moreover enables it to take a greater amount of earth from the soil than standard notched discs. Each profiled protrusion of the disc moves the earth in the direction of plant mulch, where optimum mixing occurs. The final results are perfect, originally we wanted to disc the field once after the corn grain and then plough, the second pass of the Atlas with A-discs convinced us otherwise. We disc the field twice and we will not plough it," says Mr. Tymich of TEAM v.o.s. Cernuc.

Packers and rollers

Consolidation of the soil after cultivation is an important part of a thorough cultivation. Proper consolidation is the key for the seeds of chip cut, and persistent weeds could quickly spout that were not damaged either mechanically or chemically. The choice of packer dependent on soil conditions is a very important factor in the overall quality of the machine.

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High machine output and stability

Each model of the Atlas cultivator is designed to provide a constant working depth at high speeds. This tends to be a limitation of the majority of short-conception cultivators, as undesirable vibrations occur at high speeds. This is caused by the location of the transporting axle behind the disc sections, which has the effect of a pendulum on the machine. This leads to variable working depths, which resemble a sinusoid in the soil profile.

In the Atlas model range these swings (vibrations) have been successfully eliminated by a total structure, or supplementary construction elements which will enable you to do quality work at a constant depth even at high working speeds. This way you can easily achieve a higher daily output without diminishing the cultivation quality.

Easy and simple operation

An important factor for every farmer is the user friendliness of the machine – maintenance, setting, folding etc. Minimal greasing points, simple folding systems, easily adjustable working depths, main and auxiliary working bodies and the protection of the machine’s key components, all of these aspects will be appreciated by both the owner, and in particular by those operating the machines.

The Atlas has been designed in such a way that it minimizes maintenance and maximises the simplicity when using the machine both at work and during transportation. This practice has proven to be a successful achievement of those who had input in the design.
The BEDNAR ATLAS AO is a disc cultivator designed for tractors ranging from 140 to 240 HP – semi-mounted machine – working widths 4, 4.5, 5, 6 m – folds around the central frame with two wings in an upward direction

**STABILITY ALSO AT HIGHER SPEEDS**
The Atlas AO model is equipped with a spring which together with the supporting wheels contributes to the stability of the machine. Discing is then possible to do comfortably at high speeds.

**SUPPORTING WHEELS**
The supporting wheels ensure a constant working depth at fast operating speeds. Moreover, they help prevent the machine swinging thereby enhancing the evenness of the cultivation throughout the entire soil profile.

**MACHINE FOLDING**
The Atlas AO can be folded around the central frame with two wings in an upward direction. The machine transport width is 3 m.

**COMFORTABLE BAR-LOCK FOLDING**
The machine comes equipped with a Bar-Lock folding system which allows you to fold and unfold the wide Atlas AM machine to its working or transport position.

**BAR-LOCK**
The Bar-Lock system enables you to fold and unfold the wide Atlas AM machine to its working or transport position.

**COMFORTABLE TRANSPORT**
Due to a maximum transport width of 3 m, as is also the case with the Atlas AM 12000 machine, it’s possible to pass through roads and spaces e.g. in villages.

The BEDNAR ATLAS AM is a wide disc cultivator designed for tractors of over 380 HP or more – towed machine – working widths of 10, 12 m – folds in the rear direction behind the drawbar

<table>
<thead>
<tr>
<th>ATLAS</th>
<th>AO 4000</th>
<th>AO 4500</th>
<th>AO 5000</th>
<th>AO 6000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working width m</td>
<td>4</td>
<td>4,5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Transport width m</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Transport length m</td>
<td>7,4</td>
<td>7,4</td>
<td>7,4</td>
<td>7,4</td>
</tr>
<tr>
<td>Working depth cm</td>
<td>6–16</td>
<td>6–16</td>
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</tr>
<tr>
<td>Number of discs pcs</td>
<td>32</td>
<td>36</td>
<td>40</td>
<td>48</td>
</tr>
<tr>
<td>Total weight** kg</td>
<td>4 600–5 500</td>
<td>4 800–5 600</td>
<td>5 000–6 000</td>
<td>6 000–6 800</td>
</tr>
<tr>
<td>Recommended output* HP</td>
<td>140–180</td>
<td>150–200</td>
<td>160–200</td>
<td>200–240</td>
</tr>
</tbody>
</table>

*depends on soil conditions **depends on the machine accessories.

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<tr>
<th>ATLAS</th>
<th>AM 10000</th>
<th>AM 12000</th>
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<tbody>
<tr>
<td>Working width m</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Transport width m</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Transport length m</td>
<td>11,7</td>
<td>12,7</td>
</tr>
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<td>Working depth cm</td>
<td>6–16</td>
<td>6–16</td>
</tr>
<tr>
<td>Number of discs pcs</td>
<td>80</td>
<td>96</td>
</tr>
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<td>Total weight** kg</td>
<td>14 800–15 600</td>
<td>15 200–16 400</td>
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<tr>
<td>Recommended output* HP</td>
<td>380–450</td>
<td>480–550</td>
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“We equipped one half of the Atlas with standard serrated discs and the other half with A-discs. There has been an obvious difference in quality in the work done on the field between the serrated discs and the A-discs. The A-discs are capable of creating a larger amount of soil and therefore incorporate crop residue better.”

Jiri Tymich, director

“We are very satisfied with the Atlas. We have had it since the last harvest and it works perfectly. This year we have been incorporating wheat and we have been pleasantly surprised. It evens the ground superbly and is therefore suitable for soil preparation before the seedbed as well. We also appreciate the maintenance-free attachment of the tines to the frame, therefore we do not have to grease them regularly and there is no danger of clogging with dirt.”

Vaclav Nedved, agronomist

“We use the Atlas during the autumn in particular for disking after corn, it is passable with this machine and incorporates the crop residue very well. In the spring the machine is used for tillage cultivation before we sow the maize crops.”

Frantisek Rybansky, chief mechanic

“We use the Atlas for the cultivation of all our crops. As a tractor driver who works with the machine I appreciate the maintenance-free system of the machine’s components. The time which I spend on maintenance in the past could have been used for cultivation or a different activity at the farm thanks to the technical solutions of the machine.”

Bohuslav Bolehusek, machine operator

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“Every high density of crop residue does not result in the clogging of the machine. The machine properly turns the crop residue over to the bottom and the soil to undercut at the same depth through the shallow stubble. These are the reasons that we decided to get the disc cultivator Atlas AM.”

Miroslav Štipčák, mechanic

“The quality of the Atlas machines work is exactly what we were hoping for. The double packer breaks up the clumps nicely and increases the machine’s stability during work thanks to the greater packer surface area on the soil.”

Vladimir Hajzler, co-owner

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# Product range

The technical data and illustrations are approximate. Reservations are made for any design changes.

## TILLAGE

<table>
<thead>
<tr>
<th>Straw harrows STRIEGEL-PRO</th>
<th>Disc cultivators SWIFTERDISC</th>
<th>Disc cultivators ATLAS</th>
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<tr>
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<th>Chisel ploughs TERRALAND</th>
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<td><img src="image5.jpg" alt="Versatile cultivators FENIX" /></td>
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<th>Inter-row cultivator ROW-MASTER</th>
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<tr>
<td><img src="image7.jpg" alt="Trailed packers CUTTERPACK, PRESSPACK, GALAXY" /></td>
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## SOWING AND FERTILISING

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<th>Fertiliser hopper Ferti-Box</th>
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<tr>
<td><img src="image9.jpg" alt="Seed drills OMEGA" /></td>
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