

TINE CULTIVATORS

BEDNAR

FENIX FN, FO_PROFI

An all-round machine for your field



JOY OF FARMING



FENIX FN 3003

Multi-purpose machine



“The FENIX is a multi-purpose machine for basic soil tillage, from shallow stubble cultivation after harvest, cultivation to medium depth and deep cultivation up to 35 cm. The FENIX versatile cultivator is the ideal machine for most of your field work and can be used in almost any weather due to its high frame clearance and the ability to work without rear packers on semi-mounted models.”

Jan Bednář

BEDNAR FENIX are versatile cultivators of robust design suitable for minimum soil tillage systems. FENIX machines are three-row or four-row machines with a maximum working depth of 35 cm.

FENIX is equipped with robust tines with AUTO-RESET securing (double-spring horizontal x hydraulic). The tines can be fitted with different point widths (40, 60 or 80 mm), including the option of fitting points with wings.

Thanks to the ideal positioning and shape of the working tools, intensive soil tillage is achieved, including uniform mixing of organic matter from 5 cm to 35 cm. The fixed alignment of the individual tines ensures easy penetration into the soil, even in very difficult conditions, achieving the desired mixing and loosening effect. The mixed and cultivated surface is levelled with levelling discs or spring tines and then compacted with a rear packer, which closes the soil back in.



FENIX FO 5004 PROFI

Why FENIX?

TECHNICAL ADVANTAGES

- The robust middle frames increase the rigidity and strength of the entire machine, allowing for a soil tillage depth down to 35 cm.
- Double-spring AUTO-RESET or hydraulic securing of tines, smooth operation even in very demanding conditions.
- The integrated axle between the tines also allows work without rear packers (FENIX FO_PROF1).
- Points for deep cultivation, including the possibility of fitting wings for shallow stubble cultivation.
- High frame clearance of 80 cm, excellent machine throughput even in large quantities of post-harvest residues or catch crops.
- Possibility to extend/reduce the machine working width (applies only to FENIX FO_PROF1 models).
- Fertilisation kit with the option of applying fertiliser on the soil surface or in the soil profile.

AGRONOMIC ADVANTAGES

- Intensive mixing of crop residues with the soil in a single pass.
- Deeper soil tillage and low fuel consumption thanks to the fixed geometry of the tines. Deeper soil layers can be easily processed at acceptable fuel costs.
- Reducing the amount of time required. Using the FENIX machine can significantly reduce the time required compared to traditional tillage technology. FENIX is able to prepare the soil in a way that minimizes the additional soil preparation operations required.
- Stubble cultivation of large quantities of crop residues in a single pass thanks to intensive mixing.
- Levelling of the soil surface after previous working operations or tracks after heavy mechanization.
- Back closure of treated surface ensures even emergence of seed admixtures and weeds.

QUALITY MIXING OF CROP RESIDUES



EXCELLENT RESULTS OF THE COVERED SOIL WITH THE CROP RESIDUE

The even accurate balanced and fast cultivation are the main attributes of the FENIX. Even mixing of crop residue improves the rate of biological degradation. Covering the crop residue with soil can be measured using the **pattern analysis** that shows soil surficiality with residue..

The **pattern analysis** serves to express the percentage of surficiality with crop residue on the soil top. The measurement is conducted right after the machinery has passed over the land. A template sized 0,5x0,5 m is placed on the land to define 0,25 m² area. This designated area will be photographed and pattern analysis will be used to determine the surface coverage with crop residue. The template is laid onto land askew to the direction the machine is travelling in, as indicated by the arrow, in order to ensure the best and most authentic illustration of the dispersion of crop residue over the fields surface. The selection is done randomly.

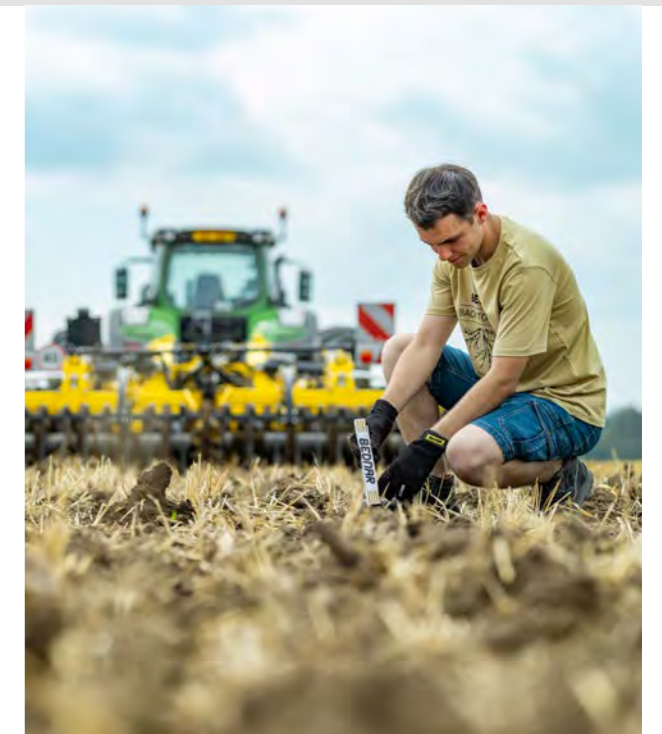
FENIX cultivators achieve excellent results when covering crop residue with an average surficiality rate of 18,7 %.



**Repeated measurements were taken on 3 plots using the FENIX FO 5004 PROFi fitted with 80 mm LONG LIFE points with wings—the 1st plot after harvest of winter wheat with a yield of 7,9 t/ha, the 2nd plot after harvest of winter wheat with a yield of 8,2 t/ha, the 3rd plot after harvest of winter barley with a yield of 7,2 t/ha. Straw and tailings were spread on the field evenly by using a six-rowed shredder on a crop harvester.*

THE BOTTOM PROFILE OF THE CULTIVATED SOIL IS THE BASIS OF QUALITY SOIL PREPARATION

The bottom soil profile depends on the selected soil engaging parts. Sufficient overlapping, their shape and angle then play a significant role in the appearance of the cultivated soil. FENIX cultivators feature high overlap of points and wings which ensures a flat bottom. The bottom levelness can be measured by thoroughly cleaning cultivated soil from the furrow bottom. The same method can also be used to ensure the operation depth is maintained throughout the entire machine's width. The FENIX is fitted with points and wings that guarantee a flat bottom and constant operation depth throughout the entire width. Tested and proven in practice!



FLATNESS OF THE CULTIVATED SURFACE

Uniformly level profile of the soil surface processed by the cultivator is the result of just how well the rotary discs fitted behind the tines. Channels or ridges cannot be eliminated even with heavy packers. The soil must be levelled before the packers. The levelling discs on the FENIX are adjustable and ensure the flatness of the soil surface.

VERSATILE USE



FENIX IS A MACHINE THAT OFFERS:

- A wide range of basic soil tillage options (shallow stubble cultivation after harvest, medium-depth cultivation or a deep cultivation to a maximum depth of 35 cm).
- Shallow stubble cultivation with points fitted with wings for perfect overlap to ensure capillary action breaks across the entire machine width.
- Medium-depth cultivation with points and side wings to achieve an even mixing of crop residues with the soil.
- Intense cultivation with points to create the right soil climate and break up compacted soil layers.



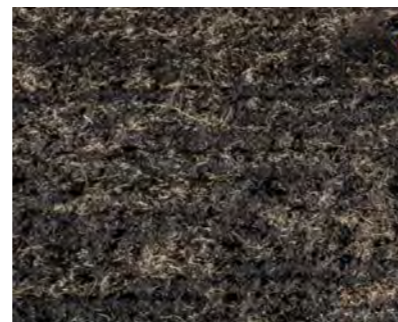
WORK OF THE MACHINE AFTER WINTER WHEAT

- Depth: 15 cm
- Working speed: 12 km/hr
- Fuel consumption: 11–12 l/ha



WORK OF THE MACHINE AFTER OILSEED RAPE

- Depth: 20 cm
- Working speed: 12 km/hr
- Fuel consumption: 12–14 l/ha



WORK OF THE MACHINE ON SOYBEAN STUBBLE

- Depth: 25 cm
- Working speed: 10 km/hr
- Fuel consumption: 18 l/ha

IMPORTANT WORKING PARTS

THREE TYPES OF SECURING FOR EXTREMELY DEMANDING CONDITIONS

FENIX versatile cultivators can be equipped with three types of securing — double-spring horizontal securing, horizontal hydraulic securing, shear bolt securing. The type of machine securing should take into account the farm's soil conditions so that it fulfils its purpose to the maximum and ensures operational continuity.



SHEAR BOLT SECURING

The tines are protected against overload by a shear bolt which is cut in the event of overload. This securing method is simple and inexpensive.

Use: light soils without stones



DOUBLE-SPRING HORIZONTAL SECURING

Double-spring, maintenance-free AUTO-RESET securing. The springs are preloaded to a stone release force of 500 kg. Constant geometry in medium-heavy conditions. The securing starts to work only upon striking an obstacle, e.g. a stone with a maximum lift height of 35 cm. In the meantime, the tine maintains the geometry and works within precisely defined space without oscillations and lift.

Use: sandy to medium-heavy soils



HORIZONTAL HYDRAULIC SECURING

The hydraulic cylinders operate with a maximum stone release of 660 kg. Stable geometry in heavy conditions. The securing starts to work only upon striking an obstacle, e.g. a stone with a maximum lift height of 35 cm. In the meantime, the tine maintains the geometry and works within precisely defined space without oscillations and lift.

Use: medium-heavy to heavy soils

IMPORTANT WORKING PARTS

POINTS

FENIX versatile cultivators can be fitted with any point and wing design. These are standard points or points from the premium LONG LIFE series with extended service life. LONG LIFE points are equipped with carbide blades and increased protection in the lower part and around the screws. These points feature a service life extended several times over, especially in abrasive soils.



POINTS – LONG LIFE 40 MM

Use: LONG LIFE 40 mm points are designed for deep cultivation.



POINTS – LONG LIFE 80 MM

Use: LONG LIFE 80 mm points are designed for medium-depth cultivation or stubble cultivation in combination with chisel wings.



POINTS 60 MM WITH MOULDBOARD

These 60 mm points are designed for medium-depth cultivation or stubble cultivation in combination with wings. The combination of point and mouldboard produces a high mixing effect.



POINTS 80 MM WITH MOULDBOARD

These 80 mm points are designed for medium-depth cultivation or stubble cultivation in combination with wings. The combination of point and mouldboard produces a high mixing effect.



SIDE WINGS

The wings help to work the soil over the entire machine working width and are particularly suitable for shallow stubble cultivation or medium-depth cultivation.

Available variants: 125 mm, 185 mm and 185 mm LONG LIFE

LEVELLING SECTION

Behind the tines, the soil must be levelled in front of the rear packers so that the land remains perfectly level. All versatile cultivator models can be equipped with the following types of levelling section.

LEVELLING SPRING TINES

Basic equipment for FENIX FN models, optional equipment for FENIX FO_PROFI models.

- FENIX FN: mechanical control by crank mechanism.
- FENIX FO_PROFI: mechanical or hydraulic control.

Use: sandy to medium-heavy soils



LEVELLING DISCS

Optional equipment for FENIX cultivators.

Levelling discs work on maintenance-free bearings protected by rubber segments.

- FENIX FN: mechanical control by means of a crank mechanism.
- FENIX FO_PROFI: mechanical or hydraulic control.

Levelling disc diameter: FENIX FN, FO_PROFI – 460 mm

Use: medium-heavy to heavy soils

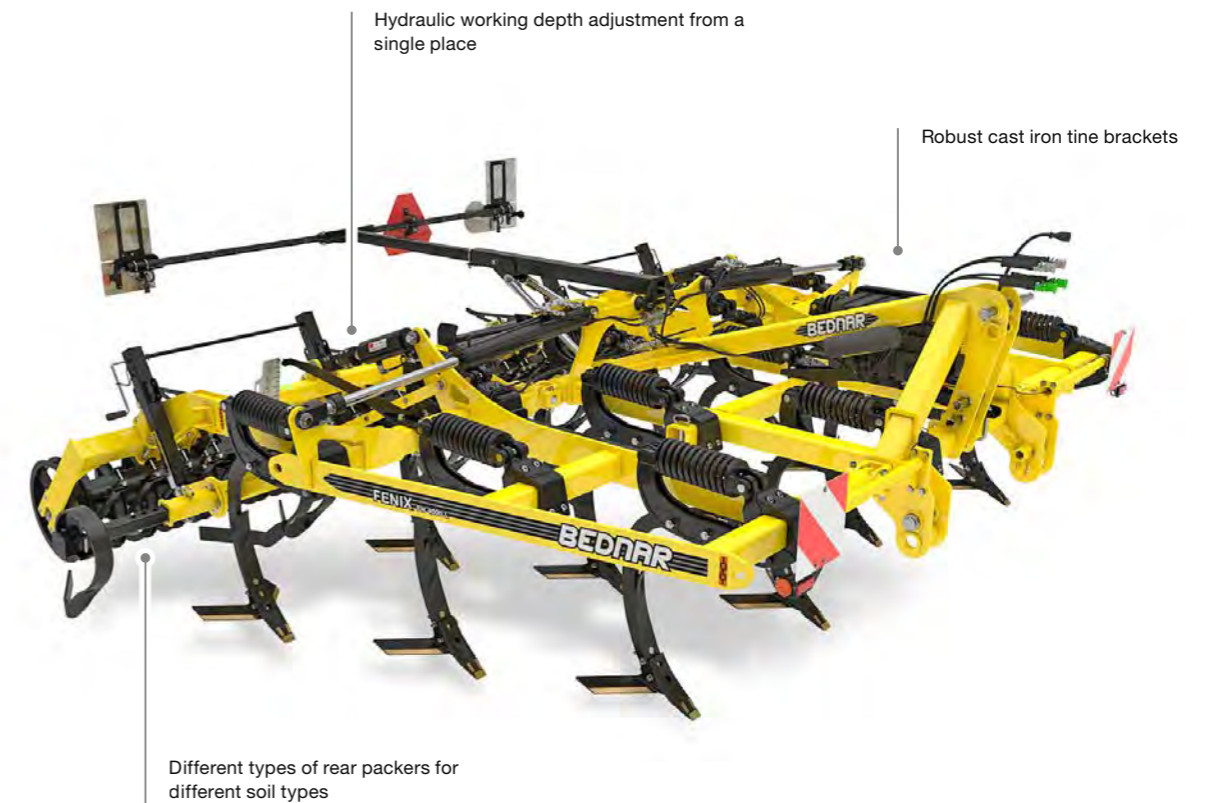
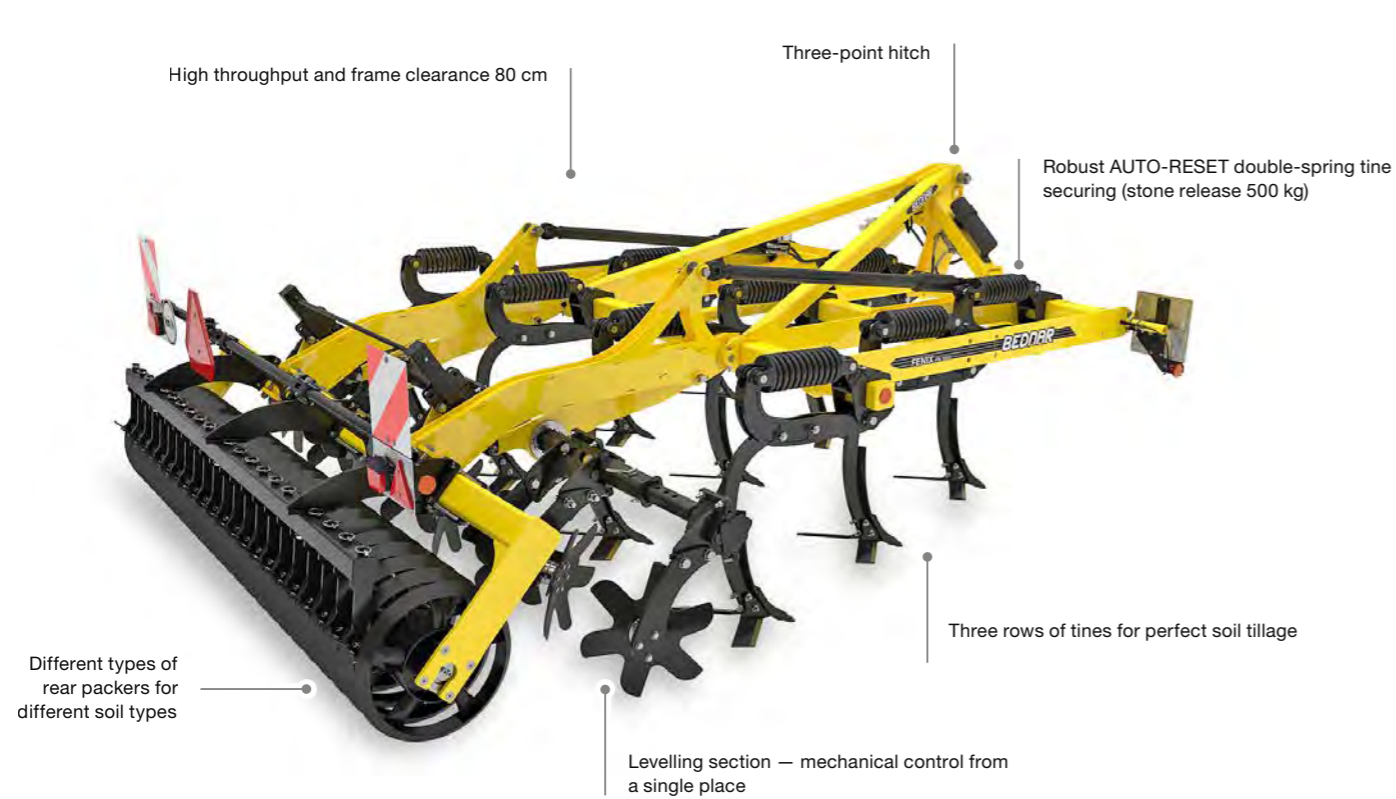


CRUSHBAR LEVELLING BOARD IN FRONT OF REAR PACKERS

The FENIX FO_PROFI semi-mounted machines can be equipped with levelling discs or spring tines, behind which the machine can be fitted with the Crushbar levelling board. This board perfectly aligns the work of the levelling section and the soil is perfectly level before the final compaction operation. A perfect work result is guaranteed.



FENIX FN



The BEDNAR FENIX FN is a basic three-row versatile cultivator designed for small and medium-sized farms interested in equipment with the widest possible range of applications. An ideal solution is the mounted FENIX FN, which handles multiple working operations.

The hydraulic working depth adjustment in the basic equipment and the simple machine adjustment according to the current soil conditions and required working operation are the advantages of the FENIX FN machine, which every farmer will appreciate. By the appropriate positioning and shape of the working tools, intensive soil tillage is achieved, including uniform mixing of organic matter. The fixed alignment of the individual tine ensures easy penetration into the soil, even in very difficult conditions, ensuring the desired mixing and loosening effect.

FENIX FN

		FN 3003	FN 3503	FN 4003 R	FN 4003
Working width	m	3	3.5	4	4
Transport width	m	3	3.5	4	3
Transport length	m	4.45	4.45	4.45	4.25
Working depth*	cm	35	35	35	35
Number of tines	pcs	10	12	13	13
Tine spacing	cm	31	31	31	31
Spacing of tines in a row	cm	87	87	87	80
Frame height	cm	80	80	80	80
Total weight**	kg	2,500	3,000	3,200	3,400
Recommended power*	HP	150—225	160—240	170—255	170—255

*depending on soil conditions **according to equipment

Why choose FENIX FN?



“We choose BEDNAR FENIX FN 3003 because we are fully convinced of the benefits of BEDNAR machines. We also trust and rely on people of our importer. We chose the FENIX cultivator and we are really satisfied with the work. This is a really nice machine for stubble cultivation, deep loosening of the soil, and the improvement of its structure. Its efficiency has exceeded our expectations.”

Bozhidar Altanov
Karaisen village, Pavlikeni manucipality
Bulgaria



WELDED FRAME WITH HIGH DURABILITY

The frame of the new FENIX FN model is completely welded, not assembled. The FENIX FN thus offers maximum robustness and high durability even for tillage cultivation to a maximum depth of 35 centimetres. The high frame clearance of 80 cm in combination with a tine spacing of 87 cm ensures trouble-free soil tillage even on land with large amounts of post-harvest residues.

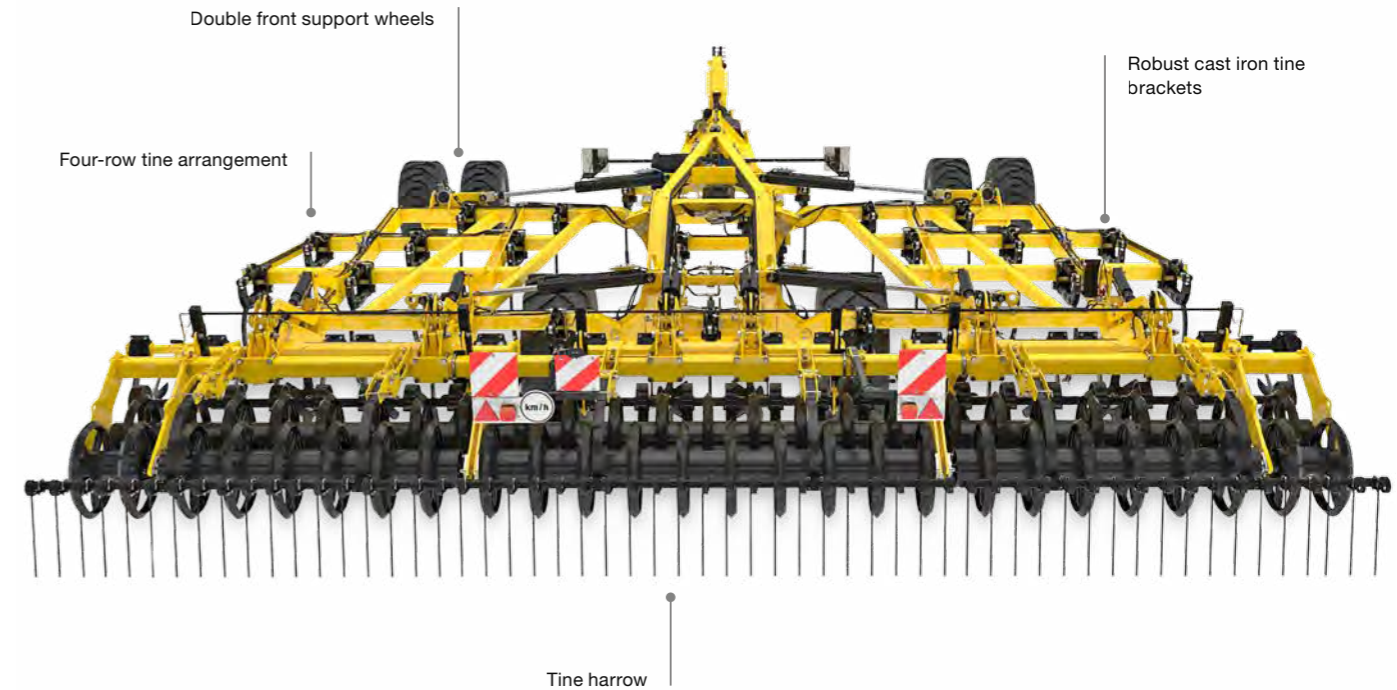
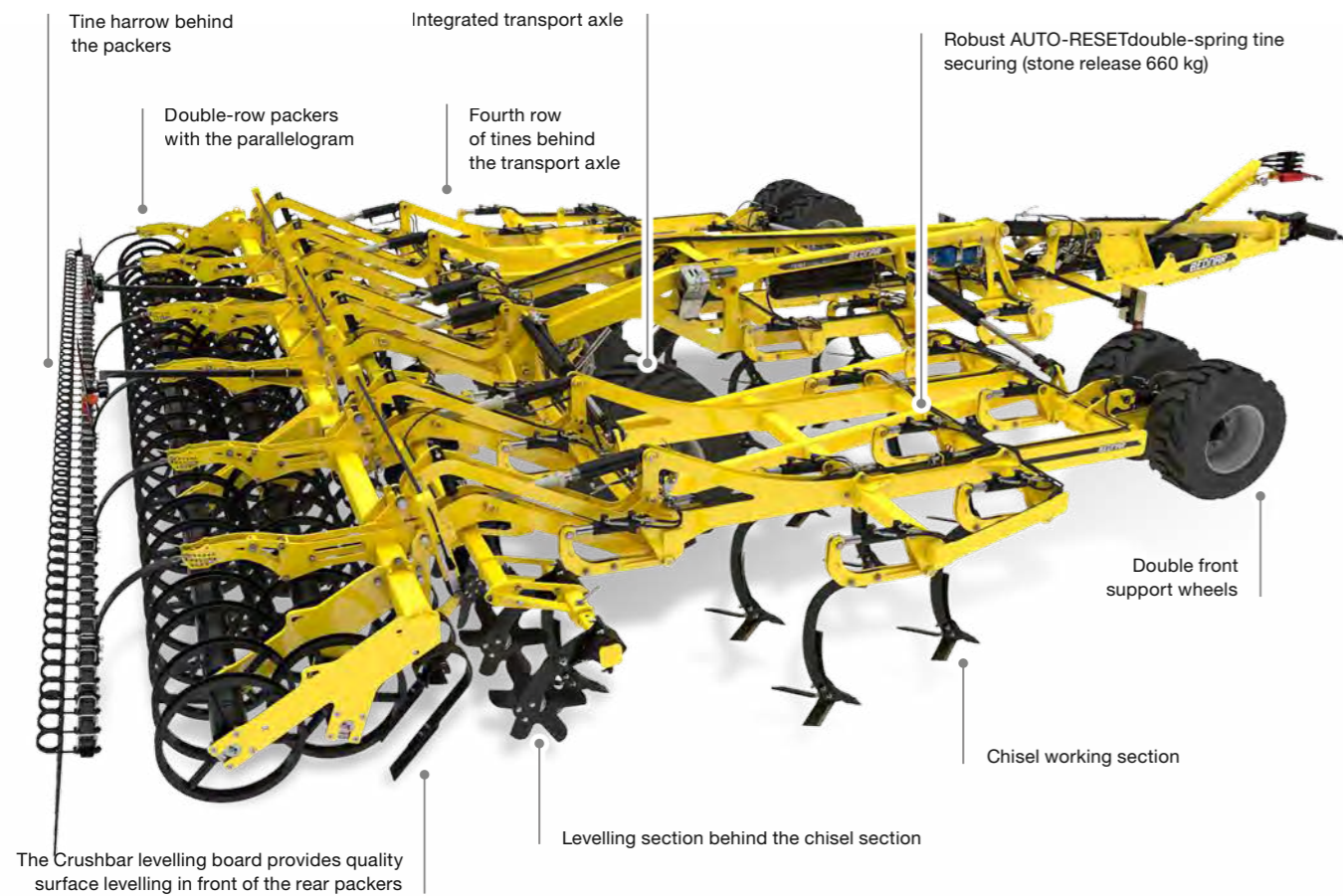


HYDRAULIC ADJUSTMENT OF WORKING DEPTH

Hydraulic adjustment of the working depth is possible thanks to a hydraulic cylinder that connects the rear packer and the main machine frame. The desired working depth is adjusted by means of a hydraulic cylinder on which the required number of integrated hydroclips are placed.



FENIX FO_PROFI



The BEDNAR FENIX FO_PROFI is a four-row versatile cultivator with an integrated axle that significantly reduces the turning radius on headlands. The FENIX FO_PROFI series also has the tines located behind the transport axle, so the machine can work without rear packers.

The FENIX FO_PROFI versatile cultivator is characterised by a low pulling force requirement thanks to the appropriate positioning of the individual tines in relation to the soil, which reduces the tensile resistance. The arrowhead-shaped tine distribution guarantees gradual penetration of the individual tines into the soil and excellent processing over the machine's working width.

The FENIX FO_PROFI is equipped with robust cast iron tine brackets. Working behind the tines are tine harrows/discs with the possibility of hydraulic control from the tractor cab. The Crushbar levelling board can also be placed in front of the rear packers. The result is a perfectly flat field.

FENIX FO_PROFI

		FO 4004 PROFİ	FO 5004 PROFİ	FO 6004 PROFİ	FO 8004 PROFİ
Working width	m	4	5.2	6.7	7.9
Transport width	m	3	3	3	3
Transport length	m	9.8	9.8	9.8	9.8
Working depth*	cm	35	35	35	35
Number of tines	pcs	13	17	23	27
Tine spacing	cm	31	31	29.5	29.5
Spacing of tines in a row	cm	93	93	88.5	88.5
Frame height	cm	80	80	80	80
Total weight**	kg	8,800	9,030	11,890	12,760
Recommended power*	HP	200—300	300—350	350—450	400—620

*depending on soil conditions **according to equipment

Why choose FENIX FO_PROFI?



SMALLER OR LARGER WIDTH?

Adjust the working width to the power of the tractor.

Have you acquired a more powerful tractor or do you need to adapt the machine working width to the current conditions and use? The FENIX FO_PROFI models offer the possibility of adjusting the working width using a kit for mounting/dismounting side sections.

FENIX FO 4004 PROFÍ (4 m) — FENIX FO 5004 PROFÍ (5.2 m)

FENIX FO 6004 PROFÍ (6.7 m) — FENIX FO 8004 PROFÍ (7.9 m)

Example for the FENIX FO 8004 PROFÍ machine:

- shallow stubble cultivation up to 15 cm with a 450 hp tractor — working width 7.9 m
- deep loosening up to 25 cm with a 450 hp tractor — working width 6.7 m



“We have been using BEDNAR machines in our company since 2016. One of the first was the FENIX FO 4000 cultivator, which has worked several thousand hectares on our farm. Recently, due to the increase in hectareage, we were looking for a machine that would allow us to increase our daily output. The choice fell again to BEDNAR, and this time we opted for a new machine, the FENIX FO 8004 PROFÍ cultivator. The acquisition of this machine has enabled us to increase our daily output from 22 ha to 60 ha. This machine’s versatility is enhanced by the ability to adjust the working width as needed. For deep soil tillage, we can remove the additional side sections and reduce the machine width from 7.9 m to 6.7 m.”

Gospodarstwo Rolne Maciej Sik farm
Poland

WORK IN EXTREME CONDITIONS THANKS TO THE INTEGRATED AXLE

The integrated axle between the tines allows the machine to work without a rear packer (a fourth row of tines works behind the transport wheels). In wet conditions, the packers can simply be taken out of operation and the soil remains without compaction, for example when preparing the soil for the winter period, when it is generally not even appropriate to compact the soil. Other advantages of the integrated axle are increased machine manoeuvrability when turning on headlands, a shorter turning radius and high machine stability during transport.

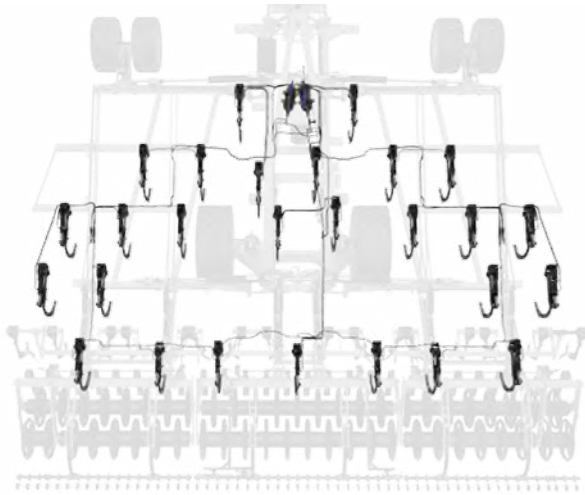


THE FENIX IS A SIMPLE SOLUTION TO WATERLOGGING

Even if you may not have managed to cultivate your soil before torrential rains, and the subsequent result is your fields become waterlogged, the FENIX FO_PROFI can be deployed immediately. This is usually in summer, when time is short and the agronomic deadlines for sowing winter crops are approaching. The hydraulic working depth adjustment enables immediate reaction to waterlogging by lifting the rear packer (danger of blockage); the machine works on the axle and the waterlogged part of the plot can also be cultivated, thus significantly accelerating the drying of the problematic part. After completing the waterlogged section, the rear packers can be put into operation immediately and the plot can be finished with soil consolidation.

Why choose FENIX FO_PROFI?

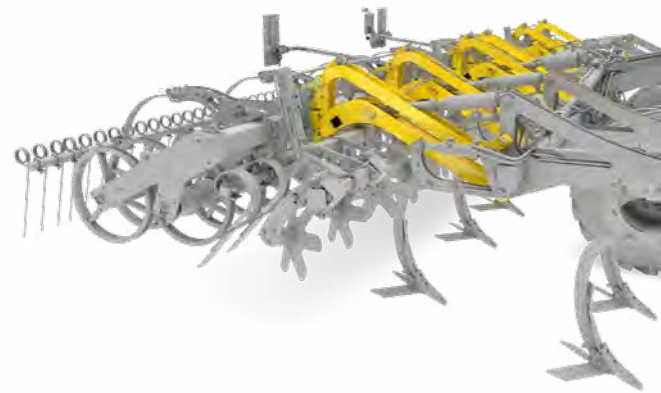
ALFA DRILL



THE ARROWHEAD-SHAPED TINE ARRANGEMENT REDUCES TENSILE RESISTANCE AND FUEL CONSUMPTION

FENIX FO_PROFI machines have their tines arranged in the shape of an arrowhead. The tines enter the soil gradually, and this technical solution allows the tractors to work with a lower pulling power than competitors' machines.

Thanks to the "arrowhead" tine concept, the tractor consumes less fuel and the quality of work is excellent.



PARALLELOGRAM OF REAR PACKERS

The rear packers of the FENIX FO_PROFI versatile cultivator are equipped with a parallelogram, which ensures perfect contouring of the terrain and keep the set working depth. This technical solution ensures that in the event of unevenness or large quantities of soil, both packers always remain in contact with the soil, thus consolidating the soil.

If the packers are not mounted on a parallelogram, almost always when there is a large amount of material in the field, the rear packer is pushed upwards and loses contact with the soil. These sites remain without compaction, which negatively affects the drying out of the topsoil.



ROBUST CAST IRON TINE BRACKETS

Each tine is bolted (not welded) to the main frame of the FENIX FO_PROFI by means of a solid bracket. The advantage of this solution lies in the high durability of the brackets and the machine frame. In case of its damage, each bracket can be easily replaced. Each tine retains its geometry and works within precisely defined limits without oscillations and lift.



The **ALFA DRILL** is a seeding unit for sowing small-seeded crops and catch crops and for microgranulate application. It can be mounted on various types of BEDNAR tillage and seeding machines. Thanks to the powerful hydraulically driven fan, smooth distribution is ensured even with wide-width machines.

CONTROL OPTIONS

With the ISOBUS system: Easy connection of the seeding unit to the ISOBUS socket of the tractor. A single ISOBUS tractor monitor replaces a number of different monitors specific to equipment connected to the tractor.

Without the ISOBUS system: The ALFA DRILL in the non-ISOBUS version is powered via a three-pin socket in the tractor cab and requires no direct connection to the tractor battery.

ALFA DRILL

	ALFA 400	
Hopper capacity	l	400
Diameter of filling hole	mm	380 × 530
Filling height	cm	117
Hydraulic oil quantity	l/min	24
Total weight*	kg	150

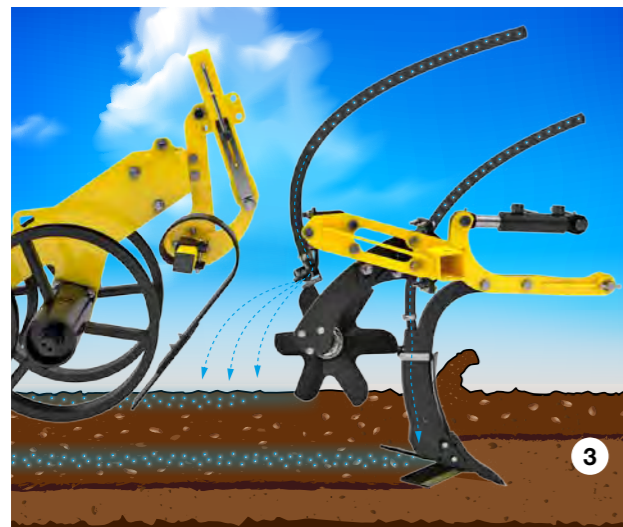
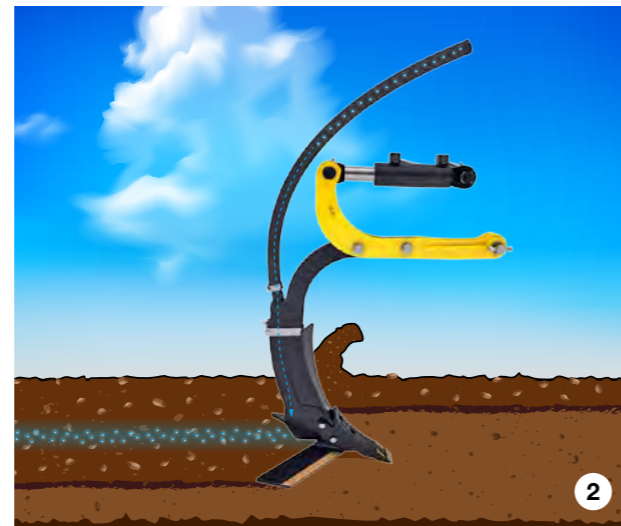
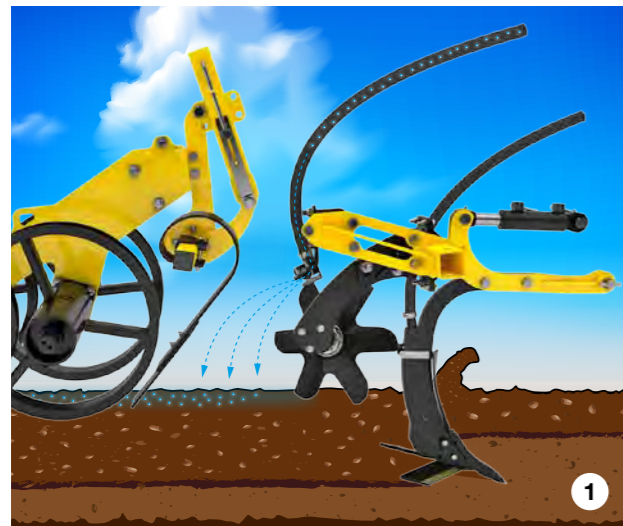
* depending on equipment

FERTILISATION SYSTEM

Upon request, FENIX versatile cultivators can be equipped with a set for the application of mineral (granular) fertilisers. In a single pass, the machine can be used to apply mineral fertiliser to the soil profile (behind the tine or wide into the soil profile), to the soil surface or by a combination of surface and soil profile application.

Variants:

- FENIX FN — fertiliser application behind the tine (1 × 140 mm)
- FENIX FO_PROFI — fertiliser application behind the tine (1 × 140 mm) / fertiliser application behind the tine wide (1 × 140 mm) / fertiliser application in front of the packer (1 × 140 mm) / fertiliser application in front of the packer + behind the tine wide (2 × 140 mm) / fertiliser application in front of the packer + fertiliser application behind the tine (2 × 140 mm)



- 1 — Fertiliser application in front of the packer
- 2 — Fertiliser application behind the tine
- 3 — Fertiliser application behind the tine + in front of the packer

PACKERS AND ROLLERS

SPRING packer



The packer has an excellent crumbling effect and reduces the risk of blockage for soil with high moisture content. .
Weight: 146 kg/m
Diameter: 530 mm

Double roller



An ideal roller for quality two-step cultivation of medium and light soils in drier conditions.
Weight: 132 kg/m
Diameter: 470 mm + 370 mm

Double V-RING



A dual-row heavy steel packer for all types of soil for intense crumbling and compaction of soil.
Weight: 163 kg/m (including scraper system)
Diameter: 630 mm

V-RING packer



A heavy steel packer for all soil types for intensive crumbling and compaction of the soil.
Weight: 119/163 kg/m (including scraper system)
Diameter: 530/630 mm

U-RING packer



Steel packer for all soil types with high crumbling quality and low adhesiveness due to the "U-ring" profile. A levelling board is part of the packer, which levels the surface in front of the packer.
Weight: 122/145 kg/m (including scraper system)
Diameter: 500/600 mm

Double U-RING



Self-cleaning double-row steel packer with excellent crumbling effect and low adhesiveness due to the "U-ring" profile.
Weight: 164 kg/m
Diameter: 600 mm

Cage packer



The cage packer is made of massive steel tubes. Suitable for intense crumbling while reaching high circumferential speed. The packer is suitable for light soils.
Weight: 121 kg/m
Diameter: 630 mm



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Soil Cultivation



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Disc Cultivators



ATLAS
Disc Cultivators



FENIX
Versatile Cultivators



VERSATILL
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TERRALAND
Chisel Plough



ACTROS
Combined Cultivator



GALAXY
Rollers

Seeding and Fertilising



OMEGA
Seed Drills



MATADOR
Strip-till Seed Drill



DIRECTO
No-till Seed Drill



FERTI-BOX
Hopper for Fertiliser

Inter-row/Line Cultivation Mulching



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Inter-row Cultivator



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