



...more than  
50 years of  
innovative mulching  
technology



...designed  
and produced  
in Germany



...for fruit growing



...for vine growing



...for turfcare



...for mechanical  
weed control

# Rotary Mowers





humus is symbolic for more than 50 years of innovative mulching technology for fruit and vine growing and for community service surface care.

We grew up with the design and manufacturing of mulching machines. Our machines, which are marketed under the brand name "humus" and are of great significance for fruit and vine growing, community services and for forestry.

We pioneered development of the first mulching machines for fruit growing applications in 1957, and still enjoy continuing success today. At present, the „humus“ product range comprises more than 100 different machine models.

For more than 50 years, the Maschinenfabrik Bermatingen has stood for competence and innovation. We invest large sums in research and development. We constantly strive to adapt our products to the requirements of our customers as well as to those of the market.

Our design engineers always keep two objectives in mind: on the one hand the realisation of advanced technical solutions with the development of user-friendly machinery and equipment, and on the other hand to consider a multitude of requirements which allow environmentally sound solutions.

Modern technology, ease of operation and proven safety are standard for us when developing our equipment - this has been documented by means of internationally valid certification.



### Up to date productions systems assure a high standard of quality

All of our company divisions are united at the company headquarters in Bermatingen near Lake Constance, where administration, R&D, parts production and final assembly work together efficiently. Over the years, production floor space has grown over 7,000 m<sup>2</sup> and we are already considering further expansion.

Qualified and motivated employees assure the fulfilment of our ambitious business objectives with their exceptional commitment and team spirit. After all, industry leaders have to be willing to give more than just 100 %, and we stick to this principle. Continuous investment guarantees our high quality standard of our products. Systematic inspection and testing accompany all stages of the product: R&D, all production sequences up to shipment to our customers all over the world.

### Precision work for satisfied customers

All of our products are the result of in-house R&D, where they are refined until they are ready for series production. In so far as it is feasible and economically viable for us, we also produce all parts ourselves.

Trained staff operates most modern production equipment. CNC welding robots, press brakes, CNC milling machines and our own Laser Centre are other essential prerequisites for a reliable and continuous fulfilment of our own quality requirements as well as those of our customers.

All our products receive its protective coating in our own painting system. Our Quality requirements apply to purchased standard parts as well, and we only use products which fulfil the toughest of international standards.



The company headquarters in Bermatingen near Lake Constance: Our expansive grounds provide us with ample opportunity for further expansion.

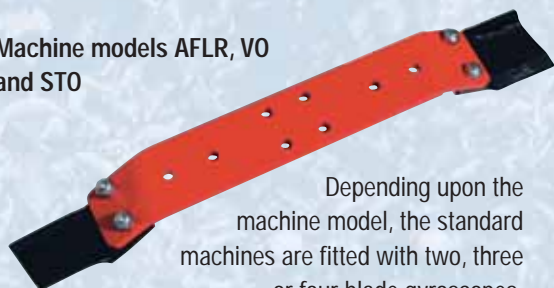


Our subsidiary, "Humus S.A.", represents us in France.



# The blade systems – outstanding technology for excellent results

Machine models AFLR, VO  
and ST0

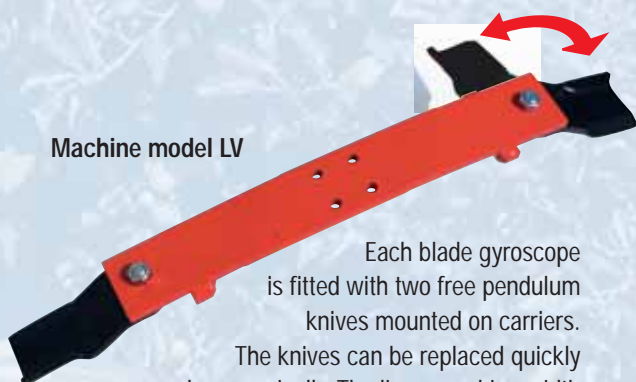


Depending upon the machine model, the standard machines are fitted with two, three or four blade gyroscopes.

They are arranged in an optimal overlap position, the cutting result is excellent.

The blades are fixed on carriers in order to allow an economical replacement of the blades.

Machine model LV



Each blade gyroscope is fitted with two free pendulum knives mounted on carriers.

The knives can be replaced quickly and economically. The linear working width adjustment ensures a large overlap, which leads to a clean cutting result.

Machine models HKP  
and HKN



Each blade gyroscope is fitted with two articulated free pendulum knives, providing a clean cutting result. For disintegrating light brushwood up to 3 cm Ø, two additional special blades can be installed at each blade gyroscope.



## humus Rotary Mowers

Page



VO model range  
Rear or front mounting

1/2

Working widths 2.05 to 3.41 m



AFLR model range  
Rear or front mounting

3

Working widths 1.40 to 2.50 m



LV model range  
Rear or front mounting

4

Working widths 1.10 to 2.16 m



ST0 model range  
Rear or front mounting

5

Working widths 2.25 and 2.61 m



HKP model range  
Rear or front mounting  
...for mulching and  
disintegration of brushwood etc.  
Working widths 1.55 and 1.94 m

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HKN model range  
Rear or front mounting  
...for mulching and  
disintegration of brushwood etc.  
Working widths 0.85 to 1.15 m

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humus-PLANET / INTERPLANET  
Rear or front mounting

8

...for the mechanical soil cultivation  
Working widths 1.50 to 4.06 m



humus Mulchgeräte  
aus Feinkornstahl

★ leichter ★ stabiler  
★ wertbeständiger!

...designed and  
produced in Germany

# Rotary mower VO

Front or rear mounting

Well proven range of use

- Grass
- Fruit growing
- Sprinkled fruit meadows
- Berry cultivation
- Municipal applications



VO rotary mowers are based upon a solid frame, especially designed for its use with powerful carrier vehicles and for working in combination with spraying devices.

Any desired with between 2.05 and 3.07 m (VO 3000) or between 2.26 m and 3.41 m (VO 3500) can be set.

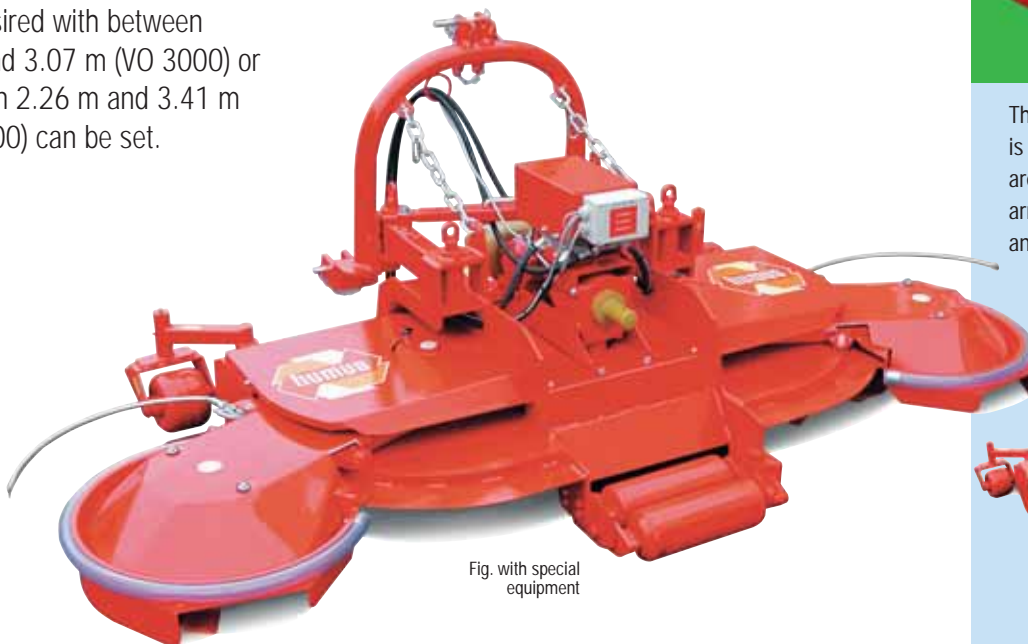
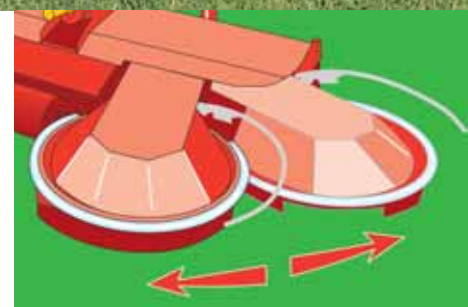


Fig. with special equipment



The electro-hydraulic fine sensing system is for mowing in tree rows. The sensors are installed in front of the extension arms, they lead the wings very sensitive and close around the tree trunk.



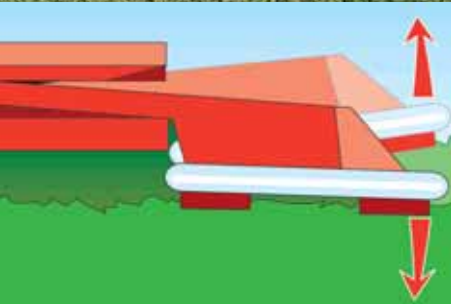
Rotary mower	type	VO 3000	VO 3500
Working width	m	2.05 to 3.07	2.26 to 3.41
Overall width	m	2.13 to 3.16	2.35 to 3.50
Power requirement*	min. kW/hp	37 / 45	44 / 60
Rpm of drive shaft	rpm	540, 750 or 1,000	
Weight**	approx. kg	640	730

\*The power requirement also depends upon the grass density and grass height

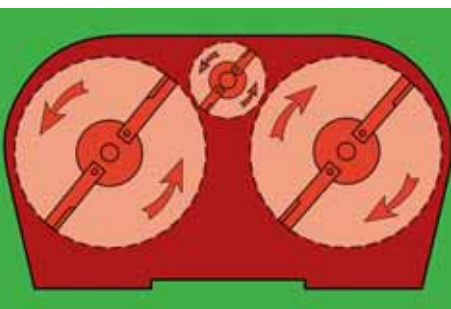
\*\*Weight may differ according to equipment

In combination with the fine sensing system, the VO standard machine is fitted with a manual wing setting. Therefore, the working width can be perfectly adjusted for mowing in alleys. Unnecessary movement of the wings is avoided and an exact mowing around the tree trunk is achieved.





A support disc is fixed under each wing, which will give way and move upwards to adjust the wing to the ground conditions.



VO rotary mowers can be supplied for front and rear mounting. The working width is set hydraulically and stageless from the carrier vehicle. Both wings can either be set synchronous or independently.



For working in combination with spraying devices, the standard VO rotary mower is fitted with a gearbox drift. The supporting load of the spraying device is transmitted to the carrier vehicle via the pendulum suspension (link arm).

#### VO characteristics

- Large overlap by third blade gyroscope
- Solid design
- Perfect ground adjustment
- Precise grass cut and equal spread of mown material
- Double-gearbox with drift, e.g. for spraying device
- Improved v-belt drive
- Rear twin roller for smooth operation
- Pivoting front wheels, adjustable in track
- Manual and stageless adjustable working with
- Suitable for fitting with electro-hydraulic fine sensing system
- Accident prevention installation
- Few maintenance required

#### VO accessories / options

Drive shaft / drive shaft with drift / front mounting / gearbox to disengage / adapter for mulching-spraying combination / hydraulic parallelogram side adjustment / control bloc with double-effective control units / electro-hydraulic fine sensing system / starting safety device for both wings

The lateral side shift of the VO mower can be carried out easily with the manual parallelogram side adjustment. If requested, hydraulic side adjustment is available, as well.



VO mowers move on broad wheels, they can be adjusted in height and track.



A Serial rear twin roller assures a smooth operation, even with increased working speed.



# Rotary mower AFLR

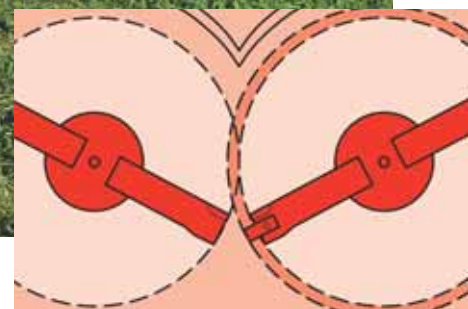
## Front or rear mounting

### Well proven range of use

- Grass
- Vine growing
- Fruit growing
- Sprinkled fruit meadows
- Berry cultivation
- Pasture and grassland care

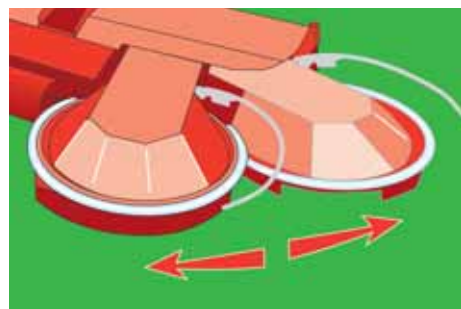


AFLR rotary mowers offer a very reliable and economical possibility of mowing in tree rows and of achieving a biological cultivation. The design is extremely flat with a smooth topside for an easy mowing under fruit-carrying and hanging branches. The compact design provides favourable weight allocation at the carrier vehicle. The elastic v-belt drive is robust and hard-wearing.

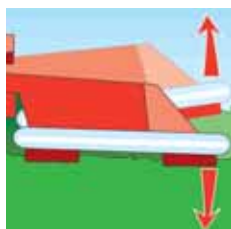


The AFLR mowing technology guarantees an excellent quality of mown grass with a discharge into the alley and under the tree row.

Fig. with special equipment



Upon request, the wing can be fitted with a hydraulically operated fine sensing system (sensor). We especially recommend this sensor when mowing in young plantations, at side slopes and with increased driving speed. Apart from the automatic backswing activated by the sensor, an extra remote control (to be activated from the driver at the tractor) offers the possibility to activate the backswing manually. This is important especially when transporting the mower, when mowing on a slope or to avoid any obstacles.



### AFLR characteristics

- Solid manufacturing, flat design
- Large stageless hydraulic side shift
- Cutting height adjustment
- Rear roller for smooth operation
- Pivoting front wheels, adjustable in track
- Improved v-belt drive
- High-quality angular gearbox
- Adjustable, padded wing
- Accident prevention installation
- Few maintenance required

### AFLR accessories / options

- drive shaft
- drive shaft with drift
- front mounting
- electro-hydraulic fine sensing system for wing

Rotary mower	type	AFLR 1800	AFLR 2300	AFLR 2500
Working width	m	1.40 to 1.76	1.83 to 2.39	1.93 to 2.56
Max. lateral offset from tractor centre	m	1.60	2.33	2.49
Setting range	m	0.40	0.63	0.63
Power requirement * min. kW/hp		15 / 20	26 / 35	29 / 40
Rpm of drive shaft	rpm		540 or 1,000	
Weight**	approx. kg	380	480	485

\*The power requirement also depends upon the grass density and grass height

\*\*Weight without parallelogram side shift





# Rotary mower LV

## Front or rear mounting

### Well proven range of use

- Grass
- Vine growing
- Fruit growing
- Sprinkled fruit meadows
- Berry cultivation



LV rotary mowers have a very compact and solid design, they will be mounted close to the carrier vehicle. The flat design provides favourable weight allocation at the carrier vehicle and an advantageous turning radius. By using supplementary equipment, simultaneous operation is possible, e.g. spraying equipment and weed control/soil cultivation by using the humus INTERPLANET rotary tiller wing (see p. 7).



### LV characteristics

- Compact and solid design
- 3-point link
- Excellent cutting result, optimal overlap of blades
- Linear working width adjustment via double-effective control unit
- Cutting height adjustment
- Rear roller for smooth operation
- Front wheels
- High-quality angular gearbox
- Accident prevention installation
- Few maintenance required

### LV accessories / options

- drive shaft with friction coupling and drift
- front mounting
- gearbox drift for working in combination with supplementary equipment
- adaptor for mulching-spraying combination
- rotary tiller wing for soil cultivation or mulching wing
- point- or band spraying devices

They are fitted with a stageless linear working width adjustment in order to set the appropriate width for the single alley, even when driving.



...other working widths available, see machine models LVO

Rotary mower	type	LV 110	LV 115	LV 125	LV 145	LV 160
Working width	m	1.10 to 1.38	1.15 to 1.48	1.27 to 1.69	1.45 to 1.96	1.60 to 2.16
Overall width	m	1.16 to 1.44	1.21 to 1.54	1.33 to 1.75	1.51 to 2.02	1.66 to 2.22
Power requirement*	min kW/hp	29 / 40	29 / 40	29 / 40	29 / 40	33 / 45
Rpm of drive shaft	rpm	540 or 1,000				
Weight**	approx. kg	455	470	500	540	620

\*The power requirement also depends upon the grass density and grass height

\*\*Weight may differ according to equipment





# Rotary mower STO

## Front or rear mounting

### Well proven range of use

- Grass
- Vine growing
- Fruit growing
- Sprinkled fruit meadows
- Berry cultivation
- Pasture and grassland care
- Municipal applications



STO rotary mowers are mainly used in the fruit growing. The very flat design and the smooth topside assure an easy mowing under fruit-carrying and hanging branches without causing damage. The extraordinary characteristics of the STO mower also provide excellent results in the surface care and when mowing sprinkled fruit meadows.



### Deposit of mown material for choice

For choice, the mown material will be equally spread either behind the mower into the alley or laterally into the tree rows, to be set at the ejection flaps.

### STO characteristics

- Solid manufacturing, flat topside design
- Excellent cutting result, optimal overlap of blades
- Parallelogram side shift
- Cutting height adjustment
- Rear roller for smooth operation
- Pivoting front wheels, adjustable in track
- Accident prevention installation
- Improved v-belt drive
- High-quality angular gearbox
- All grease points installed on the topside
- Gearbox drift for working in combination with supplementary equipment

### Rotary mower STO 260

Working width 2.61, fitted with 4 blade gyroscopes with large overlap, lateral skids for smooth operation and pivoting front wheels.



STO mowers move on broad wheels, they can be adjusted in height and track.



A Serial rear twin roller assures a smooth operation, even with increased working speed.

### STO accessories / options

Drive shaft / drive shaft with drift / front mounting / gearbox to disengage / adapter working in combination with supplementary equipment / hydraulic side adjustment

Rotary mower	type	STO 230	STO 260
Working width	m	2.25	2.61
Overall width	m	2.30	2.70
Power requirement* min. kW/hp		33 / 45	41 / 55
Rpm of drive shaft	rpm	540 or 1,000	
Weight** approx. kg		570	510

\*The power requirement also depends upon the grass density and grass height

\*\*Weight without parallelogram side shift

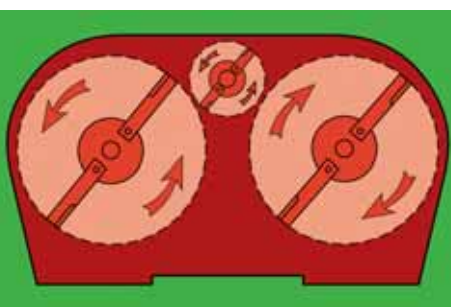




For working in combination with spraying devices, the standard STO rotary mower is fitted with a gearbox drift. The supporting load of the spraying device is transmitted to the carrier vehicle via the pendulum suspension (link arm).



The lateral side shift of the STO mower can be carried out easily with the manual parallelogram side adjustment. If requested, hydraulic side adjustment is available, as well.



The standard machine is fitted with three blade gyroscopes. They are arranged in an optimal overlap position, the cutting result is excellent. The blades are fixed on carriers in order to allow an economical replacement of the blades.



Fig. with special equipment

HKP mowers are budget-priced machines for the fruit growing. They will be used after a chemical treatment of the tree rows, or if kept open with a soil treatment equipment. In addition, it is well proven with the general surface care. The linear side adjustment offers the possibility of lateral offset of the HKP at the carrier vehicle.

#### HKP characteristics

- Solid manufacturing, flat topside design
- Excellent cutting result, optimal overlap of blades
- Linear side adjustment
- Cutting height adjustment
- Skids
- Gearbox laterally fixed, improved v-belt drive
- Accident prevention installation

#### HKP accessories / options

Drive shaft / drive shaft with drift / special blades for the disintegration of brushwood etc. / hydraulic cylinder for side adjustment / roller / wheels / two skids / lateral grass ejection / gearbox installed centrally (only HKP 2000)



Rotary mower	type	HKP 1600	HKP 2000
Working width	m	1.55	1.94
Max. lateral offset from tractor centre	m	1.42	1.85
Setting range	m	0.40	0.63
Height	m	0.28	0.28
Power requirement* min. kW/hp		18 / 25	22 / 30
Rpm of drive shaft	rpm	540 oder 1,000	
Weight** approx. kg		370	420

\*The power requirement also depends upon the grass density and grass height  
\*\*Weight without parallelogram side shift





# Rotary mower HKN

Front or rear mounting

Well proven range of use

- Grass
- Vine growing
- Fruit growing
- Sprinkled fruit meadows
- Berry cultivation
- Disintegration of brushwood etc.

HKN machine models are all-purpose mowers, they are smooth-running with an excellent cutting result, even with an increased driving speed. The desired cutting height can be set in different stages at the skids. For disintegrating light brushwood up to 3 cm Ø, additional special blades can be installed.



## HKN characteristics

- Solid manufacturing, flat design
- One blade gyroscope with two articulated knives
- Adjustment rail for side shift (HKN 1000 and larger machine models)
- 3-point link
- Accident prevention installation
- Few maintenance required

## HKN accessories / options

Drive shaft / drive shaft with drift / special blades for the disintegration of brushwood etc.

Rotary mower	type	HKN 850	HKN 950	HKN 1000	HKN 1200
Working width	m	0.88	0.98	1.08	1.15
Overall width	m	0.97	1.07	1.17	1.25
Required width of alley	min. m	1.30	1.40	1.50	1.60
Power requirement* min. kW/hp		12 / 16	12 / 16	14 / 19	14 / 19
Rpm of drive shaft	rpm	540			
Weight**	approx. kg	150	170	180	200

\*The power requirement also depends upon the grass density and grass height

\*\*Weight without parallelogram side shift

# humus- INTERPLANET



In order to customise the efficient humus-PLANET for the ecological row cleaning to the general user, we designed the INTERPLANET, which is suitable for mounting as supplementary equipment at mulching machines and other cultivators of almost every brand.



The humus-INTERPLANET can be supplied with a rotary tiller head of 30 or 40 cm working width. Upon request, also available with mechanical control.





# humus-PLANET

Front or rear mounting

Well proven range of use

- Vine growing
- Fruit growing
- Berry cultivation



The humus-PLANET is designed for the mechanical weed control and can be supplied for single or double-side mounting. The tree row is treated evenly deep. A brush is rotating above the operating tools which removes the last remaining weed directly at the trunk. The electro-hydraulic fine-sensing system leads the humus-PLANET very sensitive and close around the tree trunk.



Fig. with special equipment



The humus-PLANET is hydraulically adjustable to every shape of ground.



Instead of the rotary tiller wing, a mulching wing can be installed.

## The advantages of the humus-PLANET

- The weed is ripped off together with its roots and disintegrated (mulching soil treatment).
- The structure of the soil will be crumbled, there won't be any soil shift.
- The machine does not block up and always achieves the same excellent result, irrespective if the ground is wet or dry, light or heavy, sandy or stony.
- The trunk cleaning brush removes even the last weeds directly at the trunk.

## humus-PLANET accessories / options

Drive shaft / hydraulic frame / mulching heads

humus-PLANET	type	...for vine growing		...for fruit growing					
		PE 1000	PE 1400	PE 1100	PE 1600	PE 2000	PD 2300	PD 3200	PD 4000
Mode of operation		single-side	single-side	single-side	single-side	single-side	double-side	double-side	double-side
Required width of alley	min. m	1.10	1.50	1.50	2.00	2.40	1.70	2.40	3.10
Lateral offset	m	0.45 to 1.00	0.60 to 1.40	0.70 to 1.15	0.93 to 1.64	1.17 to 2.03	1.41 to 2.30	1.85 to 3.27	2.33 to 4.06
Rpm of drive shaft	rpm	hydraulically at the carrier vehicle			540 / 1,000 or hydraulic supply of the carrier vehicle				
Gewicht		depending upon equipment			depending upon equipment				





- Innovative technology
- Excellent working results
- Easy to operate
- Reliability
- High quality
- Solid design
- Service-friendly

Recognised and awarded technology is part of our motivation to keep on endeavouring to offer always the perfect solutions to our customers.

Our wide dealer network guarantees our customer the best quality service and support for many years after purchasing a humus machine.



We reserve the right to vary technical specifications and colours without prior notice. / 05.2007

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service@mabe-info.de**

Your specialised dealer



[www.humus-mulchgeraete.de](http://www.humus-mulchgeraete.de)



### Safety mulchers - the new mulching technology

The special design and arrangement of the blades fixed at the rotor eliminates almost completely the danger of stones and other material being thrown out.

Please ask for **Safety mulcher** brochure.



### Flail mulchers

The cutter rotor mulches the growth exactly in the set height. The mown material is transported along the housing via the rear roller and spread equally behind the machine.

Please ask for **flail mulcher** brochure.



### Side mulchers

For mulching at paths and embankments - fitted with "Y"-type blades, system flails or the "Safety" blade rotor.

Please ask for **flail mulcher** and **Safety mulcher** brochure.

humus is also strongly committed with the technology of the equipment, and offers a broad range of practical assistance for the harvest in the fruit growing and pruning. . .



. . .humus forklifts for mounting

**All fork lifts are fitted with double-effective lifting cylinder for pushing and a quick lowering, hydraulic top link, upward folding and multi-adjustable teeth.**

	Type	I	II	A	B	C
Lifting height	m	2.50	3.00	2.00	2.60	3.20
Lifting capacity	kg	1,000	1,000	1,500	1,500	1,500
Height	m	1.85	2.10	1.70	2.00	2.30
Width	m	0.80	0.80	1.03	1.03	1.03
Weight	kg	260	280	380	410	440



...Felco -  
electronic pruning shears



...humus  
cutting equipment