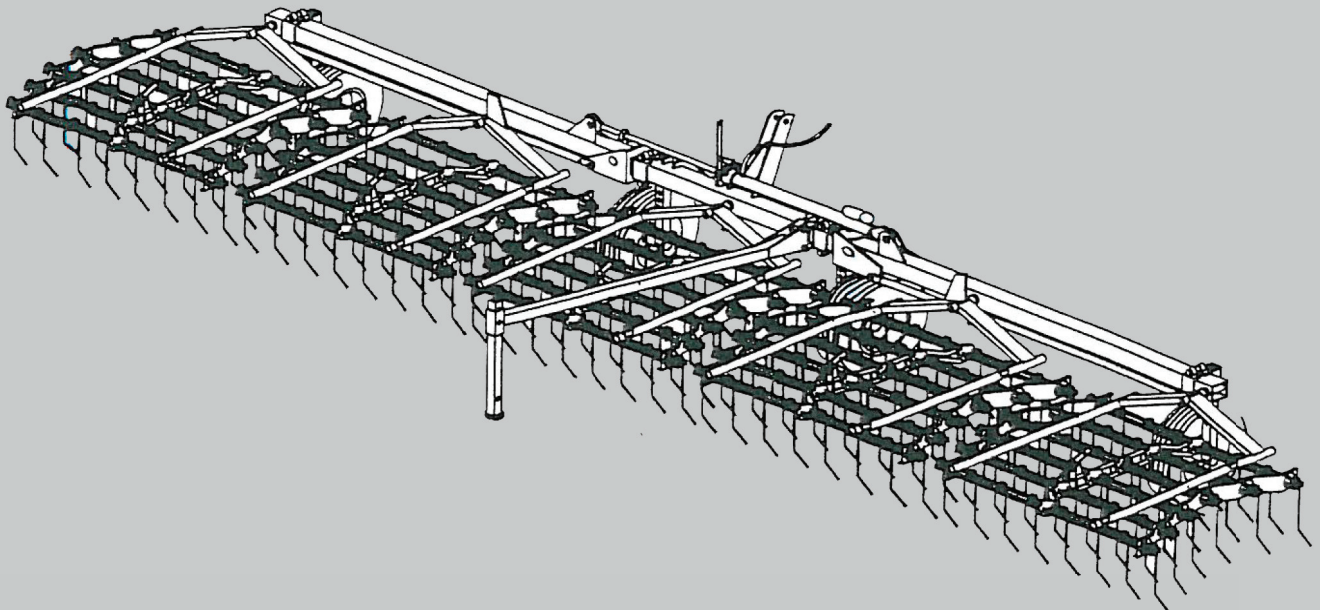




**Manual
and
spare parts catalogue**

**Harrow
working width 7,5m**



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2014



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EG Declaration of Conformity

The manufacturer: **Thomas Hatzenbichler**
Agro-Technik GmbH
Fischering 2
A-9433 St. Andrä
Phone: +43 (0) 4358/2287

declares that the following product:

Product: Harrow

Working width 7,5m

Serial number: _____

Year of building _____

all relevant provisions of the Machinery Directive (2006/42/EC).

To properly implement the EG directives specified in the safety and health requirements of the following standards and / or specifications have been used.

DIN EN ISO 4254-1 Agricultural machinery - Safety - Part 1: General requirements

DIN EN ISO 12100 Safety of machinery - Basic concepts -
Risk assessment and risk reduction

DIN EN 60204-1 Safety of machinery - Electrical equipment of machines Part 1:
General requirements

Fischering, 02.04.2014
Date



Director

2nd. Safety information:



Before starting, read the instruction manual and note.



The transport of the machine is prohibited!



When attaching the machine and during operation of the hydraulic folding ensure that no one is in between.



Never reach into the crushing area as long as parts may move!



Stay clear of swinging range folding machine parts!

Only operate in the hydraulic lift drop zone if hydraulic cylinder is supported by a mechanical stay.



Beware of high pressure fluid escaping!



3rd. Intended Use

Dear Customer!

We are pleased to congratulate you on your buying decision and wish you much fun and success in working with this device.

Please read necessarily before using this product all the instructions in this manual carefully.

This will avoid, reduce risks, downtime and repair costs, increase reliability and service life of your machine.

With illustrations and information on technical data and dimensions in this manual the manufacturer reserves the right to make changes.

The machine is equipped with state of the art and the recognized security safety rules. Nevertheless, results from the use injury to the user or third parties. Take care of the machine may not cause.

Use the machine in perfect working condition for its intended purpose, safety and risk of danger with respect to user manual!

In particular, problems that can affect safety must be corrected immediately.

The machine may only be used maintained and repaired by individuals who are familiar with and aware of the danger.

Hatzenbichler cannot take responsibility for installation of modification of the machine effecting safety of man or machine.

The machine is designed for normal use for cultivation in the agricultural sector. Any other or additional use is considered improper.

Shall not be liable for damages resulting from Hatzenbichler.
The risk is borne entirely by the user.

Intended use also includes compliance with the instruction manual and the adherence to the manufacturer's instructions for operation, maintenance and maintenance requirements.

4th. Accident prevention

- The General accident prevention regulations of each country are taken into account.
- When is arrival and uncoupling the machine to the hitch of the tractor injury.
- The unit must be secured to prevent accidental switching off when rolling.
- The device may only be used by anyone on the regulations for public transport streets know.
- The attached machine before hanging off the ground.



5th. Transport on public roads (main provisions)

- For transport on public roads set the stop valve on the cylinders to shut off this will ensure no accidentally opening of the machine.
- The axle load and total weight of the tractor must not be exceeded.
- The attachment must match films with warning signs or red and white diagonal bar (according to DIN, or relevant standards) are identified.
- Transport hazardous or dangerous parts must be covered and also with warning signs or sheets be identified.
- Warning signs or slides to max. be 1.50 m above the roadway while driving.
- Illumination devices of the tractor must not be obscured by the unit, otherwise illumination must be attached to the attachment also.
- The ability to steer the tractor may not be impaired or diminished.
- The device may only be used on the public highway by someone who knows the regulations fully.
- For transport on public roads with a max. 25 km/h.

6th. Warranty

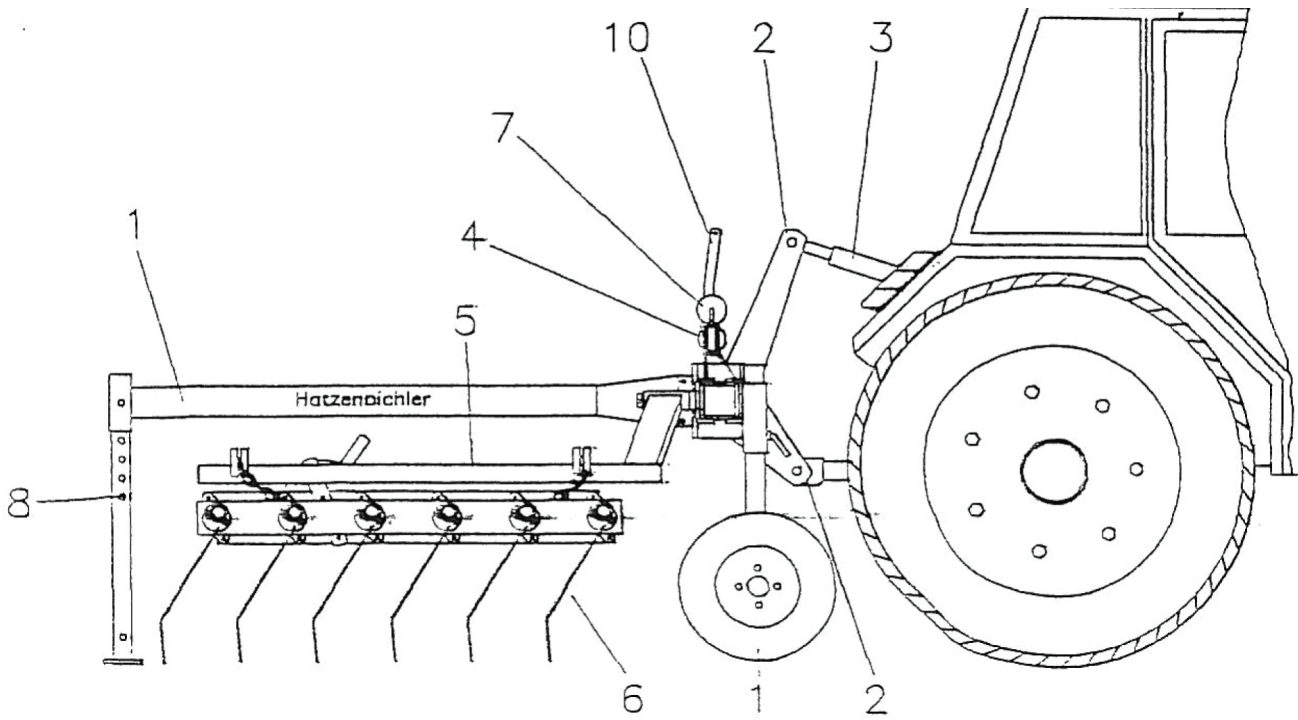
Check unit immediately upon acceptance for possible shipping damage. Subsequent complaints from transit damage can not be accepted.

We give a one year warranty from date of shipment (your invoice or delivery note as proof of valid). This warranty is valid in the case of material or construction failure and does not cover parts that are damaged by normal-or excessive wear.

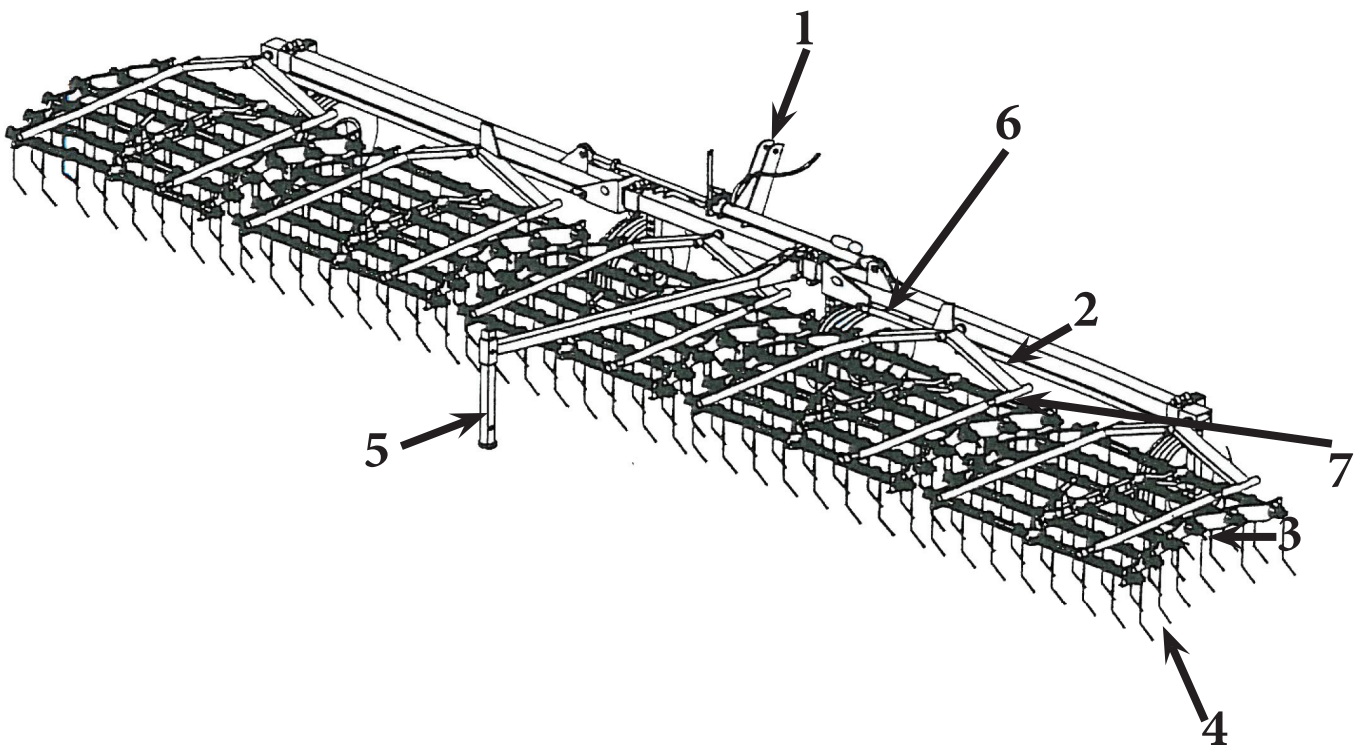
- The warranty is void
- if damage is caused by external forces
 - when an operation error
 - if the specified KW/horsepower limit is exceeded
 - if the device is changed without our consent, extended, or is equipped with foreign parts.

7th Attaching the Harrow on the tractor

- The air pressure in the tractor rear tyres should be sufficient for use
- Under difficult operating conditions wheel weights might be advantageous. See also operating instructions of the tractor manufacturer.
- Enhance tractor's front equipment with sufficient ballast to ensure the steering and braking ability.
- Tractor lift arms must be adjusted left and right at the same height.
- Attach Heavy Duty Grass Harrow to the 3-point hitch of the tractor.
- Connect the hydraulic hoses (for devices with hydraulic folding) connected to a double-acting valve.
Note when connecting to the tractor and machine hoses are depressurized.



8th Design and operation



1. 3 Point hitch
2. Harrow bed holder
3. Harrow section
4. Harrow tine
5. Jack stand
6. Support wheel
7. Adjustment for tine aggressiveness



Operation of the Harrow:

The Hatzenbichler harrow is used for mechanical weed control for more than 30 years in almost all soil cultures, as for example corn , canola , soy , beans, peas, corn, grassland etc.

By vibrating tines the bottom crust is broken and the soil aerated again .

The water balance is regulated and the tilth is maintained.

The tine aggressiveness can be adjusted mechanical or hydraulical.

The tines are made oil-tempered hardened spring wire , therefore very durable and sturdy . Due to the vibration of the tines in conjunction with the traveling speed an extensive editing is achieved.

Due to its sheltered a spring coil to nick the crop peaks is prevented.

On each harrow bed are six rows tine bar mounted (10 settings see page before) .

Each harrow bed is with two wheel bearing is individually suspended on chains on the special form tubular frame . This best ground and extreme adaption the whole set. As additional equipment and a hydraulic leveler can be mounted .

The support wheels are infinitely adjustable in height by means of spindle adjustment .

The transport position is done hydraulically. The devices with shear retraction are equipped with 2 piece double acting cylinder (you need the tractor a double- acting control unit) .

9. Tips on using the harrow in different cultures

Winter weed:

Autumn	1. Work use	Blind harrowing (means harrowing before the seed starts growing) <u>Effect:</u> - Breaking the soil crust and give air to the soil - Destroy small weed
	2. Work use	With early sowing easier to use in 2 - to 3-leaf stage.
Spring	3. Work use	once the vegetation begins, medium setting <u>Effect:</u> - Soil loosening - stimulate plant growth - Enhancement of plant
	4. Work use	At 30-40cm grew in height <u>Effect:</u> - Late seedling combat - nutrient mobilization - Creation of balanced growth conditions
	5. Work use	with Hatzenbichler weed inter row cultivator (if inter row crop)

Summer weed:

1. Work use	Blind harrowing after seeding
2. Work use	Harrowing at the 3-leaf stage, medium setting
3. Work use	At 30-40cm grew in height

In spring barley, it is particularly important in adolescence as possible efficiently to groom, as occurs in the spring stronger weed pressure.

4. Work use	with Hatzenbichler weed inter row cultivator (if inter row crop)
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Corn:

1. Work use	Blind harrowing
2. Work use	at 8 to 15cm grew in height

With a plant height of 8-15 cm, the harrow can be over the whole area Insert. The flexible zinc tools that the static Pressure of the corn plant to dodge, is a whole-area achieve weed control. Stops water is knitted in this growth stadium on warm days when the corn plants by the Solar heat softer and not bend it.

3. Work use	with Hatzenbichler corn inter row cultivator or rollstar cultivator
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Sugarbeet:

1. Work use	Bling harrowing, gentle setting
2. Work use	3-4cm grew in height
3. Work use	with Hatzenbichler sugarbeet inter row cultivator



Raps:

Autumn 1. Work use at ca. 20cm grew in height
gentle setting
Effect:
- Soil loosening
- Improve nutrient availability
- Destroy of the not yet visible autumn germinator

Spring 2. Work use once the vegetation begins
middle setting
Effect:
- Soil loosening
- branching conveying

Soy:

1. Work use Blind harrowing, gentle setting
2. Work use at 3-4 leaf stage, medium setting
3. Work use depending on weed growth, strong setting
4. Work use work shortly before the series concludes working with
Hatzenbichler inter row cultivator

Faba bean:

1. Work use Blind harrowing, strong setting
2. Work use in the 8-leaf stage, medium setting
3. Work use at 15-20cm grew in height
Effect:
- Loosening the soil before the series circuit of the plant
- optimum soil aeration to harvest
4. Work use with **Hatzenbichler inter row cultivator**

Pea:

1. Work use Blind harrowing
2. Work use 8 leaf stage

Potatoes:

1. Work use Blind harrowing, middle setting
2. Work use 3-4 leaf stage, followed by earthing up with **Hatzenbichler rollstar cultivator**

Vegetable:

1. Work use Seeds - plant height at 4-5cm, gentle setting
Seedlings - about 14 days after planting, gentle setting
2. Work use depending on weeds and soil conditions
3. Work use with **Hatzenbichler special vegetable inter row cultivator**

Grassland:

Harrow in conjunction with side plates for leveling mole hills, cow dung, grinding of dung, liquid manure and aeration of the turf. Uniform processing even on uneven surfaces by adjusting the mobile field and the geferderten tines with high clearance - no clogging.



10th The small 1x1 of harrowing

The success of a Hatzenbichler Harrows for weed control is 30% about through the spilling of weeds in the bud stage and only about 70 % by a gentleman pulling the weeds. From this fact , various conditions for good success of the curry comb insert can be derived :

- The soil should be as even and free flowing . Why must especially on clay and silty Soils that are prone to crusting , agree to the PH- value in the upper crumb layer . On critical (hours) floors , for towing in the spring and the blind harrowing are reativ lightweight devices with large working widths of light tugs possible to track damage to minimize . When towing and reactive harrowing it depends on good ground following. devices with portable design or as many as possible , self- twistable individual fields , show it the best Results . Depending on soil conditions you have work with lower or higher tine pressure.
- The seedbed of harrowing areas surfaces must be ordered coarsely in the fall to the spring also to have still pourable floor.
- Is driven faster during grooming , the greater the power and the Control measures.

11th Hitting the right growth stage

Specificities are effective measures that take place before the emergence of the cultures. Weed control must therefore be matched as closely as possible to the time of tillage and sowing.

- Wherever possible, the seed and the blind harrowing should be tried and true „Towing“ precede, to a whole generation of weeds in the top seedbed layer time to germinate to stimulate.
- The Blind harrowing (before the crop starts growing) often causes very good success. It can be up to the tips of the grain (stage EC to EC 10 07) according to.
- Especially in the bud stage or small-leaf stage of the weeds of the largest combat success (up achieved to 80%) by spillage or exposure.
- The time-optimal harrowing date (piercing of the weed seeds by the seed bed) can help with launched a window pane can be determined. When the first seed leaves appear, should the Harrow be used.
- In rye, winter barley and wheat in early seeded cereal rich rotations the autumn germinator windgrasses and field foxtail (Ackerfußschwanz) often make the most problems. In rye and winter barley harrowing success depends on a timely use before winter starts. In wheat, the harrow time is extended due to the later sowing and thus the weed pressure is lowered.
- Are the weeds reached via the cotyledon stage also in the small rosette stage, is the Fight harder: Here you have sharper (more tine pressure or steeper pitch of the tines) be harrowing because the weeds can hardly be torn out and survive even the Spillage.
- Is particularly effective harrowing on sunny and windy days late morning. exposed Weed seedlings dry up then have until the afternoon.

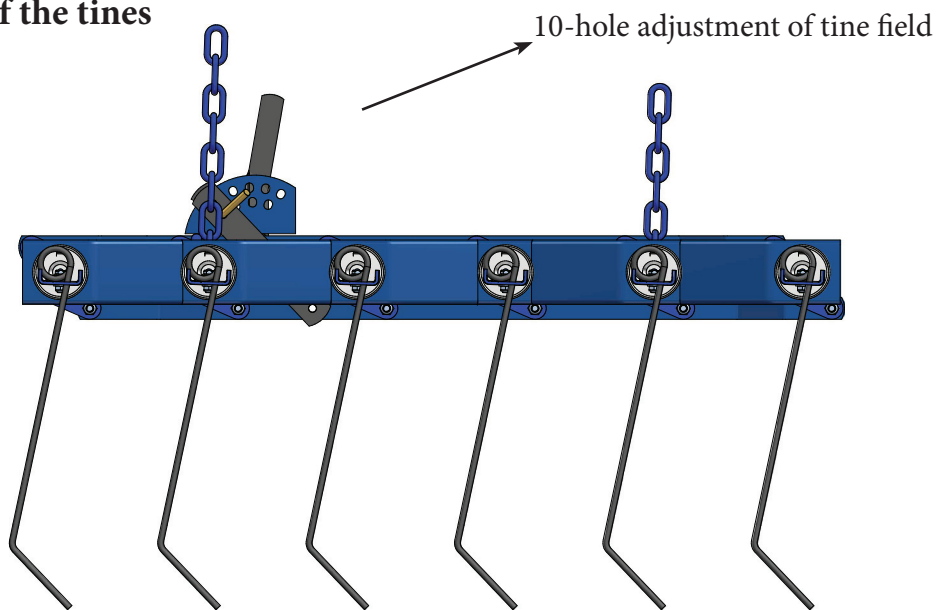
12th setting options for tine aggressiveness

The setting of the aggressiveness of tines are noted below, according to drawings by means of central adjustment lever.

There are 10 settings, shallow to be aggressive.

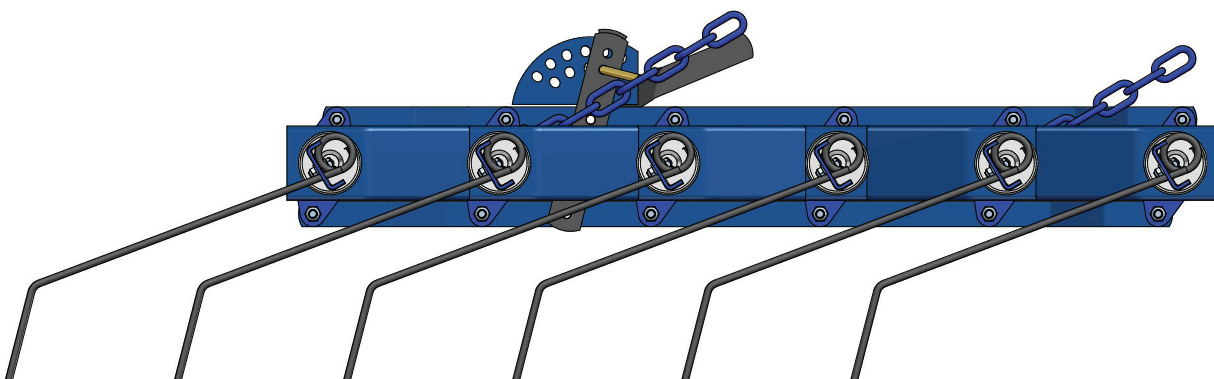
NOTE: Each harrow bed must be located in the via pin and clip hole.

Attack angle of the tines



Aggressive recruitment of tines

- for aggressive harrowing the soil



shallow setting

- for not aggressively working the soil

13th Care and Maintenance

- For maintenance and service work mount the machine on level and stable ground to prevent from rolling away.
- After cleaning, all hydraulic lines for leaks and loose connections check (About every 50 hours, the hydraulic power packs and hoses checked).
- Check damage or wear. Any defects rectified immediately.
- Check nuts and bolts regularly for tightness and tighten if necessary. (On new units every 3 hours and again after 20 hours.)
- The lubrication points on the joints and bearings greased regularly (approximately every 10 hours).
- Do not use high pressure washers for cleaning bearings and hydraulic parts used.
- During the winter, protect the equipment with environmentally friendly means against rust.
- When taking machine off protect from weather and ensure no unnecessary pressure on machine part (tines, etc).

14th Adjustment / operation

When coupling may ensure there are no people between the tractor and machine.

Attach the machine:

- The machine, depending on the equipment at the three-point
- Hydraulic lines connect
- Connect the plug for the lights and functioning
- Lift the machine.
- Remove the jack stand (if any)
- Fold sides (for transport) or fold out for the working position.

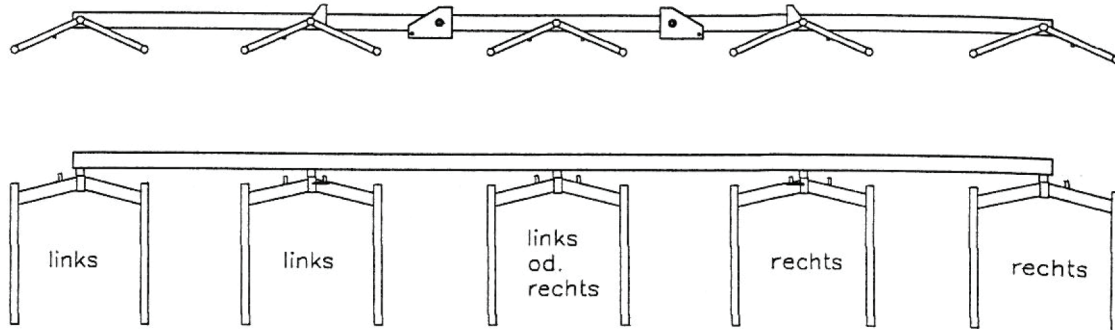
15th Technical details:

Working width	Weight	Number of beds	HP	Transport high	Transport width
3,00 m	ca. 250 kg	2 X 1,50	ab 15 PS	-	-
4,50 m	ca. 350 kg	3 X 1,50	ab 15 PS	1,45 m	2,80 m
5,00 m	ca. 400 kg	1 X 2,00 + 2 X 1,50	ab 25 PS	1,70 m	2,80 m
6,00 m	ca. 460 kg	4 X 1,50	ab 40 PS	2,20 m	2,80 m
6,25 m	ca. 540 kg	2 X 1,70 + 2 X 1,50	ab 40 PS	2,20 m	2,80 m
7,50 m	ca. 700 kg	5 X 1,50	ab 50 PS	3,15 m	2,80 m
8,00 m	ca. 730 kg	1 X 2,00 + 4 X 1,50	ab 50 PS	3,25 m	2,80 m
9,00 m	ca. 780 kg	6 X 1,50	ab 60 PS	3,70 m	2,80 m
9,00 m*	ca. 850 kg	6 X 1,50	ab 60 PS	2,75 m	2,85 m
10,50 m*	ca. 1050 kg	7 X 1,50	ab 65 PS	3,50 m	2,85 m
12,00 m*	ca. 1200 kg	8 X 1,50	ab 70 PS	3,40 m	2,85 m
12,50 m*	ca. 1215 kg	2 X 1,70 + 6 X 1,50	ab 70 PS	3,50 m	2,85 m
15,00 m*	ca. 1850 kg	10 X 1,50	ab 80 PS	4,00 m	2,85 m

Tine length: 380 mm, 450 mm / Tine diameter: 6 mm, 7 mm, 8 mm / Tine distance: 25 mm

* Scissors folding

16th Mounting harrow sections



When mounting the harrow box carrier, make sure that the left and right fields are not confused.

The top image shows the arrangement.

Should it come to confusion during assembly, it is not possible to mount the folding rod and various tabs. The unit may be damaged.

17th Connect the hydraulics:

Hydraulic connect only when the machine is hydraulic and unit pressure.

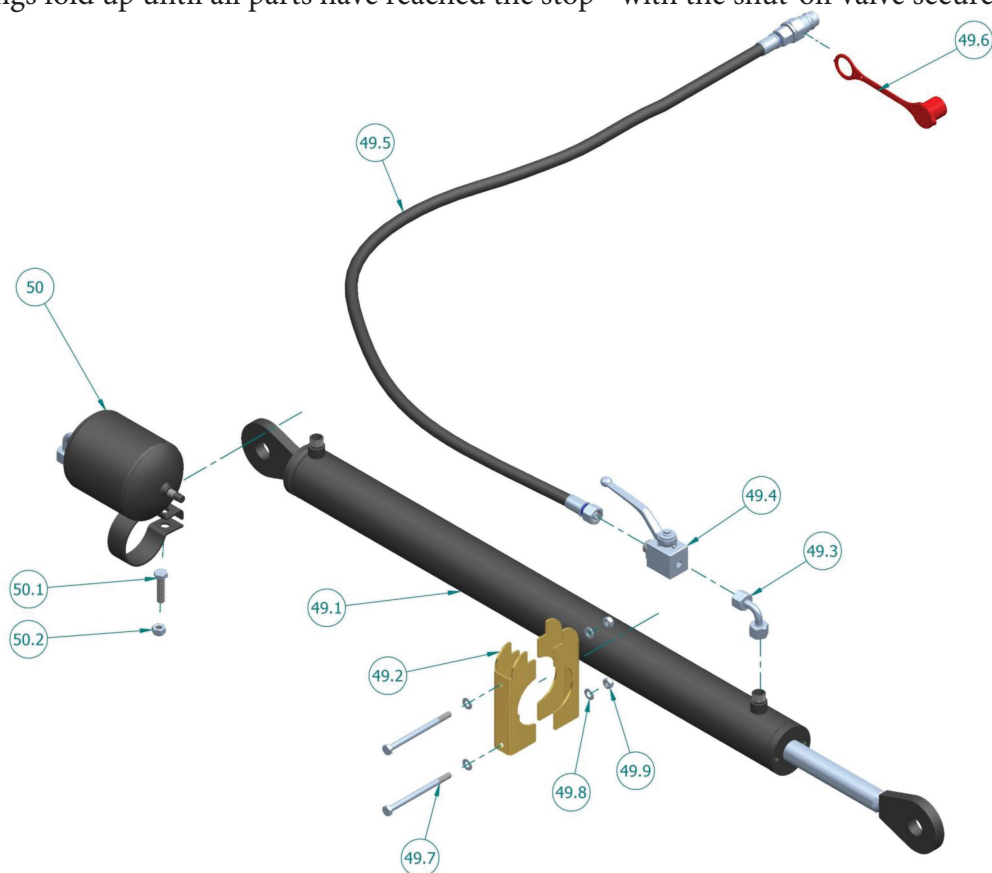
Throttling for all hydraulic movements controller before stop of the machine parts (minimise hydraulic speed).

To set the device to fold it must be connected to a double-acting control device.

Fold only on solid level ground.

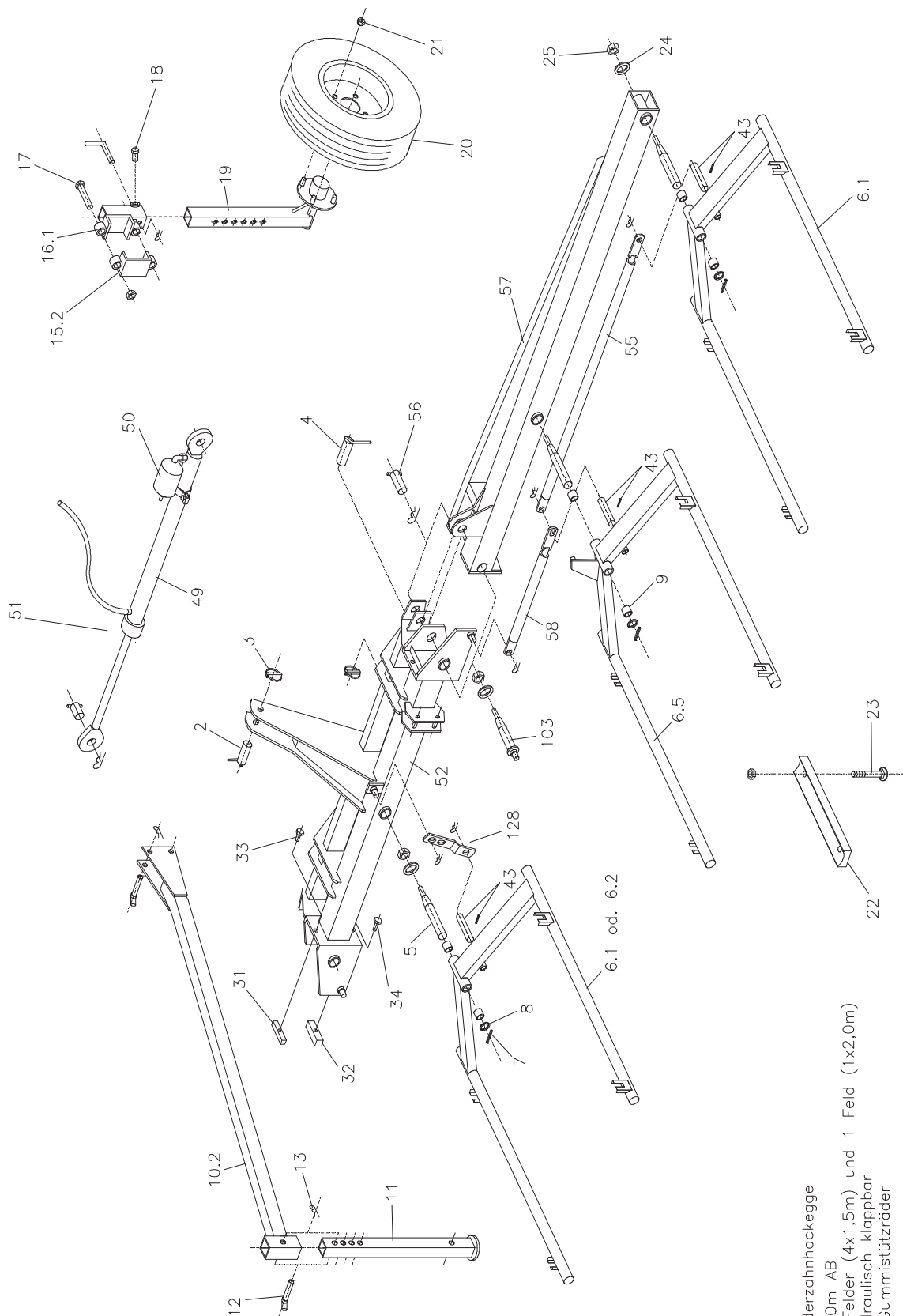
When folding movement of the side wings always keep in mind - Warning Danger of tipping!

The side wings fold up until all parts have reached the stop - with the shut-off valve secure side wings.

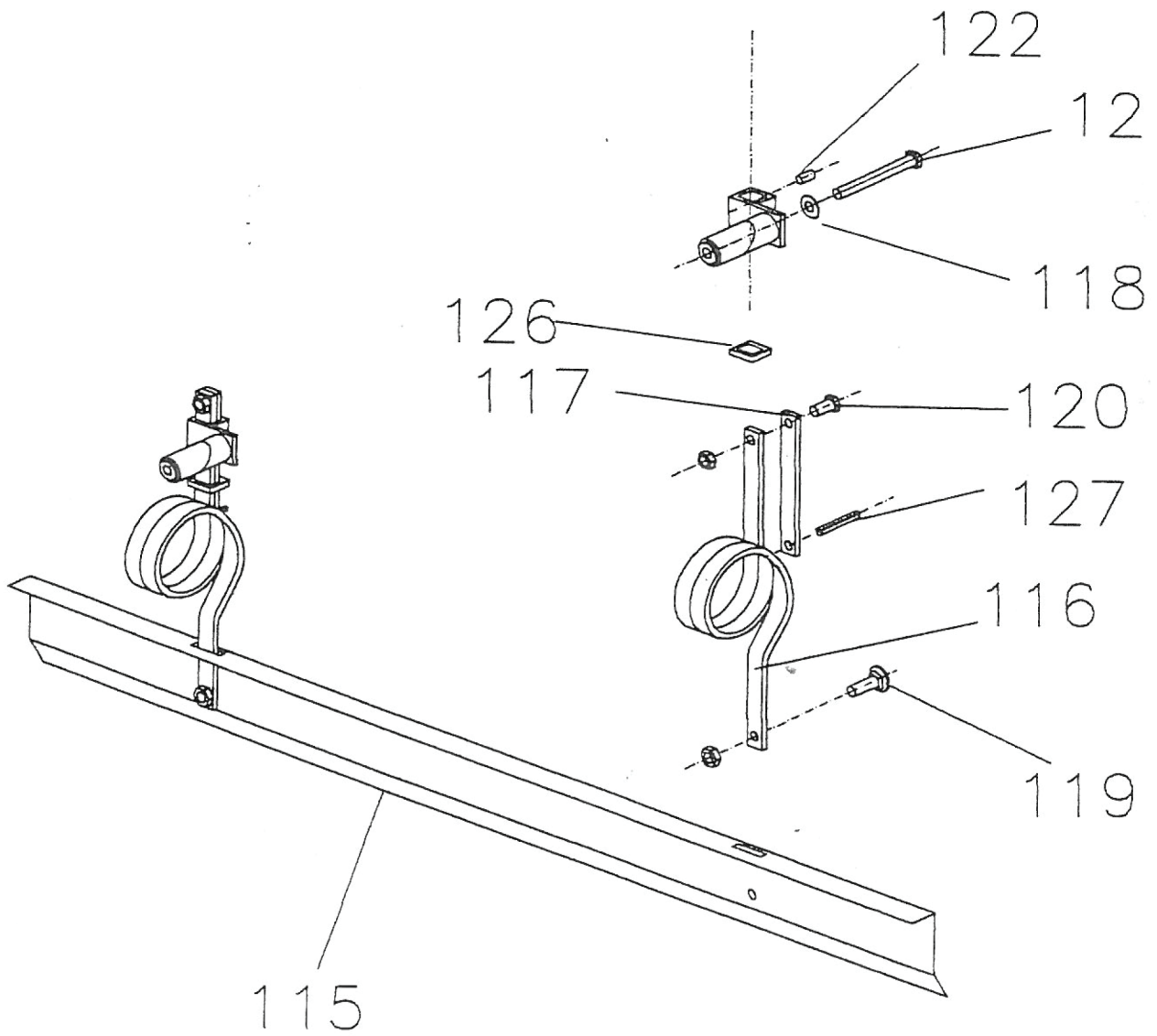


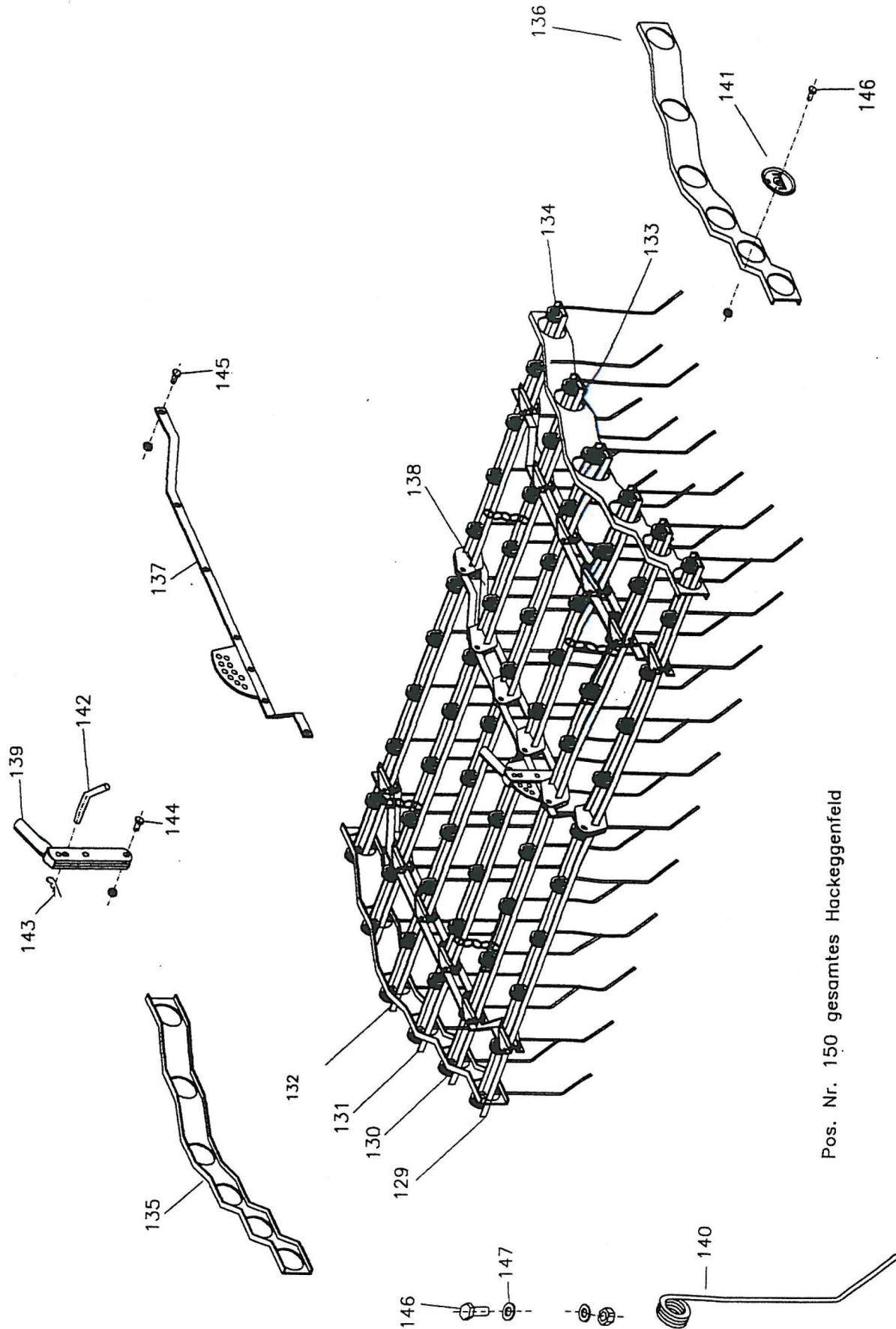
Pos. No.:	Order nr.:	
49.1	81906	hydraulic cylinder for 9,00m harrow
49.2	81901	clamp (half)
49.3	81902	union 90°
49.4	81903	lock valve
49.5	81904	hydraulic hose for 6m harrow
49.6	912031	dust cover
49.7	81905	bolt M8x110
49.8	930097	flat washer M8
49.9	70036	nyloc nut M8
50	93206	accumulator
50.1	70019	bolt M10x40
50.2	70017	nyloc nut M10

18TH SPARE PART LIST



- Federzahnhackegge
- 8,00m AB
- 4 Felder (4x1,5m) und 1 Feld (1x2,0m)
- hydraulisch klappbar
- 4 Gummistützräder





Pos. Nr. 150 gesamtes Hackeggenfeld

Pos. Nr.:	Art. Nr.:	Description
1	93572	centre part for 3,0m
2	9345	top link pin d=25mm w. lynch pin d=10mm
3	930225	lynch pin d=10mm
4	9346	lower link pin d=28mm w. lynch pin
5	9327	threaded pin - short (295mm), M20 w. nut
6		CARRIER FOR HARROW SECTION
6,1	93062	carrier for harrow section with pin - right
6,2	93061	carrier for harrow section with pin - left
6,3	93066	carrier for harrow section with pin - above right
6,4	93065	carrier for harrow section with pin - above left
6,5	93063	carrier for harrow section with pin right, (tree - nurseries) - above left
6,6	93064	carrier for harrow section with pin left, (tree - nurseries) - above right
6,7	93067	carrier for harrow section with stop pin
7	930222	roll pin 8x50
8	930223	washer disc A35
9	9326	glacier - bush 35x39x20
10		CARRIER FOR SUPPORT
10,1	931610	carrier for support - straight
10,2	93161	carrier for support - bent
10,3	931612	carrier for support - long f. 13,5m
11	9316	support
12	93609	pin d= 14x100 w. spring pin
13	930224	spring pin d=4mm
14	9311	flat iron 8x40
15	93202	CLAMP FOR SUPPORT WHEEL COMPL.-EXTENDED
15,1	93200	Clamp for support wheel
15,2	932001	counter clamp
16	93201	CLAMP FOR SUPPORT WHEEL COMPL.
16,1	9320111	Clamp for support wheel
17	93021	hex. bolt M16x110 w. nut
18	93022	hex. bolt M12x25
19	9315	wheel hub with rod f. rubber support wheel
20		RUBBER SUPPORT WHEEL
20,1	9313	rim with tyre 16x6.5-8
20,2	93131	wheel without rim 16x6,5-8
20,3	93132	inner tube 16x6,5-8
20,4	93125	rim for rubber support wheel 16x6,5-8
21	930226	wheel nut M12
22	9340	PVC wearing part w. nuts
23	9424TOR	cup square bolt 8x70 w. nut
24	930227	washer A20
25	93023	hex. nut M20
26	93573	centre part for 4,5m
27		SIDE ARM FOR 4,5m WORKING WIDTH
27,1	941778	side arm f. 4,5m working width right
27,2	941779	side arm f. 4,5m working width left

Pos. Nr.:	Art. Nr.:	Description
28	941805	folding rods for 4,5m
29	93222	folding pin threaded
30	94179	folding rods for 6m and 9m rigid
31	93610	threaded piece (quadratic) 20x20
32	93611	threaded piece (quadratic) 30x30
33	93024	hex. bolt M12x30
34	93025	hex. bolt M12x40
35	93500	hydr. ram w. folding lock 4,5 and 5m
36	9300	FOLDING LOCK - COMPLETE f. 4,5 a. 5m on the ram
36.1	93000	lever for folding lock f. 4,5 a. 5m on the ram 25x8x400
36.2	93001	flat iron f. 4,5 a. 5m on the ram 25x8x115
36.3	93002	flat iron f. 4,5 a. 5m on the ram 30x6x100
36.4	93003	spring d=2mm, l=85mm
36.5	93026	hex. bolt M8x50 w. 2 nuts
36.6	9318S	hex. bolt M8x25 w. nut
36.7	93027	hex. bolt M8x35 w. nut
37	93205	pressure container small
38	93606	pin d=25mm, l=65mm f. hydr. folding w. cotter 6,3x50
39.1	935001	MECHANICAL FOLDING FOR COMB HARROW 4,5m AND 5m
39.2	935011	MECHANICAL FOLDING FOR COMB HARROW 6m
39.3	935002	mounting head f. mechanical folding
39.4	93028	hex. bolt M12x30 w. nut
39.5	935003	outer tube f. mec. folding, 49/49/4 l=495mm
39.6	935004	inner tube f. mec. folding, 30/30/3 l=410mm
39.7	935005	fastening f. mec. folding, thread M16x70
39.8	935006	holder for spring with tube mec. Folding
39.9	935007	spring f. mec. folding l=377mm
39.10	935008	pin d=14mm w. spring pin d=4mm
39.11	93029	adjusting bolt M16x60 w. counter nut
39.12	930210	counter nut M16
39.13	935009	pin d=25mm, l=75mm m. cotter 6,3x50
39.14	93605	pin d=25mm, l=95mm m. cotter 6,3x50
39.15	935010	holder for spring - mec. Folding
40	93574	centre part f. 5m working width
41		SIDE ARM FOR 5m WORKING WIDTH
41,1	9417710	side arm right f. 5m working width
41,2	9417711	side arm left f. 5m working width
42	941806	folding rods f. 5m
43	9302	pin d=16mm with roll pin 5x28
44	93575	centre part f. 6m
45		SIDE ARM FOR 6m WORKING WIDTH
45,1	9417712	side arm f. working width 6m right
45,2	9417713	side arm f. working width 6m left
46	941794	folding rods f. 9m rigid and 12m
47	9303	bent flat iron
48	9328	threaded pin long (330mm) w. nut M20

Pos. Nr.:	Art. Nr.:	Description
49	93501	hydr. ram w. folding lock (6; 7,5; 8; 9 rigid)
50	93206	pressure container - big
52	93576	centre part for 7,5m and 8m working width
53		SIDE ARM FOR 7,5m working width
53,1	9417714	side arm f. 7,5m working width right
53,2	941777	side arm f. 7,5m working width left
54	93300	folding rods short f. 7,5m
55	941793	folding rods f. 7,5m to 9m rigid, 10,5m to 13,5m working width
56	93605	pin d=25mm, l=95mm
57		SIDE ARM FOR 8m working width
57,1	9417725	side arm f. 8m working width left
57,2	9417726	side arm f. 8m working width right
58	93301	folding rods short f. 8m
59	93577	centre part f. 9m working width, rigid
60		SIDE ARM FOR 9m working width, rigid
60,1	941772	side arm f. 9m working width right, rigid
60,2	941771	side arm f. 9m working width left, rigid
61	93578	centre part f. 9m working width, scissors folding
62		SIDE ARM FOR 9m working width, SCISSORS FOLDING, inner part
62,1	941773	side arm f. 9m working width, sciss. left (inner part)
62,2	941774	side arm f. 9m working width, sciss. right (inner part)
63		SIDE ARM FOR 9m working width, SCISSORS FOLDING, outer part
63,1	941775	side arm f. 9m working width left, outer part, scissors folding
63,2	941776	side arm f. 9m working width right, outer part, scissors folding
64	93400	folding rods - bent f. 9m scissors folding
65	93607	bolt w. safety device 30x200 w. thread M20
66	93405	holder for 2 way valve
67	934051	HOLDER FOR 2 WAY VALVE
67,1	934052	holder for manometer (single acting ram)
67,2	934053	holder for manometer (double acting ram)
68	930212	hex. bolt M12x30 w. nut
69	930214	hex. bolt M12x30
70	934054	2 way valve with lock
71		HYDR. RAM W. FOLDING LOCK (SCISS.)
71,1	93502R	hydr. ram w. folding lock (sciss.) right
71,2	93502	hydr. ram w. folding lock (sciss.) left
72	935041	FOLDING LOCK 9-13.5m working width SCISSORS FOLDING COMPLETE
72,1	935042	lever for folding lock - bent, 9-13.5m sciss. on ram

Pos. Nr.:	Art. Nr.:	Description
72,2	935043	flat iron round 9-13,5m sciss. on ram, 30/6/150
72,3	935044	flat iron 9-13,5m sciss. on ram 32/10/145
72,4	935045	spring 9-13,5m sciss. on ram d=2mm, l=85mm
72,5	93026	hex. bolt M8x50 w. 2 nuts
72,6	93027	hex. bolt M8x35 w. nut
72,7	9318S	hex. bolt M8x25 w. nut
73	93600	CLAMP FOR SUPPORT WHEEL COMPL. - SCISSORS FOLDING
73,1	936001	clamp for support wheel - scissors folding
73,2	936002	counter clamp - scissors folding
74	93700	rods f. folding the wheels - adjusting piece f. 9m
75	93701	rods f. folding the wheels - inner part bent f. 9m
76	930213	hex. bolt M12x40 w. nut
77	93706	mounting head f. foldable support wheel
78	93800	rods for scissors folding f. 9m
79	93801	flat iron piece - bent f. scissors folding
80	93802	flat iron piece 40/6/200
81	930211	hex. bolt M12x50 w. nut
82	930215	hex. bolt M12x40 w. nut
83	930214	hex. bolt M12x20
84	930216	hex. bolt M12x40 w. nut
85	93579	centre part f. 10,5m working width
86		SIDE ARM FOR 10,5m working width INNER PART
86,1	9417715	side arm f. 10,5m working width left, inner part
86,2	9417716	side arm f. 10,5m working width right, inner part
87		SIDE ARM FOR 10,5m working width OUTER PART
87,1	9417717	side arm f. 10,5m working width left, outer part
87,2	9417718	side arm f. 10,5m working width right, outer part
88	93803	rods for scissors folding f. 10,5m
89	93302	folding rods short f. 10,5m
90	93403	folding rods - bent f. 10,5m
91	93151	wheel hub with rod
92		rim with tyre (18 x 8,5)
92,1	93133	rubber support wheel w. rim 18x8,5-8
92,2	93136	wheel without rim 18x8,5-8
92,3	93137	inner tube 18x8,5-8
92,4	93138	rim f. rubber support wheel 18x8,5-8
93	93702	rods f. folding the wheels - inner part bent f. 10,5m
94	93703	rods for folding the wheels, adjustment part 10,5m
95	935710	centre part f.12m working width
96		SIDE ARM FOR 12m working width INNER PART
96,1	9417719	side arm f. 12m working width left, inner part
96,2	9417720	side arm f. 12m working width right, inner part
97		SIDE ARM FOR 12m working width OUTER PART
97,1	9417721	side arm f. 12m working width left, outer part
97,2	9417722	side arm f. 12m working width right, outer part
98	93304	folding rods short f. 12m

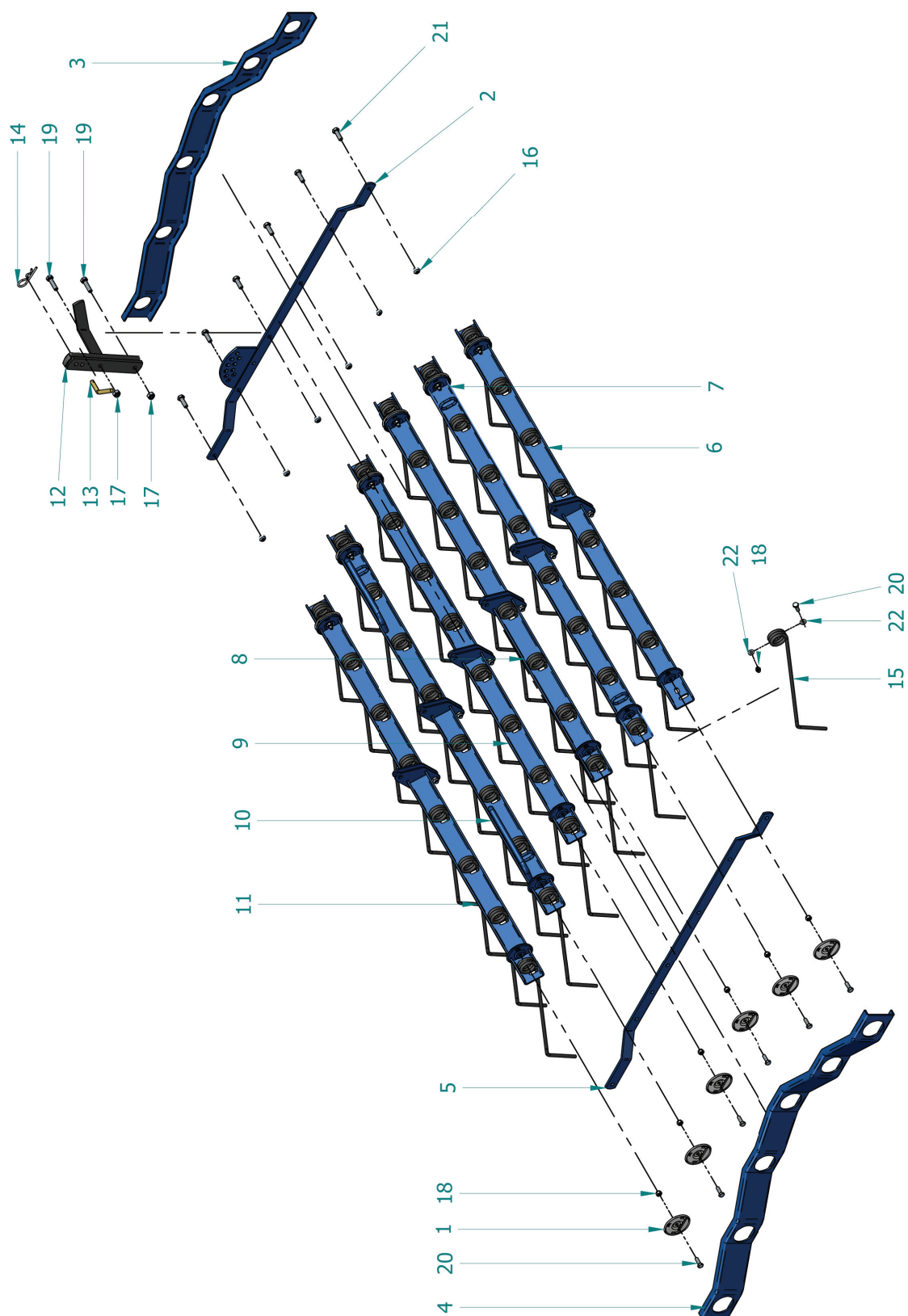
Pos. Nr.:	Art. Nr.:	Description
99	93704	rods f. folding the wheels - inner part bent f.12m
100	93705	rods f. folding the wheels, adjustment part f. 12m
101	93804	rod for scissors folding f. 12m
103	9417732	folding pin, threaded with attachment for folding rods
106	93900	bracket for parallelogram behind
107		BRACKET FOR PARALLELOGRAM FRONT
107,1	93901	bracket for parallelogram front with pin right
107,2	93902	bracket for parallelogram front with pin left
107,3	93903	bracket for parallelogram with pin above right
107,4	93904	bracket for parallelogram with pin above left
108		SUPPORT FOR PARALLELOGRAM
108,1	93905	support for parallelogram short
108,2	939051	support for parallelogram long
109		HYDRAULIC RAM CYLINDER
109,1	93906	hydraulic ram cylinder short
109,2	939061	hydraulic ram cylinder long
110	93907	glacier bush
111	93908	distance tube
112	930217	hex bolt M12x100 with nut
113	930218	hex bolt M12x80 with nut
114	93909	manometer
115		LEVELLING BAR
115,1	9353	levelling bar 1,5m
115,2	9354	levelling bar 2m
116	93931	levelling bar spring
117	93932	support for spring
118	93933	clamp for spring
119	9424TOR	cup square bolt M8x30 w. nut
120	9316S	hex. bolt M8x30 w. nut
121	930219	hex. bolt M12x30
122	930220	threaded piece
123		SIDE ARM FOR 13,5m working width INNER PART
123,1	9417723	side arm f. 13,5m working width left, inner part
123,2	9417724	side arm f. 13,5m working width right, inner part
124	93805	rods for scissors folding f. 13,5m
125	93571	centre part for 1,5m and 2m
126	93004	roll pin
127	930221	roll pin 6x25
128	93005	flat iron bent

Pos. No.:	Art. Nr.:	Position
129		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.1
129,1	932016	tine profile without tine 1,5m working width; 1.1
129,2	933016	tine profile without tine 2,0m working width; 1.1
130		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.2
130,1	932116	tine profile without tine 1,5m working width; 1.2
131,1	933116	tine profile without tine 2,0m working width; 1.2
131		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.3
131,1	932216	tine profile without tine 1,5m working width; 1.3
131,2	933216	tine profile without tine 2,0m working width; 1.3
132		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.4
132,1	932316	tine profile without tine 1,5m working width; 1.4
132,2	933316	tine profile without tine 2,0m working width; 1.4
133		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.4
133,1	932416	tine profile without tine 1,5m working width; 1.4
133,2	933416	tine profile without tine 2,0m working width; 1.4
134		TINE PROFILE WITHOUT TINE 1,5m WORKING WIDTH; 1.4
134,1	932516	tine profile without tine 1,5m working width; 1.4
134,2	933516	tine profile without tine 2,0m working width; 1.4
135	93203	side profil f. harrow field left
136	932031	side profil f. harrow field right
137	932013	flat iron w. punch
138	932113	flat iron without punch
139	9362	lever f. harrow field
140		COMB HARROW TINE
140,1	9309360	comb harrow tine 6mm, l=360mm
140,2	9309380	comb harrow tine 6mm, l=380mm
140,3	93091	comb harrow tine 6mm, l=500mm
140,4	9312	comb harrow tine 7mm, l=450mm
140,5	93391	comb harrow tine 7mm, l=500mm
140,6	93392	comb harrow tine 7mm, l=700mm
140,7	9310380	comb harrow tine 8mm, l=380mm
140,8	9310	comb harrow tine 8mm, l=450mm
140,9	9310500	comb harrow tine 8mm, l=500mm
140,10	9310STROH	comb harrow tine 8mm, straight "straw"
141	93204	washer disc f. harrow field bearings
142	936011	pin d=10mm, spring pin d=4mm
143	936012	spring pin d=4mm
144	930228	hex. bolt M10x35 w. nut
145	930229	hex. bolt M10x30 w. nut
146	9309S	hex. bolt M8x25 w. disc a. nut
147	930230	washer disc A8
148		HARROW FIELD EXTENSION LEFT
148,1	93081	harrow field extension left without tine
148,2	930810	harrow field extension left, 6mm tine
148,3	930812	harrow field extension left, 7mm tine
148,4	930814	harrow field extension left, 8mm tine

Pos. No.:	Art. Nr.:	Position
149		HARROW FIELD EXTENSION RIGHT
149,1	93082	harrow field extension right without tine
149,2	930811	harrow field extension right, 6mm tine
149,3	930813	harrow field extension right, 7mm tine
149,4	930815	harrow field extension right, 8mm tine
150		HARROW FIELD COMPLETE
150,1	93041	harrow field 1,5m without tine
150,2	9304	harrow field 1,5m, 6mm tine
150,3	9336	harrow field 1,5m, 7mm tine
150,4	93361	harrow field 1,5m, Vertikatorzinken
150,5	93051	harrow field 1,5m, 8mm tine
150,6	9305	harrow field 1,5m, 8mm straw tine
150,7	9307	harrow field 2,0m, 6mm tine
150,8	9338	harrow field 2,0m, 7mm tine
150,9	9308	harrow field 2,0m, 8mm tine
151		CHAIN FOR HARROW FIELD
151,1	932020	chain for harrow field 9 chain links
151,2	932021	chain for harrow field 7 chain links

HARROW FIELD COMPLETE 1,50M:

complete: 0110050001



HARROW FIELD COMPLETE 1,50M:

Art. Nr.	Pos. Nr.	Bezeichnung	Menge
0110010002	1	disc for harrow field	12
0110010003	2	Flat iron for adjustment with multi-hole	1
0110010004	3	side profile for Harrow field right	1
0110010005	4	side profile for harrow field right	1
0110010006	5	Flat iron for adjustment below	1
0110010012	6	tine profile Nr. 6	1
0110010011	7	tine profile Nr. 5	1
0110010010	8	tine profile Nr. 4	1
0110010009	9	tine profile Nr. 3	1
0110010008	10	tine profile Nr. 2	1
0110010007	11	tine profile Nr. 1	1
0110010013	12	adjusting for harrow field	1
1903030009	13	Bolts for field adjustment harrow	1
1904020002	14	linch pin Ø=4mm	1
1909030008	15	tine Ø=8mm	48
1902010005	16	hexagonal nut M10	12
1902010005	17	hexagonal nut DIN 982-M10	2
1902010002	18	hexagonal nut DIN 982-M8	13
1901010031	19	hexagonal screw DIN 933 M10x40	2
1901010032	20	hexagonal screw DIN 933 M8x25	13
1901010025	21	hexagonal screw M10x30	12
1908010004	22	disc DIN 125 -A8,4	2