



minos
agri

ROTARY DRUM MOWER
1350

CE

Introducing & Operating Manuel



Our company, activating in agricultural mechanization field which has great importance for improvement of agriculture in our country since 1959, manufactures Rotary Tillers, Seed Drills, Inter Row Rotary Cultivator, Fertilizer Spreaders, Mulchers, ReaperBinder Machine, Maize Chopper, Rotary Mowers, Rotary Rakes, Tedder, Subsoilers, Cultivators, Chisel, Disc Tiller, Baler used in agricultural works such as handling, fertilizing and harvesting starting from preparation of soil at the pre-sowing period until plantation, in compliance with stage of the art technology.

Considering the agricultural needs of our country, Minos Agricultural Machinery has put the mixer feeders into service with the quality, privilege, guarantee and assurance of Minos, which are designed to have strong and reliable structures, be easy to use and eco-friendly machines.

Our company following the global technological advancements is always beside farmers and at the service of state agriculture with quality machinery conforming to standards and on-site applications.



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ROTARY DRUM MOWER - 1350

Introducing & Operating Manual



EC DECLARATION OF CONFORMITY

TURKAY TARIM MAKINALARI SAN. VE TIC. LTD. STI.

Fatih Mah. 1191 Sok. No: 17/A 35414 Gaziemir / IZMIR / TURKIYE

Declare under our own responsibility that the product(s) specified below satisfies the requirements of the Machinery Safety Directive 2006/42/EC.

The product(s) identified below has been produced according to basic safety and health measures.

BRAND: minos agri

PRODUCT NAME: ROTARY DRUM MOWER

MODELS: T-TCBM 1350 / T-TCBM 1650 / T-TCBM 1900 / T-TCBM 1350-H / T-TCBM 1650-H / T-TCBM 1900-H

Harmonized standards:

TS EN ISO 4254-1 (18.04.2016) / Agricultural machinery - Safety - Part 1: General requirements

TS EN ISO 12100:2010 (12.04.2011) / Safety of machinery - General principles for design - Risk assessment and risk reduction

TS EN ISO 13857 (29.04.2014) / Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs

TS EN 349+A1:2009 (19.02.2009) / Safety of machinery - Minimum gaps to avoid crushing of parts of the human body

TS EN ISO 14120 (18.04.2016) / Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards

TS ISO 11684 (02.02.1999) / Tractors, machinery for agriculture and forestry, powered lawn and garden equipment- safety signs and hazard pictorials- general principles

TS EN ISO 4254-12 (12.06.2013) / Agricultural machinery-Safety -Part 12: Rotary disc and drum mowers and flail mowers

Issued at IZMIR-TURKEY, February 23.2017

Authorized Signatory

Ahmet KOÇ
Production Manager

Ahmet Koç (Production Manager)



MINOS AGRICULTURAL MACHINERY

Fatih Mah. 1191 Sok. No: 17/A 35414 Gaziemir/ İZMİR-TÜRKİYE

Ph: +90 232 281 54 04 - 281 63 30/ 31 Fax: +90 232 281 57 10

Web: www.minosagri.com e-mail: info@minosagri.com

WARRANTY CERTIFICATE

MINOS warrants, for the period of 1 year.

Machine details

BRAND

PRODUCT NAME

MODEL

T-TCBM 1350 T-TCBM 1350-H

T-TCBM 1650 T-TCBM 1650-H

T-TCBM 1900 T-TCBM 1900-H

PRODUCT CODE

MANUFACTURE YEAR

Machine details

Title:

Address:

Tel:

Fax:

Date and Number of invoice:

Signature&Seal

WARRANTY CONDITIONS

- Warranty period is one (1) year commencing from the delivery date of the product.
- The product and all parts thereof are under the warranty of our company.
- If the product breaks down during the warranty period, the period of repair is added to the warranty period. The maximum period of repair of the product is 20 working days. This period starts when the product is delivered to a service centre, or in absence of a service centre, to the seller, dealer, agency, representative, importer or manufacturer in order.
- In the event that the product breaks down due to material or workmanship faults or installation faults, it will be repaired free of charge, without charging any fees due to labour, replaced part or anything else.
- In the following events, the product shall be replaced free of charge:
 - I-The product repeats the same defect more than twice or different faults more than four in one year, however, in any case within the warranty period, and as a result, periods during which meter is out of service become continuous.
 - II-Maximum period necessary for its repair is exceeded.
 - III-With a report issued by a service centre, or in absence of a service centre, by the seller, dealer, agency, representative, importer or manufacturer in order, the repair of the meter is determined as impossible.
- Breakdowns due to improper operation of the product not observing the instructions in the operating manual are not covered by warranty
- For problems with the warranty certificate, consumers may apply to the Republic of Turkey Ministry of Science, Industry and Technology, General Directorate of Protection of Consumers and Competition.
- Failures arising from the use of product against the consideration specified in the user's guide are unguaranteed.



This warranty provided by Minos Agricultural Machinery does not cover any faults caused by any abnormal or unintended use of the meter.

We declare:

- That during the warranty period, the product will operate flawlessly, if you use it in accordance with its purpose and the enclosed instructions;
- That upon your request, we will repair any defect of the machine if you inform us of it during the warranty period. The warranty takes effect from the date of purchase of the product, evident from the certified warranty certificate and the receipt.
- The machine is designed to reap all kinds of feed plants, grass, meadow grass, heath and wild plants bordering the roads with blades rotating at a high annulus velocity and existing in both of the 2 drums rotating reversely to each other and leaves them behind in the form of barrel.

The warranty becomes invalid due to:

- Failure to comply with the enclosed instructions;
- Damage and faults caused by improper use;
- Usage of an unsuitable PTO shaft;
- Negligent handling of the product, overloading which leads to the fracture of any parts;
- Interference with the product by an unauthorised person;
- Damage caused by mechanical shock due to the fault of the buyer or a third person;
- Damage caused by flooding, fire, lightning;
- Damage and faults caused during transport, shipment, loading and unloading;

- Damage and faults caused by fire, lightning, flood and earthquake (natural disasters), inappropriate environment and accidents;
- Faults caused by installation or connection of the meter not in compliance with the installation and operating manual;

The warranty will be valid only for the period stated on the reverse side of this certificate and the faults at the product, and no other right or damages under any reason whatsoever can be claimed.

In the events that the warranty certificate is destroyed or defaced, that the serial number on the product is removed or destroyed, the warranty certificate will become null and void. Any warranty certificate not bearing the seal and authorised signature of the seller and the date of sale will not be valid.

MINOS is liable for damages it caused by intentional and deliberate damages, not for minor negligence. Besides, it will not be liable for the results, including but not limited to the interruption of business activities or loss from profit due to this reason, or any loss caused as a result of the failure of a duty due to the breakdown of the product.

If there is any defect in the product, the defective product shall be sent to MINOS with risks and expenses on customer's account. The defects of the product will be removed by MINOS by replacing a new one or repairing the same.

When reporting a defect by phone or in writing, please inform our representative of:

- The name, model, serial number and manufacture year of the product;
- The nature of the defect;
- Your full address.



Dear Customer!

You have purchased one of the best built, most reliable rotary mowers available and you have chosen it from our wide product range. Congratulations! We strive to provide you with a rugged, durable unit which is simple to maintain and we are sure that you will be satisfied with it. We sincerely thank you for your confidence.

Minos presents the experiences about agricultural machinery to the farmers by the modern equipments like rotary drum mowers. The machines are designed to reaps all kinds of feed plants, grass, meadow grass, heath and wild plants bordering the roads with blades rotating at a high annulus velocity and existing in both of the 2 drums rotating reversely to each other and leaves them behind in the form of barrel.

With the advantage of adjustable cutting height and the high quality of the cutting height, the nutrient values of the plant are preserved and drying is made possible in a short time.

With its little power requirement, it operates in a high-quality manner without tiring the tractor.

The belts are tightened by means of a spring and thus the safety is ensured on the pulley mechanism.

Its adaptation to the unevenness of the ground is highly successful.

Any person who will be operating or maintaining this mixer should first read and understand this manual and all safety warnings on the unit.

This introducing and operating manuel should always be available to those responsible for the operation and maintenance of this mixer. It is the owner's responsibility to provide this safety information to his operators and employees.

Any person who does not understand the safety and operation instructions contained in this manual should not be considered qualified to operate this mixer.

This manual has been designed to help you become familiar with your unit. Before you operate your unit, be sure you understand and follow all the operation, lubrication, and safety instructions on the following pages in this manual. These have been written for your safety and convenience, and to keep your unit running trouble-free for many years.

This manual should be considered a permanent part of your machine, and should remain with the machine if you sell it.

In the event that you experience an issue that has not been addressed in this manual, contact our company for help; you must state the model and serial number of you equipment in order for us to help you with your inquiry. This is necessary in order to resolve issues quicker and provide better services.

Regards,

MINOS AGRICULTURAL MACHINERY

Fatih Mah. 1191 Sok. No: 17/A 35414 Gaziemir / **İZMİR-TÜRKİYE**
Ph: +90 232 281 54 04 - 281 63 30 - 281 63 31 **Fax:** +90 232 281 57 10
Web: www.minosagri.com **e-mail:** info@minosagri.com



EC DECLARATION OF CONFORMITY
WARRANTY CERTIFICATE
CAUTIONS ABOUT THE WARRANTY
THANK YOU FOR CHOOSING MINOS!

1- Introducing	7-8
2. Introducing the machine	9
3- Preparing the machine for work	10-12
4- Maintenance and repair	13-14
5- Working safety	15-16
6- Technical data	17
7- Spare parts list	18-28





Minos Agri Company offers you the TTCBM Rotary Drum Mower which is driven by the tractor tail spindle and connected to it with three point hitch system.

It reaps, the feed plants, grass, meadow grass as well as wild plants and heath bordering the roads. It achieves high capacity with low power consumption and provides propellant saving. The action is transmitted serially through its three fold belt pulley. The belt of the pulley mechanism is tightened with a spring. It has an automatic security system. Reaping height can be adjusted. Adjustment is possible for road and work status. Besides the instructions from this booklet take into consideration all generally used safety and accident regulations before working with the machine.

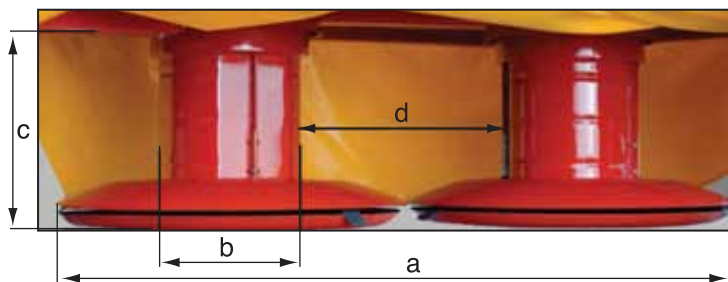


Figure 1 – Dimensions of Rotary Drum Mower

Technical Specifications

General length (transport position)	3115 mm
General height	985 mm
General width	1176 mm
Mowing width (a)	1350 mm
Drum diameter (b)	300 mm
Drum height (c)	442 mm
The distance between the drums (d)	340 mm



ATTENTION!

WHILE THE MACHINE IS CONNECTED TO THE TRACTOR AND IF THE TRACTOR IS IN WORKING POSITION.

TRANSPORTING :

- Never carry anyone or any animal on the machine.
- Pay attention on the traffic rules on public roads.
- Check out the lightening, warning decals, and protection guards before starting to work.
- Pay attention to work with the machine in the daylight. Especially at nights in public roads take care to have safety decal (light decal apparatus) on the machine

Transporting the machine,

1. Transporting with forklift :

You must choose a forklift according to the weight of the machine. Hold the machine from its weight center. Connect the forklift hook on the machine from the weight center. Start transporting the machine.

2. Transporting with crane:

This method is same as transporting with forklift. Hold the machine from its weight center by crane. Pay attention if the security lock of the crane's hook is working safely.

3. Transporting with palette:

Choose palette according to the machine dimensions. Transport the machine by forklift while it is on palette.



ATTENTION!

PAY ATTENTION TO BE NOT UNDER THE MACHINE WHILE TRANSPORTING



Figure 2- Transporting the machine by Forklift and pallet



ATTENTION!

TAKE CARE OF THE HOOKS AND IRON ROPES OF THE CRANE AND FORKLIFT TO BE SAFETY ENOUGH.





INTRODUCING THE MACHINE

Drum Mower has been designed for mowing of all kinds of grass and clover on clean surfaces. It consists of a cutter with 2 drums, where each of them is equipped with 3 knives. Drums are turnably fastened to the cutter-bar housing. Protection covers, covering the cutter bar from the top, are also fastened to the cutter bar housing. The cutter bar is surrounded by protection curtain. Three point hitch for connection to the tractors of the I or II category is made of round tube. Mower drive is led from the tractor over the P.T.O Shaft to the connecting shaft of the mower, belt transmission, gear-box transmission shaft to the gears in the gear-box and over them to the drums. Mower is equipped with a safety fuse which protects it from damages which may occur if the mower hits an obstacle.

The main parts of the machine:

1. Main Holder
2. Cutter-bar(gear box)
3. Three point hitch system
4. Belt drive
5. Drums
6. Support Leg
7. Knife holder
8. Upper disc
9. Knife
10. Protection plate
11. Curtain

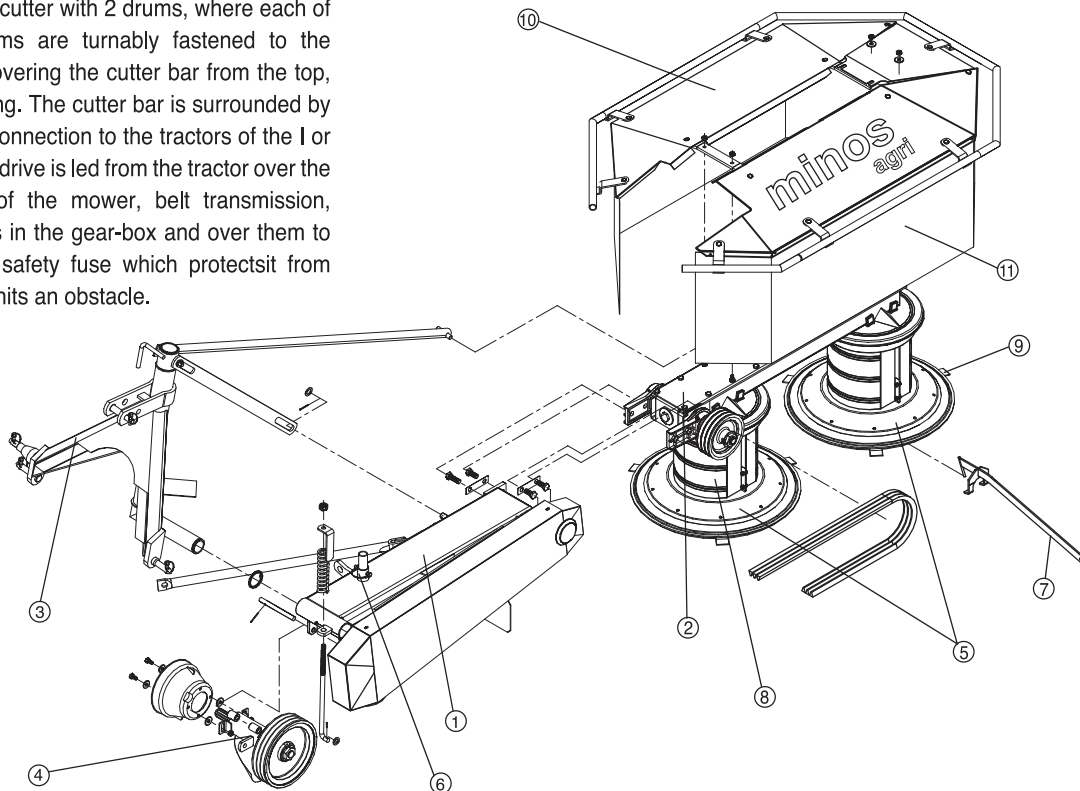


Table 3- Main parts of the machine



PREPARING THE MACHINE FOR WORK

Required Tractor Equipment,

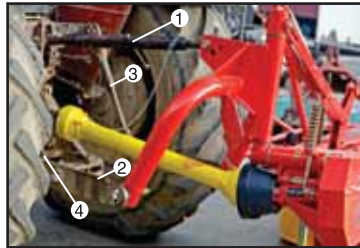
- Mower may only be driven by a tractor shaft with max. 540 rpm.
- 3 point connecting bars of the I or II category

Connection to the tractor,

Firstly connect the lower non adjustable arm then adjustable arm at the end connect upper connection arm. While disconnecting the machine do the opposite. The machine should be positioned as near to the tractor as possible, for using the whole working width (Fig. 4).



Figure 4- Connection to the tractor



1-Upper hitch arm
2-Lower hitch arm
3-Right hanger arm
4-Left hanger arm

- The main holder on the machine can be connected to the three point hitch system while the tractor is parallel to the ground as shown in the (Fig.4).
- Connect the prescribed P.T.O shaft and secure the P.T.O shaft connection by a chain (Fig.4).
- Make sure that the P.T.O shaft is in proper position on both ends.
- If the load in front wheels is not enough put additional load.

Adjustment of the P.T.O Shaft,

The adjustment of the P.T.O shaft is necessary for different tractors. To find out the right length.

- Connect the machine to the tractor .
- Pull out the P.T.O shaft entirely and connect each separate half of the shaft to the tractor and then compare them with each other .
- In case you need to shorten the P.T.O shaft, make sure you shorten both shafts and protection tubes for exactly the same length.



Figure 5- Adjusting the length of the P.T.O shaft to the proper dimension for the tractor.

- File the end of the tube, remove the remainings of filling and lubricate gliding spots well.
- K T4 101 910 100 (covered, triangle piped 400 serial, machine side 1 3/8 Z6, tractor side 1 3/8 Z6 -1000 mm length) shaft is used in Rotary Drum Mower.
- P.T.O shaft can only be connected when the P.T.O connection and engine are switched off and the ignition key is pulled down.

Preparation of the mower for transport position

If the machine is connected to the tractor and the machine is in transport position, take the pto shaft in safety by the chain. In working position connect the pto shaft to the tractor.



PREPARING THE MACHINE FOR WORK



Figure 6- Transport position.



Figure 7- Disconnect the tension spring (1)



Figure 8- Connect the tension pin and control (2)



Figure 9- Lowering of the Mower from the transport into the working position, (3)

In working position connect the P.T.O shaft to the tractor



Protection Chain



Figure 10- Lowering of the Mower from the transport into the working position,



Regulation of cutting height:

- The machine must be in horizontal position when it is connected to the tractor. **2**
 - By turning the tractor upper arm regulate the cutting height. **1**
 - Fasten the tractor bottom arm, so you can prevent the vibrations on the machine while it is working. **3**
- For a regular cutting, the cutting unit of the machine should not be higher or lower distance from the ground.

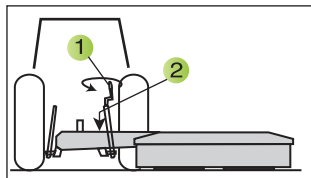


Figure 11- Regulation of cutting height

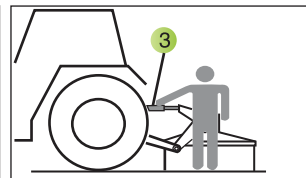


Figure 12- Fastening of tractor bottom arm

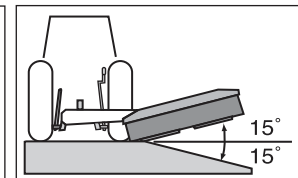


Figure 13- Working angle of the machine to the ground



PREPARING THE MACHINE FOR WORK



ATTENTION!

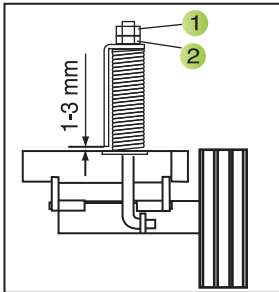
NEVER TOUCH THE MACHINE WITH HAND, FOOT WHILE IT IS WORKING.

Replacement of the protection curtain:

- Untighten the screws for fastening the protection curtain.
- Pull the curtain out of the notch.
- Install new curtain and fasten it by screws.

Protection of the Mower:

Drum mower is equipped with a safety fuse, which gets released when the mower hits an obstacle. Mower moves backwards. In this case stop immediately and pull backwards so that the safety fuse will get contact



again. Do not forget to remove the obstacle before starting to mow again. The safety fuse does not function when driving backwards. In case the safety fuse is released too fast at normal working, adjust in by a nut. (Fig.14)

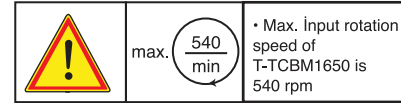
Figure 14- Belt tightening working with Drum Mower

Belt tightening:

The vee-belts are mostly stretched in the first working hours. On the tightening device there is a spring that enables the belts to remain tightened inspite of the stretching. We advise you to control the level of tightening from time to time (Pic.14)

Attention:

- If you tighten the belts more than necessary, there is a danger of damaging the bearings and shafts.
- Pay your best attention to proper mounting and securing of the P.T.O shaft.



ATTENTION!

STOP THE ENGINE! THEN ADJUST AND PREPARE THE MACHINE FOR WORK

- Make sure that nobody is in the area of danger of the implement before switching on the P.T.O shaft connection.
- When working with the P.T.O shaft connection nobody is allowed to be in the area of rotating connection on the P.T.O shaft.
- After switching off the P.T.O shaft connection the danger of rotating heavier parts remains. Do not get close to the implement during this period. You can start to work only when the rotation is completely stopped.
- P.T.O shaft protection must be fitted on. And must be in perfect condition.
- Use only original P.T.O shafts prescribed by your manufacturer. Because the manufacturer will not take any responsibility if another shaft is used.

Transporting the machine to the field to prepare for work:

- Start the engine of the tractor for a minute. Hold the machine with main hydraulic arm. Attach the security lock for not to damage to the hydraulic system while driving. Stretch the stretching chains to prevent swinging. Transport the machine empty (without fertilizer) to the field. Fill the fertilizer to the tank in the field.
- In transporting position, raise the machine up and lock the security pin to prevent the machine fall down.
- In turnings, take into consideration the load which is outside the centre of gravity and/or constant weight of the implement.
- Working with tractor in the tendency fields can give damage to the machine. But if you have to work in these tendency fields take care of working, do not turn the road bend fastly and sharply. For working in tendency fields you must be careful about if the tractor is decked out with the additional weights.



ATTENTION!

MAINTENANCE, REPAIRS, CLEANING MAY ONLY BE EXECUTED WHEN THE DRIVE AND THE ENGINE ARE SWITCHED OFF AND THE IGNITION KEY IS PULLED OUT.

T-TCBM135 Drum Mower is produced by full of quality. So this machine will not need so much maintenance and repair after working with the machine.

Take care about the items that is written below for maintenance and repair :

- Turn engine off when adjustment, service and repair work is to be done.
- Do not work under the machine without safe support
- Retighten all screws after the first hours of operation

Cleaning of machine parts:

- Do not use high pressure water for the cleaning of bearing and hydraulic parts.
- Danger of rust
- After cleaning, grease the machine according to the lubrication chart and carry out a short test run.
- The knife has cutting edges at both sides. Therefore it is possible as soon as one edge is blunt to take the knives and use it on the next drum

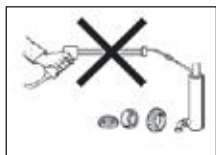


Figure 15- Cleaning of machine parts

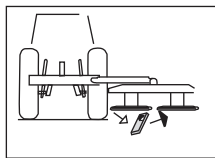


Figure 16- Wearing of the knives

Replacing the knives:

- Support the lever against the lower edge of the drum and press the flexible holder on the lower end of which is fixed the cutter on the pin.
- Remove the damaged knives and apply a new one, at the same time the rests of fodder around the pins of the knife holders, eventually from the inner space of the discs. Remove the lever and check whether the pin of the holder has returned to the initial position and whether the knife removes the holder revolves freely on the pin (Fig.17).



Figure 17- Replacing the knives

- Check the weariness of the knives more frequently on stony ground.
- Check normally every 100 hours.
- Check the mowing blade mountings more frequently when mowing on stony ground.

If mowing disc is worn through close to the mowing knives proceed as follows:

- Remove bottom disc.
- Undo nuts on knife mountings.
- Tighten bolts firmly and check after some hours operation.

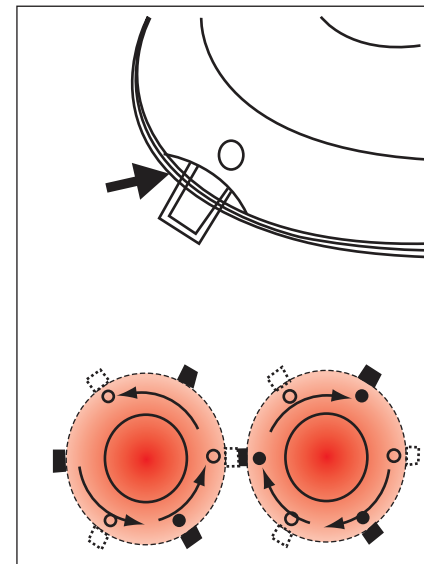


Figure 18- Changing of worn bottom disc



CONTROL(A)	MAINTENANCE(B)			VARIATION(C)		
Maintenance Period ==>	Daily	Weekly	30 Hours	100 Hours	400 Hours	
Lubrication (Level control of gear box oil) Variation of oil(BR000)			A			C
Oil leakage control	A					
Wearness control of drums	A					
Lub.grease nipples		B				
Tightness control (bolt-nut)	A					
Cleaning	B					

Table 3 - Maintenance Periods

Lubrication :

- Lubricate with grease before starting work and every 8 hours worked.
- Before any extended period of non-use, clean and lubricate driveshafts
- For winter working, grease the tube guards, to avoid them freezing together
- Gear oils according to operating instructions-however at least once a year
- Take out oil drain plug, let run out and duly dispose waste oil
- Before garaging the machine (winter season) an oil change and greasing of all lubricating points has to be done. Unprotected metal parts outside (joints e.t.c) have to be protected against corrosion

The oil in the gear-box is 15-16 kg.

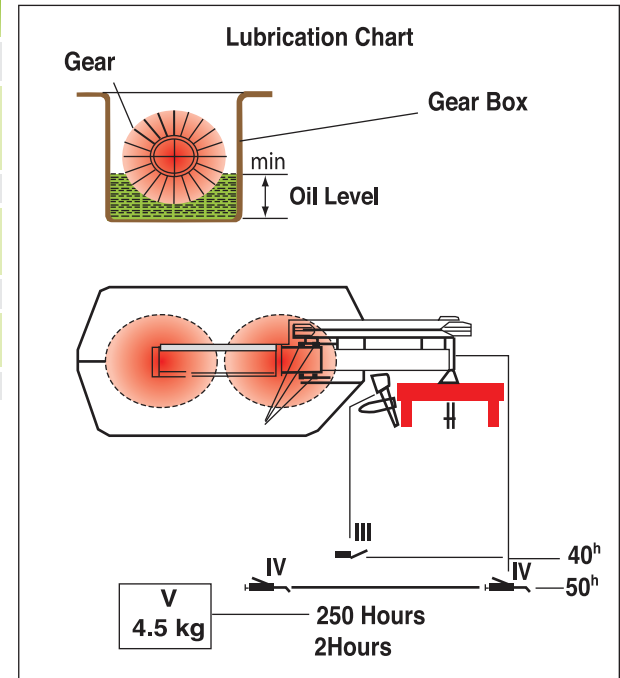


Figure 19- Lubrication chart



Safety decals:

There are 3 types of main safety decals. These are shown as,

Danger :

When you see this alert symbol and heading be alert to the danger of injury or death of men and animals.

Alert :

When you see this heading, be alert to the possibility of serious injuries because of using the machine out of the using rules.

Attention :

When you see this heading, be alert to the possibility of damage to equipment, crop, building, etc. but to financial and / or juridical problems as well.



ATTENTION!

READ OPERATORS MANUAL BEFORE STARTING TO WORK WITH THE MACNINE.

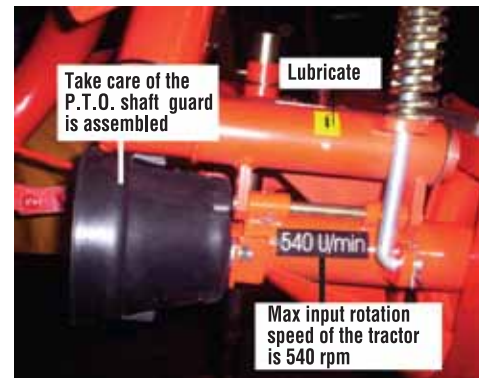
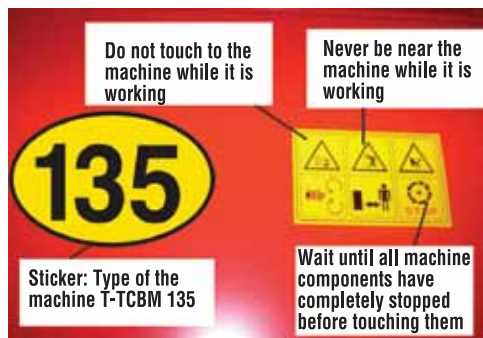


Figure 20- Alert Decals

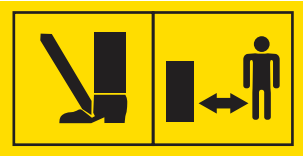


01



- Do not open or remove safety shields while the engine is running

02



- Stay clear of mower knife area as long as tractor engine is running

03



- Wait until all machine components have completely stopped before touching them

04



- Shut off engine and remove key before performing maintenance or repair work.

05



- Stay clear of swinging area of implements.

06



- Never reach into the crushing danger area as long as parts may move.

All machines have stickers glued on. In this stickers machine type, address of manufacturer, machine serial number, model of the machine is prescribed.

- Make sure you get familiar with all devices and elements for handling and with the functions before starting with the work.

- Avoid wearing loose-fitting clothes. Clothes should fit tight to the operator's body..

- Implements should be connected according to the instructions, fastened to the prescribed devices and secured.

- Never left the driving seat during driving.

- Strating devices for remote control should be secured in a way that, they can not be unintentionally released during transport or work.

- When disconnecting the machine from the tractor, place it on the flat ground..

- Never jump, sit or climb on the machine while it is connected to the tractor.

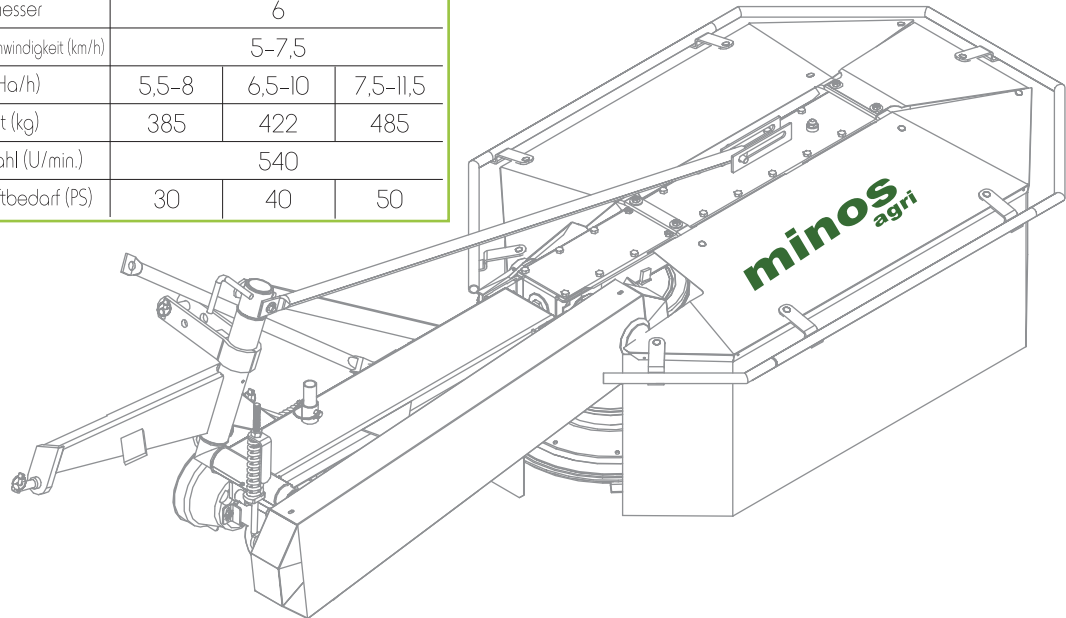
- Stopping or operating the machine must be done by the driver. No one may drive the tractor except the driver.

- Use protection for hearing and glasses while working with the machine if the tractor does not have a closed cabin.



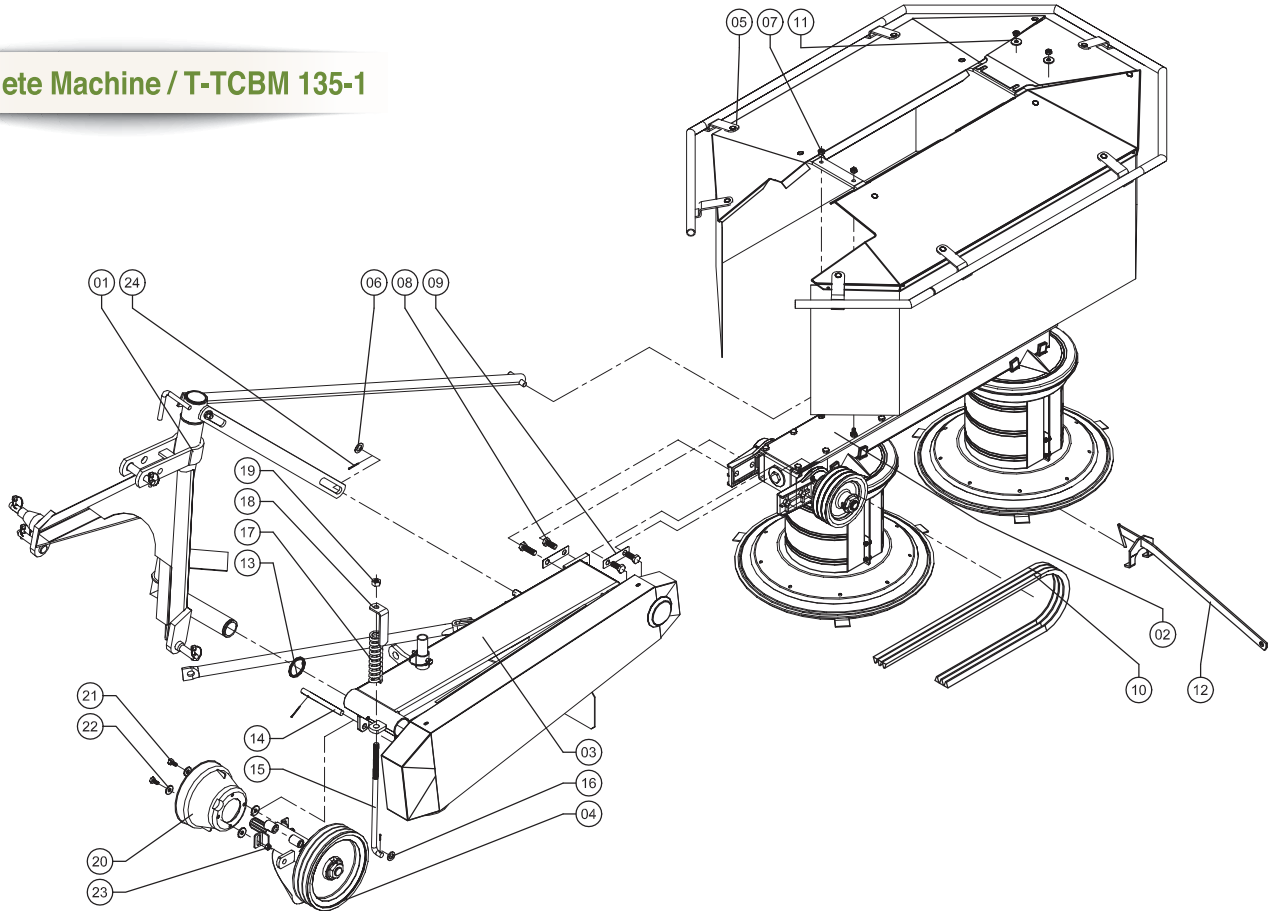
TECHNICAL SPECIFICATION / TECHNISCHE DATEN		T-TCBM 1350	T-TCBM 1650	T-TCBM 1900
Machine code (Order number)	Maschinenbezeichnung (Bestellnummer)	20401103	20401204	20401304
Working Width (mm)	Arbeitsbreite (mm)	1350	1650	1900
Transport Width (mm)	Transportbreite (mm)	1175	1518	1500
Transport Length (mm)	Transportlänge (mm)	2962	3185	3456
Overall Height (mm)	Gesamthöhe (mm)	990	1075	1035
Number of Drums	Anzahl der Mähtrömmeln	2		
Number of Blades	Anzahl der Mähmesser	6		
Optimal Working Speed (km/h)	Optimale Arbeitsgeschwindigkeit (km/h)	5–7,5		
Capacity (da/h)	Flächenleistung (Ha/h)	5,5–8	6,5–10	7,5–11,5
Machine Weight (kg)	Maschinengewicht (kg)	385	422	485
P.T.O. Shaft Rotations (max) (min ⁻¹)	Zapfwellendrehzahl (U/min.)	540		
Required Tractor Power (HP)	Erforderlicher Kraftbedarf (PS)	30	40	50

Table 4 – Technical values





7 Complete Machine / T-TCBM 135-1





SPARE PARTS LIST

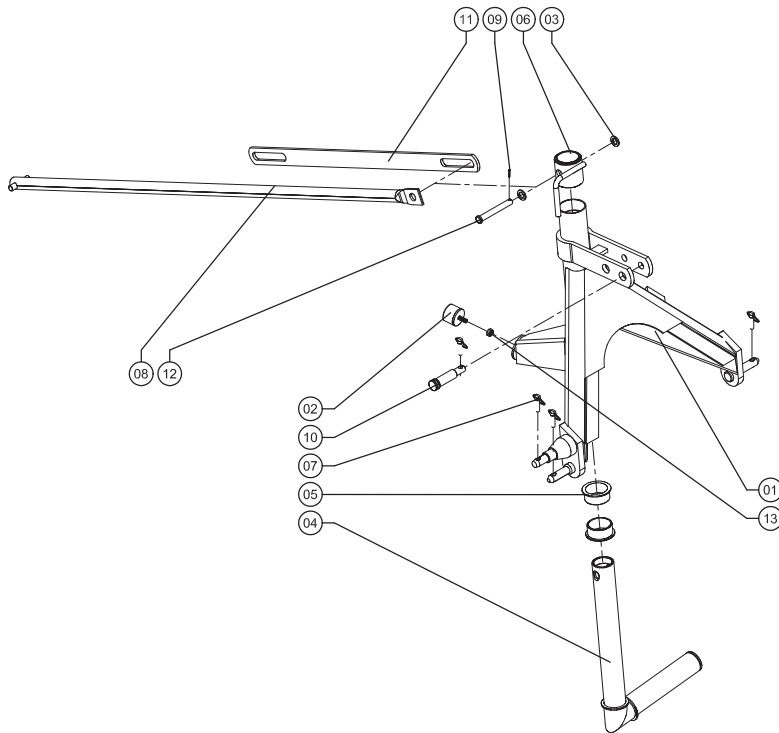
7 Complete Machine / T-TCBM 135-1

Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.1	Three point hitch gr.	
02	1	T-TCBM 135-1.2	Gear-box group	
03	1	T-TCBM 135-1.3	Main holder group	
04	1	T-TCBM 135-1.4	Belt and pulley group	
05	1	T-TCBM 135 1-1.5	Curtain group	
06	1	RON-DUZ-M20	Flat washer	
07	4	SOMFIB-AKS-M10x1,5	Hexagonal fiber nut	DIN 985
08	3	CIV-M16x2x35-8.8	Hexagonal bolt	DIN 933
09	2	T-TCBM 135 1-1.2.66	Support plate	
10	3	KAYIS-V 17x2550	V-belt	DIN 7753
11	4	T-TCBM 135 1-1.28	Washer	
12	1	T-TCBM 135 1-1.27	Knife key	

Pos. Number	Amount	Order Number	Explanation	Norm
13	1	SEG-DIN 471060x2-CK75	Spindle circlip	DIN471
14	1	T-TCBM 135 1-1.14	Connection spindle	
15	1	T-TCBM 135 1-1.15	Drop bolt	
16	1	RON-DUZ-M16	Flat washer	DIN 125-A
17	1	T-TCBM 135 1-1.17	Stretcher spring	
18	1	T-TCBM 135 1-1.18	Stretcher plate	
19	1	SOMFIB-AKS-M16x2	Hexagonal fiber nut	DIN 985
20	1	TDRAM301S-1.32	Shaft guard	
21	2	CIV-M10x1,5x20-8.8	Hexagonal bolt	DIN 933
22	2	RON-DUZ-M10	Flat washer	DIN 125-A
23	2	SOMFIB-AKS-M10x1,5	Hexagonal fiber nut	DIN 985
24	3	GUP-4x40 DIN 94	Cotter pin	



7.1 Three Point Hitch System / T-TCBM 135-1.1



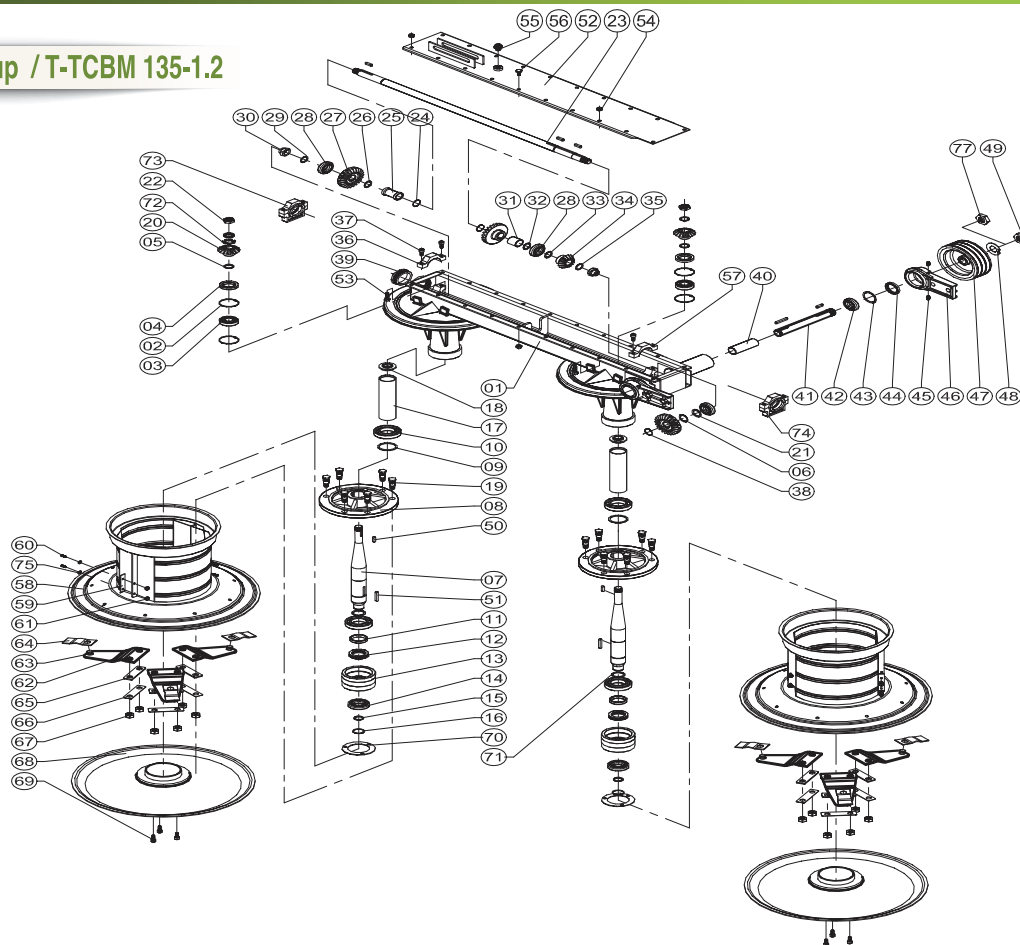
SPARE PARTS LIST

7.1 Three Point Hitch System / T-TCBM 135-1.1

Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.1.1	Three point hitch	
02	1	T-TCBM 135-1.1.29	Hitch filler block	
03	2	RON-DUZ-M22	Flat washer	DIN 125-A
04	1	T-TCBM 135-1.1.4	Hitch crooked level	
05	2	T-TCBM 135-1.1.5	Plastic bush	
06	1	T-TCBM 135-1.1.6	Cast hat	
07	4	PIM-MAŞ-ARM Ø10	Perch pin	
08	1	T-TCBM 135-1.1.8	Gear-box upper pipe complete	
09	1	GUP-4x40 DIN 94	Cotter pin	
10	1	T-TCBM 135-1.1.25	Hitch pin	
11	1	T-TCBM 135-1.1.11	Stretcher lama 2	
12	1	T-TCBM 135-1.1.16	Connection pin	
13	1	SOMFIB-AKS-M10x1,5	Hexagonal fiber nut	DIN 985



7.2 Gear-box Group / T-TCBM 135-1.2





SPARE PARTS LIST 7.2 Gear-box Group / T-TCBM 135-1.2

Pos. Number	Amount	Order Number	Explanation	Norm	Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.2.1	Gear-box		20	2	T-TCBM 135-1.2.20	Conical gear Z:15	
02	4	SEG-DIN472Ø62x2-CK75	Circlip	DIN 472	21	1	T-TCBM 135-1.2.21	Distance washer	
03	2	RUL-6305 C3	Bearing	DIN 625	22	2	T-TCBM 135-1.2.22	Conical spindle adjustment nut	
04	2	KEÇE-YAG-40x62x10 AS	Felt	DIN 3760	23	1	T-TCBM 135-1.2.23	Long spindle	
05	4	T-TCBM 135-1.2.5	Distance washer Ø33x25.5x2		24	2	SEG-DIN471Ø30x1,5-CK75	Circlip	DIN 471
06	1	T-TCBM 135-1.2.6	Distance washer Ø40x30.5x1		25	1	T-TCBM 135-1.2.25	Distance pipe	
07	2	T-TCBM 135-1.2.7	Conical spindle		26	1	SIM-45x30x1,5	Adjustment shims	DIN 988
08	2	T-TCBM 135-1.2.8	Flange		27	3	T-TCBM 135-1.2.27	Conical gear Z:23	
09	2	SIM-60x50x2.5	Adjustment shims	DIN 988	28	3	RUL-6206 C3	Bearing	DIN 625
10	4	RUL-6210 2RS-G100 C3	Bearing	DIN 625	29	1	T-TCBM 135-1.2.29	Distance washer	
11	2	T-TCBM 135-1.2.11	Bearing distance ring		30	2	T-TCBM 135-1.2.30	Adjustment nut	
12	2	RUL-51109 KJ	Bearing	DIN 711	31	1	T-TCBM 135-1.2.31	Distance pipe	
13	2	T-TCBM 135-1.2.13	Inside housing		32	1	SIM-42x30x0.5	Adjustment shims	DIN 988
14	2	RUL-6207 2RS G100-C3	Bearing	DIN 625	33	1	SIM-42x30x0.5	Adjustment shims	DIN 988
15	2	T-TCBM 135-1.2.15	Distance washer		34	1	T-TCBM 135-1.2.34	Conical gear Z:15	
16	2	SEG-DIN471Ø35x2,5-CK75	Spindle Circlip	DIN 471	35	1	T-TCBM 135-1.2.35	Distance washer	
17	2	T-TCBM 135-1.2.17	Distance pipe		36	1	T-TCBM 135-1.2.36	Support part	
18	2	T-TCBM 135-1.2.18	Stretcher ring		37	4	CIV-IMB-M10x1,5x35-8.8	Bolt	DIN 912
19	12	T-TCBM 135-1.2.19	Bijon		38	1	SEG-DIN471Ø30x1,5-CK75	Circlip	DIN 471



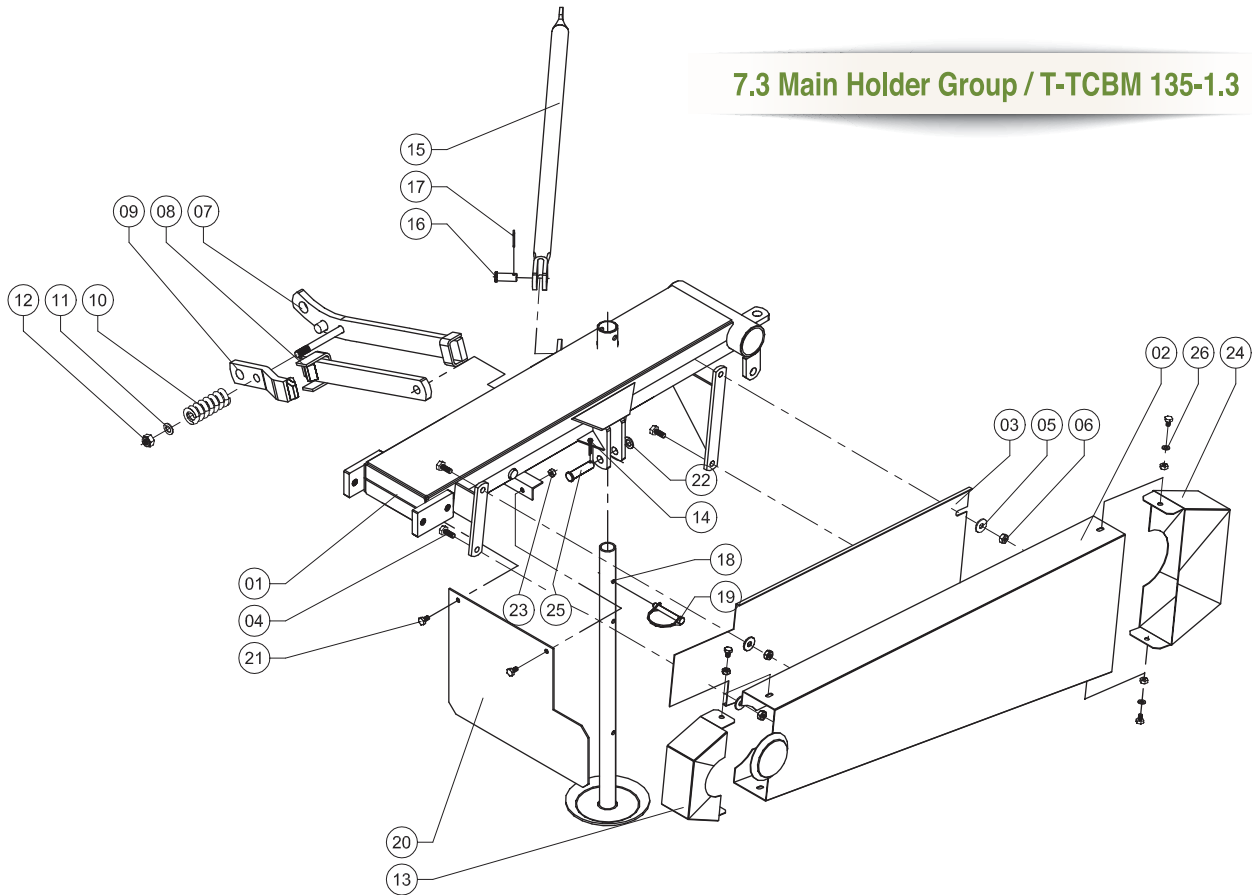
SPARE PARTS LIST 7.2 Gear-box Group / T-TCBM 135-1.2

Pos. Number	Amount	Order Number	Explanation	Norm
39	1	T-TCBM 135-1.2.39	Plastic cover	
40	1	T-TCBM 135-1.2.40	Distance pipe	
41	1	T-TCBM 135-1.2.41	Short spindle	
42	1	RUL-6206 C3	Bearing	DIN 625
43	1	SIM-45x30x1,5	Adjustment shimps	DIN 988
44	1	KEÇE-YAG-45x62x7 A	Felt	DIN 3760
45	4	GRE-DÜZ-M6	Nippel M6	DIN 71412
46	2	T-TCBM 135-1.2.46	Joint	
47	1	T-TCBM 135-1.2.47	Gear-box pulley	
48	1	T-TCBM 135-1.4.10	Safety nut plate	
49	1	T-TCBM 135-1.2.49	Nut M30x1.5	
50	6	KAMA A8x7x32	Cotter	DIN 6885
51	2	KAMA A8x7x55	Cotter	DIN 6885
52	1	T-TCBM 135-1.2.52	Gear-box upper cover	
53	4	CIV-M10x1,5x40-8.8	Hexagonal bolt	DIN 933
54	20	SOMFIB-AKS-M10x1,5	Hexagonal nut	DIN 985
55	1	TAPA-YAG-HAV-çap3/8"	Vent plug	
56	16	CIV-M10x1,5x20-8.8	Hexagonal bolt	DIN 933
57	1	T-TCBM 135-1.2.57	Support part 2	

Pos. Number	Amount	Order Number	Explanation	Norm
58	2	T-TCBM 135-1.2.58	Upper disc	
59	4	T-TCBM 135-1.2.59	Crusher knife	
60	8	CIV-M6x1x16-8.8	Hexagonal bolt	DIN 933
61	8	SOM-AKS-M6x1-8,8	Hexagonal nut	DIN 934
62	6	TTCBM135-1.2.62	Knife holder	
63	6	T-TCBM 135-1.2.63	Knife pin	
64	6	T-TCBM 135-1.2.64	Knife	
65	6	T-TCBM 135-1.2.65	Support plate 1	
66	6	T-TCBM 135-1.2.66	Support plate 2	
67	12	SOM-AKS-M16x2-8,8	Hexagonal nut	DIN 934
68	2	T-TCBM 135-1.2.68	Bottom disc	
69	6	CIV-IMB-M10x1,5x35-8.8	Bolt	DIN 912
70	2	T-TCBM 135-1.2.70	Washer	
71	4	SIM-62x50x0.8	Adjustment shimps Ø62xØ50x0.8	DIN 988
72	2	T-TCBM 135-1.2.72	Safety washer	
73	1	T-TCBM 135-1.2.73	Cast hat complete 1	
74	1	T-TCBM 135-1.2.74	Cast hat complete 2	
75	8	RON-YAY-M8	Spring washer	DIN 127-B
76	1	SIVI GRES-BR000	Grease	
77	1	T-TCBM 135-1.2.77	Nut	



7.3 Main Holder Group / T-TCBM 135-1.3





SPARE PARTS LIST

7.3 Main Holder Group / T-TCBM 135-1.3

Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.3.1	Main Holder (welded)	
02	1	T-TCBM 135-1.3.2	V-belt cover	
03	1	T-TCBM 135-1.3.3	Protection cover plate	
04	4	CIV-M10x1,5x25-8.8	Hexagonal bolt	DIN 933
05	4	RON-DUZ-M10	Flat washer	DIN 125-A
06	4	SOM-AKS-M10x1,5-8,8	Hexagonal nut	DIN 985
07	1	T-TCBM 135-1.3.7	Safety lama (Welded)	
08	1	T-TCBM 135-1.3.8	Safety lama	
09	1	T-TCBM 135-1.3.9	Safety lama (short)	
10	1	T-TCBM 135-1.3.10	Safety spring	
11	1	RON-DUZ-M14	Flat washer	DIN 125-A
12	1	SOMFIB-AKS-M14x2	Hexagonal fiber nut	DIN 985
13	1	T-TCBM 135-1.3.13	Small pulley plate	

Pos. Number	Amount	Order Number	Explanation	Norm
14	1	GUP-3x45 DIN 94	Cotter pin	DIN 94
15	1	T-TCBM 135-1.3.15	Main holder side pipe	
16	1	T-TCBM 135-1.3.16	Conneciton pin	
17	1	GUP-3x45 DIN 94	Cotter pin	DIN 94
18	1	T-TCBM 135-1.3.18	Support leg	
19	1	TOT-1.23	Spring pin assembly	
20	1	T-TCBM 135-1.3.20	Plate	
21	2	CIV-M8x1,25x15-8.8	Hexagonal bolt	DIN 933
22	1	RON-DUZ-M16	Flat washer	DIN 125-A
23	2	SOMFIB-AKS-M8x1,5	Hexagonal fiber nut	DIN 985
24	1	T-TCBM 135-1.3.24	Big pulley plate	
25	1	T-TCBM 135-1.1.24	Connection pin	
26	4	RON-DUZ-M8	Flat washer	DIN 125-A

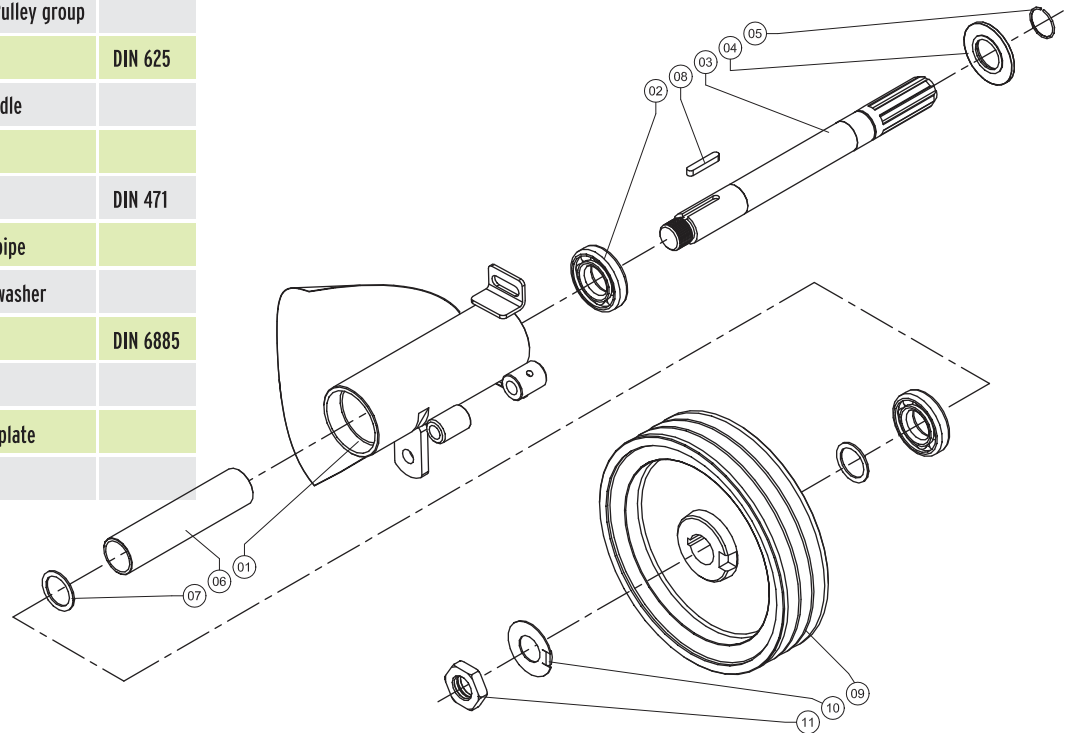


SPARE PARTS LIST

7.4 Belt and Pulley Group / T-TCBM 135-1.4

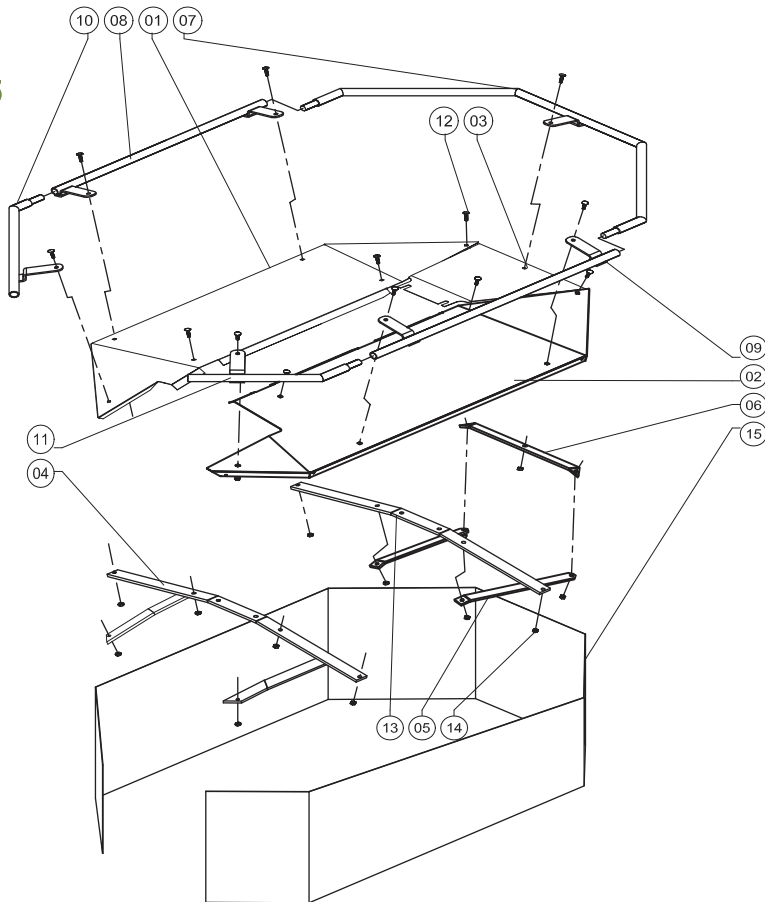
Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.4.1	Belt and Pulley group	
02	2	RUL-6207 RS C3	Bearing	DIN 625
03	1	T-TCBM 135-1.4.3	P.T.O spindle	
04	1	T-TCBM 135-1.4.4	Cover	
05	1	SEG-DIN471035x2,5-CK75	Circlip	DIN 471
06	1	T-TCBM 135-1.4.6	Distance pipe	
07	2	T-TCBM 135-1.4.7	Distance washer	
08	1	KAMA A8x7x45	Cotter	DIN 6885
09	1	T-TCBM 135-1.4.09	Big Pulley	
10	1	T-TCBM 135-1.4.10	Safty nut plate	
11	1	T-TCBM 135-1.2.49	Nut	

7.4 Belt and Pulley Group / T-TCBM 135-1.4





7.4 Curtain Groub / T-TCBM 1650-1.5





SPARE PARTS LIST

7.5 Curtain Group / T-TCBM 135-1.5

Pos. Number	Amount	Order Number	Explanation	Norm
01	1	T-TCBM 135-1.5.1	Curtain plate left	
02	1	T-TCBM 135-1.5.2	Curtain plate right	
03	1	T-TCBM 135-1.5.3	Curtain plate front	
04	1	T-TCBM 135-1.5.4	Curtain connection lama	
05	1	T-TCBM 135-1.5.5	Connection lama 1	
06	1	T-TCBM 135-1.5.6	Conneciton lama 2	
07	1	T-TCBM 135-1.5.7	Conneciton pipe 1	
08	1	T-TCBM 135-1.5.8	Conneciton pipe 2	
09	1	T-TCBM 135-1.5.9	Conneciton pipe 3	
10	1	T-TCBM 135-1.5.10	Conneciton pipe 4	
11	1	T-TCBM 135-1.5.11	Conneciton pipe 5	
12	13	CIV-TAV-M8x1,25x30	Bolt	DIN 603
13	1	T-TCBM 135-1.5.4.01	Curtain plate left	
14	13	SOM-AKS-M8x1,25-8,8	Hexagonal nut	DIN 934
15	1	T-TCBM 135-1.5.15	Curtain 430x3950	



HANDOVER DOCUMENT

The handover document is the part of the documentation of the machine in which the manufacturer or representative informs the buyer of:

1. The correct usage and major components of the machine;
2. The operation and handling of the machine.

For all machines, the manufacturer or manufacturer's representative guarantees that the commissioning of the machine will be performed within 8 days from the acquisition of the machine:

Machine details

PRODUCT NAME

MODEL

PRODUCT CODE

SERIAL NUMBER

MANUFACTURE YEAR

Seller'st

Date of Invoice:

Signature&Seal

Buyer's

Name Surname:

Address:

Tel :

Basic rules for using, maintenance and points to take into account for the machine purchased are duly explained to me and I am advised to read and understand the introductory and user guide provided with machine carefully.

Signature

Authorised service provider'st

Date of service:

Signature&Seal

The machine is correctly assembled and handed over to use – the commissioning has been performed.

The buyer has been acquainted with the usage, operation and handling of the machine.

The handover document is filled out by the seller or authorised service technician, who sends a copy directly to MINOS or at the email address: info@minosagri.com. With their signature, they guarantee the accuracy of the information. The warranty is validated simultaneously with the validation of the service sheet.



minos agri

Minos Agricultural Machinery

Fatih Mah. 1191 Sk. No: 17/A 35414

Gaziemir - İZMİR - TÜRKİYE

Ph : +90.232 281 54 04 - 281 63 30

281 63 31 Fax: +90.232 281 57 10

E-mail: info@minosagri.com



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