



# Jumbo Flailmower (left execution)





## EC Declaration of conformity for machines

Manufacturer: Votex B.V.  
Adresse : Groen 2  
Code postal : 6666 LP  
Town: HETEREN (Netherlands)

declare that the following machines

Votex Jumbo types : 120 150 190 and 230 nr.....

- meets the requirements of the directive

Directive 98-37-EC

and the national legislation concerning the execution of this directive

- meets the requirements of further EEC directives (only fill in if applicable)

and further declare that ;

the following (parts of ) harmonised norms have been applied

- EN 292-1 1994 / EN 292-2 1996
- EN 745 1999

Heteren .....

A handwritten signature in black ink, appearing to be "P. Krieckaert", written over a horizontal dotted line.

(signature)

P.Krieckaert  
General Manager.

# Operation manual and parts list Votex Jumbo flail mower

Applicable for the following models

120

150

190

230

Delivered after 01st. of January 2003

HK005

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## 1. Introduction

This manual for the Votex Jumbo flail mower gives you complete information about safety, performance and maintenance.

We advise you to take time to read this manual thoroughly and to keep it in a safe place. This guarantees not only optimum performance of a high class mower but will also help you to avoid accidents and comply with the laws regarding product liability and guarantee.

The Votex Jumbo flail mower is a machine with which the crop, by its flails attached to a high speed rotating shaft, will be isolated, pulverized, and via its hood thrown back onto the ground.

The mower is developed for use on tractors with an engine power of over 40 kW and over and a minimum track of 1.50 m, for the mowing and pulverizing of grass, weeds and pruning with a maximum diameter of 2 cm on;

- verges and/or ditches
- airports
- fallowlands and other large grass areas.

### **ATTENTION !**

Any other use will be considered as not being in accordance with the use its designed for!!

The tractor driver must be experienced in the use of a tractor and flail mower.

The Votex Jumbo flail mower must **not** be used;

- for mowing activities where the roller does not rest on the ground over its total length,
- for mowing activities in areas where is risk of fire and/or explosion.

Votex is continually striving to improve its products and therefore reserves the right to modify or alter specifications to its machines without obligation to apply these alterations on previously sold machines.

## 2. Safety



If you see this sign it indicates, there is a direct danger to life and health of people and animals.



This sign warns of eventual damage to the product if the user does not follow up the manufacturers instructions.

### TIP

Gives the user suggestions/advice on how to make some tasks easier and safer.

#### 2.1. Safety instructions.

- We recommend that you to read this manual thoroughly, so that you will be prepared for situations which might cause danger !  
Particularly familiarize yourselves how to use the mower and especially how to stop the tractor in case of an emergency !  
Pass on all safety advice etc. to other (fellow) users !
- Never allow the rotor shaft to rotate when the roller is not in contact with the ground over its full length !
- The exhaust fumes of a combustion-engines contain carbon monoxide, a scentless and deadly poison. Therefore the engine of the tractor should never be running in an enclosed area !
- As well as the specific instructions in this manual the normal precautions regarding safety and accident prevention must be considered !
- The plates/decals on the machine indicate important information for safe operation. Take note, this information is for your own safety !  
Damaged plates/decals have to be replaced immediately !
- At a noise level higher than 85 dB(A) always use ear protection, except when driving on the highway !
- The operator must wear close fitting clothing whenever possible !
- Stick to the applicable traffic regulations when you use the main road !
- Tractor with the attached mower must only be driven by a qualified person with sufficient experience !
- Stick to the maximum permissible transport dimensions !
- If necessary, attach hazard lights and/or warning boards !

- Before transport on the road bring the machine to its transport position and secure it (see paragraph 6)
- Whenever driving on the road with a raised machine the linkage lever must be locked in the raised position !
- Before every operation check both the mower and tractor before every operation for safety regarding performance and traffic !
- Never carry passengers on the tractor or mower irrespective of their age !
- If necessary, attach front weights to the weight carrier in accordance with the mounting instructions !  
Stick to the maximum permissible axle load/total weight and the minimum permissible front axle load (according the traffic regulations) !
- Hoses, cables etc. for the rams and lightning must be fitted in such a way, that during all operating conditions they cannot be damaged or fouled which may cause them to malfunction !
- Pay attention at corners with the large turning circle and heavy weight (inertia mass) of the machine !
- Check the area around the tractor and mower before putting the mower into operation. Ensure unimpaired visibility !
- No one must be allowed to remain or work in the danger area around the machine !



Keep distance! Objects (stones etc.) can be thrown out

- Only work with the machine when all guards and safety devices are fitted and in good condition !
- Set your speed according to the conditions of the site and work involved !
- Working on slopes with the tractor is very dangerous !  
However if this is unavoidable you must work horizontally accross the slope with the lowered cutting head on the heigher side whis will stop overturning of the tractor !
- Only work during daylight or with very good artificial light !
- Before starting work remove all objects from the area which may be caught and thrown out by the mower !
- After hitting an object, check the mower immediately for damage which may have to be repaired before restarting the operation !
- Repair damage before restarting work !
- When positioning the cutting head for transport or work the PTO shaft must be disengaged and the rotor shaft at a complete stand still !



Never remain in the area of the linkage lift arms while operating them!

- Before leaving the tractor unattended and/or carrying out repairs on the mower or PTO shaft the following precautionary measures must be taken;
- disengage the PTO shaft,
- put the gearlever of the tractor in a neutral position,

- put-on the tractor parking-brake,
- lower the mower in locked transport- or work position,
- switch off the tractor engine and remove the keys from the ignition,
- always wait until the rotor shaft is completely stationary !



The machine decelerates slowly. Do not stand near the rotating parts until the machine has come to a stand still.

- Ensure that the jack is locked in its lowest position when the mower is to be attached or disconnected !
- Special care should be taken when attaching or disconnecting the mower to or from the tractor !

#### PTO drive shaft.

- Only use the PTO drive shaft and freewheel recommended by the manufacturer !
- Guard tubes and cones on the PTO drive shaft, as well as the guard cones on the tractor and mower must always be in good condition !
- Ensure the recommended overlap of the PTO shaft and guard tubes are sufficient in transport as well as the working position (see PTO shaft manufacturers instructions) !
- Attachment and disconnection of the PTO drive shaft must only take place when the tractor engine is stopped and the ignition key has been removed !
- Ensure correct attachment and locking of the PTO drive shaft !
- Prevent the PTO shaft guard from spinning by attaching both chains, to suitable fixing points on the machine and tractor !
- Before engaging the PTO shaft, ensure that the RPM and direction of rotation are correct for the machine to be driven. The RPM and direction of rotation are indicated on the machine by a decal !
- Never exceed the indicated RPM !
- Never engage the PTO shaft when the engine is stopped !
- Keep away from the rotating shafts !
- Always disengage the PTO shaft if the working angle becomes too big !
- Place the disconnected PTO drive shaft in its support on the 3-point linkage frame
- Fit the guard sleeve for the tractor PTO shaft immediately after the PTO drive shaft is disconnected !

## Hydraulics.

A hydraulic system works under high pressure. When discovering a leak, immediately depressurise the system, clear up oil leakage and replace defective parts !



Fluid under high pressure can easily penetrate the skin and clothes and cause serious injury. In this case consult a doctor immediately !  
Leaking oil can cause damage to the environment. Take all necessary precautions to avoid this !

- Regularly check hydraulic hoses, lines and joints, replace them when damaged or ageing. New hoses must be in accordance with the technical recommendations of the manufacturer !
- Before coupling, uncoupling or repair, ensure that the hydraulic system of the tractor and machine are depressurised.



The accumulator is filled with nitrogen and under high pressure !  
Never try to weld anything on the accumulator.

- Fit dust caps on the disconnected hydraulic hoses and place the hoses in the hooks on the three points frame to avoid pollution

## Maintenance and inspection



Vibration in the machine is usually caused by imbalance of the rotor shaft. These vibrations can cause severe damage to the machine. Therefore when, during operation, more vibration and/or a change in the sound of the machine is noticed, stop immediately, find the cause and rectify it before restarting to work !

- Check regularly for worn flails, flail shackles, bolts and flail mounting lugs plates on the rotor shaft. For minimum dimensions see paragraph 9.1. !
- Ensure that the rotor shaft has a complete set of flails and are all facing the same way whether new or worn !
- Immediately replace any damaged or worn flails, flail shackles and bolts !
- Imbalanced rotor shafts or rotor shafts with worn mounting lugs must also be replaced immediately !
- Check regularly the rubber guard and replace it if it show too much sign of wear, see paragraph 9.2. !
- Only people who are familiar with the machine and the possible dangers must be allowed to operate it !

## 2.2 Decals (see Picture 2.1.)

1. Before commissioning the machine read this manual and the safety instructions thoroughly (Votex no. 20.10.604) !
2. Direction of rotation and maximum RPM of the PTO shaft (Votex no. 20.10.600) !
3. Do not touch rotating parts before the machine is at a complete stand still (Votex no. 20.10.605) !
4. Keep clear of the rotating rotor shaft (Votex no. 20.10.606) !
5. Keep a safe distance from the machine (Votex no. 20.10.607) !
6. Never remain near to the moving parts in the linkage area (Votex no. 20.10.608) !
7. Before maintenance and repair stop the engine and remove the ignition key (Votex no. 20.10.609)!
8. Lift the machine only by its crane hook (Votex no. 20.10.610) !
9. When operating the linkage mechanism keep away from the 3-point link area (Votex no. 20.10.611) !

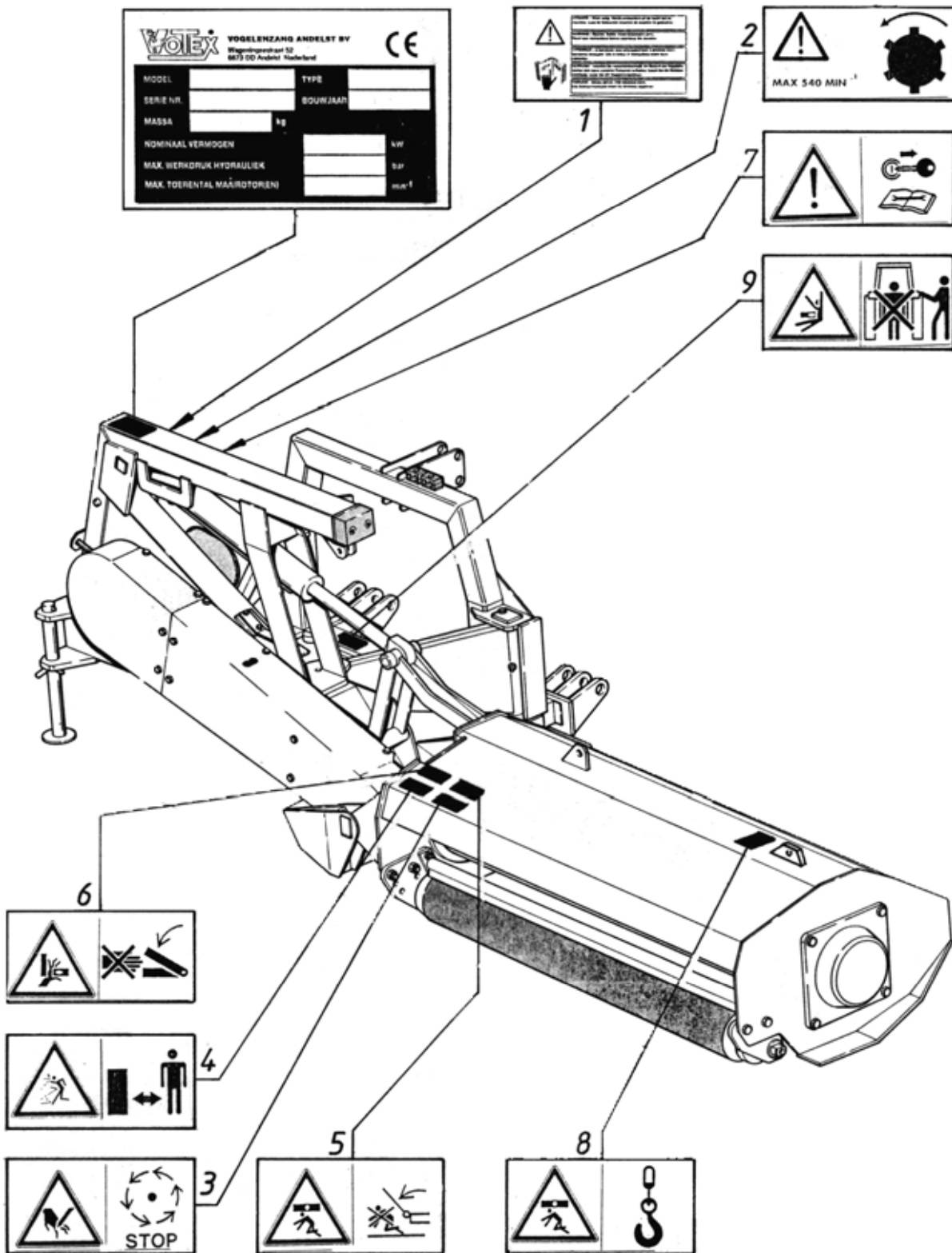
## 2.3 Identification plate.

The identification plate is placed on the upper beam of the frame, see Picture 2.1.

The following information is given on this plate;

Trade name:	Votex
Manufacturer's name:	Votex
Address:	Groen 2 6666 LP Heteren Holland
CE marks:	CE
Model:	Jumbo
Type:	120,150, 190 or 230
Serial number	
Year of manufacture	
Mass (weight)	845,915, 985 or 1045 kg
Nominal power	30,40, 50 or 60 kW
Maximum pressure hydraulic system:	180 bar
Max. RPM of the the mowing rotor:	2,000 RPM max.

Picture 2.1  
Decals and identification plate



### 3. Technical details.

<u>Model</u>	<u>Votex Jumbo</u>			
Type	<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>
Working width in m.	1.09	1,45	1,81	2,17
Transport width in m.	1.86	1,86	1,86	1,86 m
Transport length in m.	1.26	1,26	1,26	1,26 m
Transport height in m.	1.76	2,12	2,48	2,84 m
Weight in kg.	845	915	985	1045
Linking category	II+III	II+III	II+III	II+III
Mounting position	Rear/Front	Rear/Front	Rear	Rear
RPM of PTO shaft	540/1000	540/1000	540/1000	540/1000
PTO drive shaft	-----with freewheel-----			
RPM of rotor shaft	-----max. 2000 rpm.-----			
Number of flails	36	48	60	72
Ditch mowing	-----van +90° tot ca. -60°-----			
Hydraulic couplings tractor ½”BSP			1x simple acting, max. 180 bar 1x double acting, max. 180 bar	

The noise level involved is for all models 93 dB(A)) measured at a height of 1,60 m and a distance of 1 m from the machine.

### 4. Transport and storage of the mower.

Transport of the mower (not attached to the tractor) must only be done, when the following measures have been taken;

- cutting head fully raised and locked,(see picture 4.1)
- parking leg in lowest position and locked,
- side shift ram in fully retracted position
- PTO drive shaft, when mounted, in its bracket on the 3-points frame

Picture 4.1  
Cutting head  
transport position



The mower can be moved in two different ways (the weight of the machine to be moved is given on the identification plate):

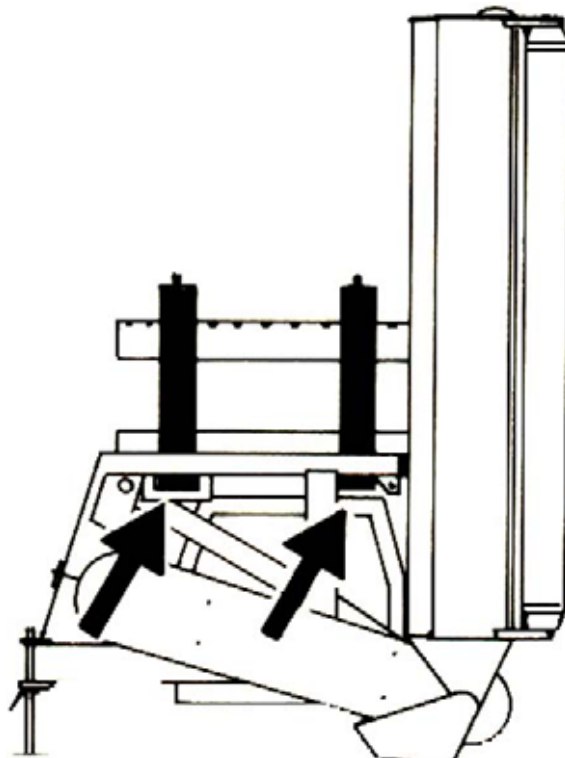
- by the crane hook at the end of the cutting head (see decal on the cutting frame),
- by the forks of a fork-lift truck (see Picture 4.2).



To lift the machine use a tackle or fork-lift with a lifting capacity equal or bigger than the weight of the machine. (see identification plate)

Picture 4.2

Moving the machine with a fork-lift truck.



Place the machine on a flat solid surface with a minimum weight capacity of 400 kPa (approx 4 kg/cm<sup>2</sup>)

The mower must be stored with the rams in the fully retracted position (to avoid oxidation or damage).

For winter storage refer to paragraph 9.9.

## 5. Preparation for the first operation.

Before coupling the mower to the tractor check that the information indicated on the machine (see Picture 5.1.) with regard to direction of rotation and RPM of rotation is in accordance with the direction of rotation and RPM of the PTO shaft of the tractor

Picture 5.1  
RPM and direction  
of rotation PTO



To alter the RPM, see paragraph 5.5

To alter the direction of rotation, see paragraph 5.6.

### 5.1. Coupling the mower.

The Votex Jumbo flail mower can be mounted onto tractors with a three point linkage Cat II or III.

Coupling must be done as follows;

- place the tractor before the mower so that the link arms can be coupled to the mower,
- engage the tractor parking brake and put the gear lever in neutral,



When operating the linkage mechanism keep clear of the link arms !

- fit both bottom link arms onto the machine by means of the link pins and secure them,
- stop the engine of the tractor and remove the ignition key,
- couple the top link, the link pin and secure it,
- minimise the lateral movement of the machine by using the stabilizing mechanism,
- fit the PTO drive shaft to the tractor and ensure that the safety chains of the guard are fixed at both tractor and machine.
- lift the machine a bit and put the parking leg in its working position
- once the machine has been coupled to the tractor adjust the top linkage to ensure that the machine is horizontal compared to the ground.
- before commencing operation check that there are no objects in the field which could damage the machine.

### 5.2 Connection of the tractor hydraulics.

Before connecting the hydraulic hoses stop the tractor engine, remove the ignition key and ensure the hydraulic system is depressurised.

The hydraulic hoses of the Votex Jumbo flail mower are fitted with 1/2" BSP-quick couplings. The coupling sockets of the tractor must be compatible.

For the ram of the cutting head, a single-acting valve with coupling socket is sufficient.

For the side shift ram, a double-acting valve is needed. Any costs involved in adapting the hydraulic of the tractor are for the responsibility of the user. After uncoupling the hoses, the dust caps supplied must be fitted on the couplings to avoid pollution of the hydraulic system of the tractor. Place the hoses in the hooks on the three point linkage.

### 5.3 Fitting the pto drive shaft.

Before fitting the PTO drive shaft the engine of the tractor must be stopped and the ignition key removed.

The PTO drive shaft supplied with the Votex Jumbo flail mower must be used in accordance with the manufacturer's instructions.

Couple the PTO shaft with the freewheel on the machine side.

Ensure that the PTO shaft is locked on both stubs. To avoid the guard spinning around attach the two safety chains at both tractor and machine.

Ensure the safe working angles of the PTO shaft are not exceeded.

The tractor and machine must be provided with proper guard cones around the PTO shaft stubs with a minimum overlap of 50 mm with the PTO drive guard.



Ensure the pto drive shaft is not too long. In defining the correct length consideration must be given to lifting and side shifting of the machine. For assembly, shortening and maintenance refer to the instruction manual of the pto drive shaft manufacturer !

### 5.4 Conversion of the mower.

(from front to rear mounting or v.v.)

Only applicable to the Votex Jumbo 120 and 150

The following modifications must only be carried out by the manufacturer or dealer !

If the mower needs to be modified, the existing 3 points linkage cannot be used .

An alternative version of this 3 point linkage must be used. When changing the mower from front to rear, or v.v., the direction of rotation and the RPM of the PTO shaft of the tractor, must be taken into consideration.

It may be necessary to alter the direction of rotation and the RPM of the mower.

These alterations can be carried out together.

For changing of the RPM or the direction of rotation, we refer to paragraph 5.5 and 5.6.

- remove the V-belt guard and power belt (see 9.6.1.),
- remove the rotor shaft (see 9.7.1.) and the complete coupling (see 9.8.1).
- separate the cutting head from the main frame,

- remove the gearbox and turn it through 180° in the gearbox support,
- mount the coupling (see 9.8.1) and the rotor shaft (see 9.7.2),
- turn the drive bearing house 180° in the main frame,
- reassembly must be done in reverse order



Be aware of any pressure left in the system when you uncouple the hydraulic hoses!

- place the accumulator support and accumulator on the opposite side of the frame,
- interchange the hydraulic hose and the air release nipple,
- assemble the hinge arms, including the hinge plate and the cylinder for offsetting on, to the opposite side of the main frame
- disassemble the safety device from the 3 points linkage and mount it in the new one. fit the whole assembly onto the hinge arms.

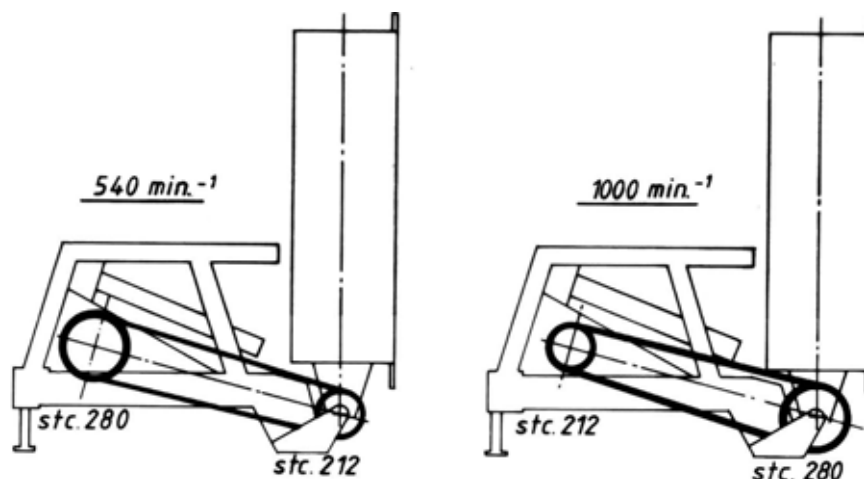
### 5.5 Alteration of rpm of the pto drive shaft, from 540 rpm to 1,000 rpm or v.v..

The following work must only be carried out by the manufacturer or dealer !

The mower can be changed from 540 to 1000 RPM, or v.v., by interchanging the V-belt pulleys (see picture 5.5.1).

In either cases the rotor shaft will turn the required number of rotations which is 1870 RPM.

Picture. 5.5.1  
Alteration of RPM



Modification of the transmission must be carried out as follows:

- remove the V-belt guard and power belt (see 9.6.1.),
- disassemble the rotor shaft (see 9.7.),
- disassemble the complete coupling (see 9.8.1),

- remove the gearbox with V-belt pulley and remove the V-pulley (see picture 5.5.1)
- assemble the other V-belt pulley onto the gearbox (tightening torque of the castle nut; 450 Nm),
- assemble the gearbox in its support,
- assemble the coupling (see 9.8.1),
- assemble the rotor shaft (see 9.7.2),
- assemble the V-pulley onto the bearing house (tightening torque of the castle nut; 450 Nm) also assemble the power belt and V-belt guard, tighten the power belt (see 9.6.1 and 9.6.2).

Picture 5.5.1

Not like this....



but like this



## 7. Working with the mower.



Pressurize the hydraulic ram of the cutting head before removing the locking pin! This avoids any unexpected movement of the cutting head!



After the first 8 hours of work check tightness of all bolts (tightening torque of the flail bolts is 80 nm) !

### 7.1 PTO shaft



The rpm indicated on the machine must never be exceeded !

The RPM indicated on the machine results in a the RPM of the rotor shaft, being approx. 1,900 RPM, at which the optimum mowing result will be achieved.

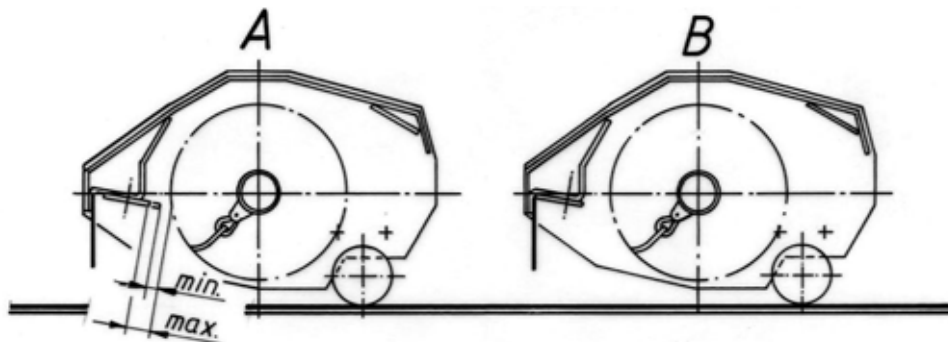
## 7.2 Adjustment of the cutting height.

The cutting height of the Votex Jumbo flail mower can be adjusted by altering the position of the roller.

## 7.3 Adjustment of the degree of pulverizing.

The degree of pulverizing can be altered by moving the adjustable chopping plate under the cutting head nearer or further away from the rotor shaft (see picture 7.3.A). The nearer the plate is mounted to the rotor shaft, the shorter the crop will be chopped. If only a small degree of pulverizing is required, it is possible to reverse the chopping plate. This way the chopping plate will be completely hidden by the profile of the cutting head (see picture 7.3.B.).

Picture. 7.3.1  
Adjustment of  
degree of pulverizing



## 7.4. Vibration of the mower.

When during operation an increase in vibration or change of noise is noticed stop work immediately, investigate the cause and rectify (see paragraph 9.1) before restarting the operation.

## 7.5. Adjustment of the leaf spring safety mechanism.

The leaf spring safety mechanism must be adjusted in such a way that, during mowing activities the mechanism stays just close. Adjust the safety mechanism by tightening or loosening the bolt (see picture 7.5.1.A)

Picture 7.5.1.a  
Adjustment  
safety mechanism



# TIP

To decrease the pressure on the roller during work we recommend that you put a little pressure in the hydraulic ram of the cutting head. This can be done by a quick short operation of the hydraulic lever.

## 8. Uncoupling.



Put the mower on an even solid surface with a minimum weight capacity of 400 kPa (approx 4 KG/CM<sup>2</sup>)!

Uncoupling must be done as follows;

- tighten the parking-brake of the tractor on and put the gear lever in neutral,
- put the side shift ram in its shortest position,
- put the cutting head in a vertical position and lock it,
- put the parking leg in its lowest position and lock it,
- lower the machine,
- switch off the tractor engine and remove the ignition key,
- depressurize the hydraulic system by operating the hydraulic levers several times



Take care of any pressure remaining in the system when uncoupling the hydraulic hoses. Clear up oil spills.

- uncouple the hydraulic hoses and fit the dust caps,
- remove the tractor end of PTO drive shaft and place it in the bracket provided for this purpose,
- remove the link pins and linkarms,
- if present, remove the lighting plug.

## 9. Maintenance of the mower.



Inspection and maintenance must only be done if;

- the cutting head is in a vertical locked position, or lays horizontal on the ground,
- the PTO shaft of the tractor is disengaged,
- the tractor engine has been switched off,
- the ignition key has been removed,
- the hydraulic system is depressurised.

## 9.1 Flails, shackles, bolts and mounting links.

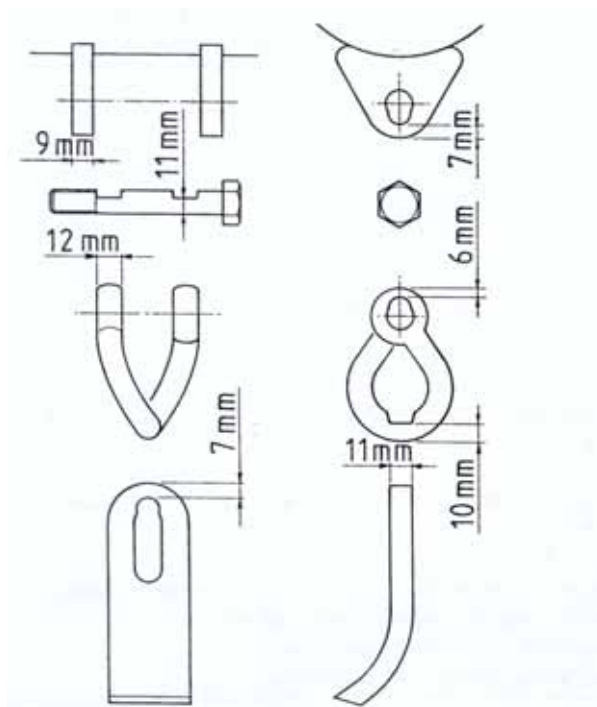
Flails, shackles, bolts and mounting links, plates on the rotor shaft must be checked regularly for signs of wear.



Never work with flails, bolts or mounting links which do not comply with the stated minimum dimensions picture 9.1.1.

Immediately replace all parts which do not comply with these minimum dimensions !

Picture 9.1.1  
Minimum dimensions



Tightening torque for the flail fixing nut: 80Nm.

Worn flails will diminish the of quality of mowing.

In this case replace all flails and, if necessary the shackles and bolts. If only the worst worn flails are replaced, the rotor shaft may get out of balance, resulting in vibration which could cause great damage to the machine within a short time.

Vibrations may not only indicate one or more (extremely) worn flails and/or shackles but also to objects wrapped around the rotor shaft like barbed wire. When noticing vibration or a change of sound of the machine, immediately disengage the PTO shaft, check the cause and rectify it.

**TIP**

Severe wearing of flails, flail shackles, bolts and mounting links on the rotor shaft can be caused by a number of revolutions too low of the rotor shaft and/or by frequent contact of flails with ground or water!!

When one or more flails and/or flail shackles are (severely) damaged, replace them with flails/ flail shackles which have the same amount of wear as the remaining flails, flail shackles on the rotor shaft.

If, after above action has been taken, the vibration still exists it could indicate a bent rotor shaft. If so immediately contact your dealer. Never try to repair the rotor shaft yourself.

## 9.2 Guarding.

Regularly check the condition of the rubber guarding front and rear. Immediately replace damaged/worn rubber flaps !

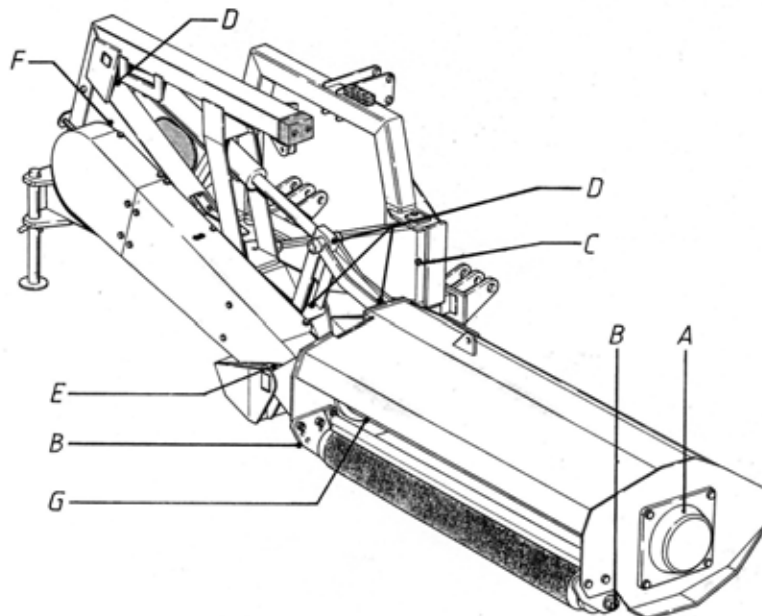
## 9.3 Lubricant points.

The following points must be greased daily with a multipurpose lithium grease (or under severe conditions, like slopes of ditches, more often in order to avoid dirt penetrating) (see Picture 9.3.1)

Lubricant points;

- A. End bearing of the rotor shaft (1).
- B. Ball bearings of the roller (2).
- C. Hinge bushes of the arms between 3-points linkage and main frame (4).
- D. Hinge points of the cylinder (6).
- E. Hinge points of the hood in the main frame (2).
- H. Hinge points of the safety mechanism (2).

Picture 9.3.1  
Greasing schedule



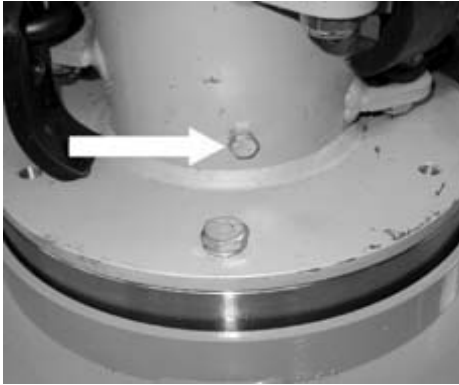
The following points must be greased weekly:

F. Bearing house (1).

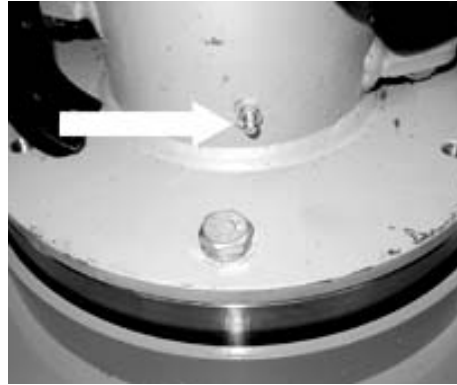
G. Coupling between gearbox and rotor shaft.

The bolt M8x12 (picture A) has to be removed from the rotor shaft and replaced with a grease nipple M8 (Picture B). After greasing, the bolt must be replaced (1).

Picture A



Picture B



The PTO drive shaft must be greased in accordance with the greasing instructions of its manufacturer.

#### 9.4. Hydraulic.

The renewing of the hydraulic oil in hoses, cylinders and accumulator will be done automatically when the hydraulic oil of the tractor is renewed. Therefore it is important to follow up the instructions of your tractor manufacturer.

Any oil leakage from the lifting cylinder will be collected in the frame tube of the main frame. The quantity of oil leakage depends on the condition of the seals in the hydraulic ram.

Check the quantity of leaked oil after every 20 hours work.

To drain the oil from the frame proceed as follows

- make provisions to collect the oil,
- remove drain plug ( see picture 9.4.1)and drain the oil
- replace the plug,
- check the oil level in the hydraulic tank of the tractor and fill up, if necessary.

Picture 9.4.1  
Draining leaked oil



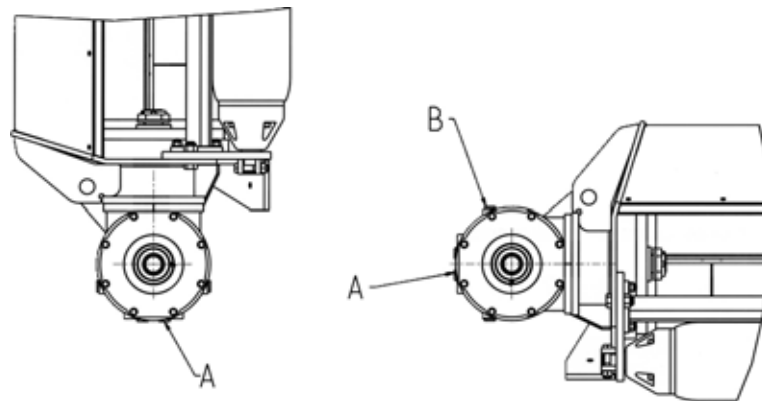
## 9.5 Gearbox.

The quantity of required oil for the gearbox is 1.4 lt Gear oil SAE 90 EP.  
The oil in the gearbox must be changed after the first 20 hours work, and after that once every season. It is recommended to check the gearbox regularly for possible leaks.

Changing oil must be done as follows; (see Picture 9.5.1.),

- put the cutting head in the vertical position and lock it,
- place the receptacle under the gearbox,
- clean around the drain plug and filler plug of the gearbox,
- remove plug A
- after draining place the cutting head horizontally on the ground,
- remove plug B,
- fill the gearbox, through opening B, until level A (approx. 1.4 lt.) is reached
- refit both plugs.

Picture 9.5.1  
Change gearbox oil.



## 9.6. V-belt transmission.

### 9.6.1 Assembly and disassemble of the v-belt guard and power belt.

- place the cutting head in a vertical position and lock it,
- remove the bolts from the outer cover of the V-belt guard and remove the left V-belt guard,
- lift the mower on the linkage approx 30 cm from the ground,
- place wooden block(s) under the wear plate of the main frame and let the machine rest on them,
- remove the right V-belt guard,
- lift the machine, remove the wooden block(s) and replace the machine on the ground,
- loosen the tensioning bolt and the three bolts which tighten the bearing house and remove the power belt [16],
- reassembly must be done in reverse order

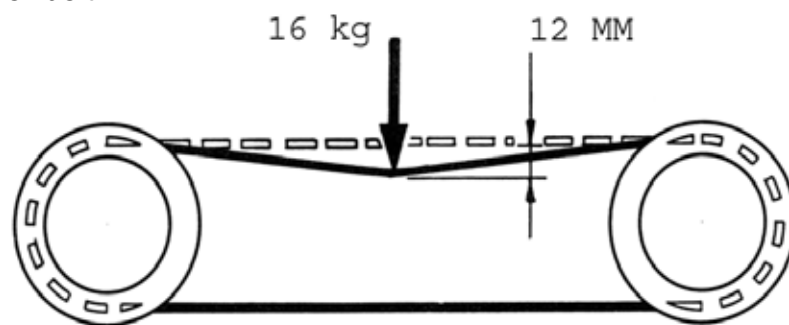
## 9.6.2 Tensioning the power belt.

Checking the power belt tension;

- remove the inspection plate on the V- belt guard
- exercise a pressure of approx. 16 kg. in the middle of the power belt (for example with a spring balance) For this it is necessary to disassemble the V- belt guard
- the tension is correct if the belt does not bend more than 12 mm, (see picture 9.6.2.1.),
- if necessary correct the tension,
- replace the inspection plate.

Picture 9.6.2.1

Tension power belt



Tensioning of the Power belt;

- slacken the three nuts of the bearing house several turns
- tighten the tensioning bolt until the above tension has been achieved,
- relock the three nuts again.

First tightening should be performed after approx 5 minutes of operation. Thereafter the tension and condition of the power belt must be checked regularly !

## 9.7 Rotor shaft.

### 9.7.a. Disassembling the rotor shaft.

Disassembling the rotor shaft must only be carried out with the help of lifting tackle with a minimum lifting capacity of 250 kg !

- place the cutting head in a vertical position and lock it,
- disassemble the rotor shaft bearing cover by removing the four M16 lock nuts. (don't loose the O-ring on the inside)
- lift the tab of the lock washer, which secures the lock nut onto the taper bush
- loosen the lock nut,
- tap the taper bush back with help of a piece of pipe (do not hit the bearing!),
- now the loosened bearing housing and the ball bearing can be removed,
- remove the bearing plate (complete with spacing bush ) of the cutting head by removing the four M10 nuts,

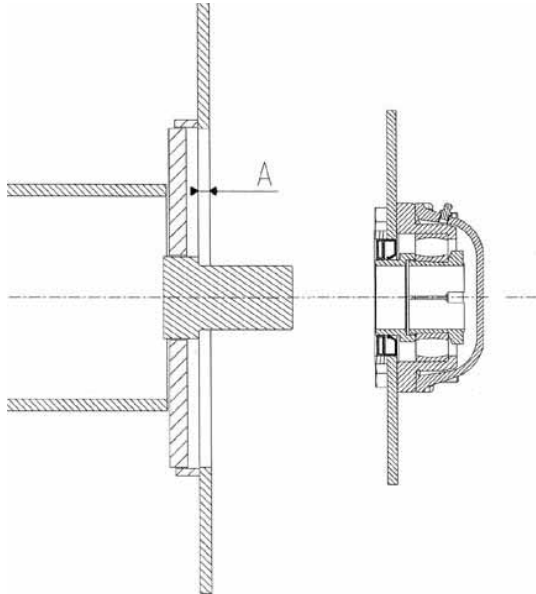
- also remove the shims from the rotor shaft,
- remove the three M12 bolts, which fastens the rotor shaft on the coupling and put these bolts into the three other screw holes of the rotor shaft flange.  
In this way the rotor shaft can be parted from the coupling body ,
- attach the lifting tackle onto the flail shackle approx. 50 cm from the upper flange of the rotor shaft,
- lift the rotor shaft approx. 10 cm and pull the rotor shaft from the bottom towards your direction and lower it on the ground.

### 9.7.2 Assembly of the rotor shaft.

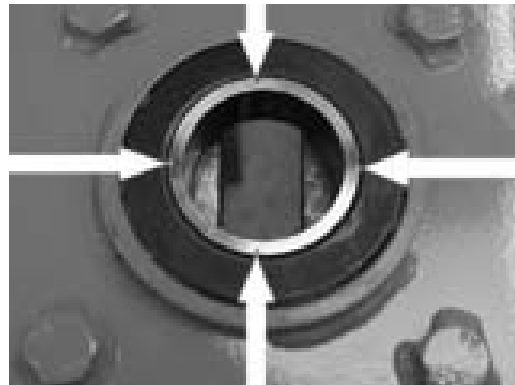
Assembly of the rotor shaft must only be carried out with the help of lifting tackle with a minimum lifting capacity of 250 kg !

- place the cutting head in a vertical position and lock it,
- attach the lifting tackle onto the flail shackle at a distance of approx. 50 cm from the flange at the top side of the shaft,
- lift the rotor shaft and push the top of the shaft through the hole in the side plate of the cutting head,
- push the rotor shaft so the mounting flange is above the coupling,
- lower the rotor shaft on the coupling with the adjusting edge into the bore and secure it with the three bolts,
- measure distance A between the rotor shaft shoulder, on which the shims sit and the outside of the side plate of the cutting house (see picture 9.7.2.1),
- add to this size 24 mm (thickness of bearing house and bearing plate),
- deduct from the obtained size 34 mm (height of spacing bush)
- the remaining size is the thickness in shims to be placed on the rotor shaft shoulder,
- now mount the bearing plate together with labyrinth seal, sealing ring and spacing bush against the shims,
- block the labyrinth seal by tapping four little holes with a centre point in the edge of the spacing bush (see picture 9.7.2.2)
- now place the taper bush with the ball bearing and bearing house without the cover and fix it temporary with two bolts, (diagonal)
- screw the lock nut without the lock ring on the taper bush,
- tighten the nut by hand until metal-metal contact is obtained between the conical surfaces and the bush and shaft,
- than tighten the nut 90° more ,
- remove now the nut and place the lock ring,
- replace the nut without tightening the taper bush any further,
- bend one of the tabs from the lock ring to block the nut,
- after assembling with the calculated shim thickness and grease in the bearing, the rotor shaft should rotate smoothly without any radial play,
- fit the bearing cover with his o-ring,
- grease the end bearing (via the grease nipple in the bearing cover) and the coupling body (by temporarily replacing the M8 bolt in the rotor shaft with a grease nipple).

Picture 9.7.2.1  
Adjustment of the  
rotor shaft end bearing



Picture 9.7.2.2  
Blocking  
labyrinth seal



## 9.8 Coupling.

It is possible to disassemble the complete coupling (see 9.8.a.), as well as partial (see 9.8.b). Complete disassembly is necessary when the gearbox has to be removed. Partial disassembly is necessary when one of the parts of the coupling has to be replaced.

Assembly and disassemble of the coupling must only be done when the cutting head is locked in a vertical position.

### 9.8.a Complete disassemble.

- disassemble the rotor shaft (see 9.7.a.),
- remove the split pin from the output shaft of the gearbox,.
- slacken the castle nut,
- removing the coupling is done by screwing 2 x 12 MM bolts into the 2 screw holes of the coupling and apply equal pressure allowing the coupling to be pushed from the cutting head),
- assembly of the coupling is done in the reverse order, (tightening torque of the castle nut is 450 Nm).

### 9.8.b Partial disassemble.



After partial disassemble of the coupling the double row self-aligning ball bearing must be replaced !

- remove the coupling body by pressing it from the coupling hub,
- before assembly the bearing must be pressed into the coupling body (to avoid damage to the bearing press only on the outer ring of the bearing),
- put some grease on the bearing,
- place the rubber disc onto the coupling body and mount the six rubber sleeves,
- press the coupling body with the bearing onto the coupling hub by pressing only on the inner ring of the bearing.

#### 9.9 Winter storage.

When the mower is stored for a longer period it should be cleaned thoroughly ! Grease all greasing points (see paragraph 9.3). Renew the oil in the gearbox (see paragraph 9.5) and run the mower for several minutes.

## 10 Recycling of the mower.

Before recycling the machine the following measures should be taken:

- place a receptacle under the gearbox and drain the oil,
- place the cutting head in a horizontal position
- take a 6 mm socket wrench and unscrew the bolt at the bottom of the accumulator a maximum of one turn so that the pressurized nitrogen can escape,
- remove all hydraulic components and collect the oil, push the cylinders in and out, several times and collect the remaining oil,
- also remove and collect any leaked oil from the frame tube (see paragraph 9.4)
- remove the grease from;
  - bearing houses
  - the coupling with its bearing
  - the bearings from the roller
- remove all plastic and rubber parts
- recycle oil and grease according current rules,
- recycle plastic and rubber parts according current rules,
- recycle the rest as scrap



## Supplement

### A Ordering of spare parts.

Your purchase order for spare parts should indicate the following information (see the identification plate on the flail mower);

- Model
- Type
- Serial number
- Parts number description and quantity.

For spare parts for which the parts numbers are not known, we suggest you send the original part to avoid the wrong part being delivered.

Sometimes the illustration in this manual may deviate from the original, this is due to the fact that improvements have been made prior to the new edition of this manual being printed.

It is not advisable to completely rely on the illustrations.

Only use original VOTEX spare parts. Only then you can be assured of an excellent quality and the correct fit.

### B Liability and warranty.

Votex B.V. guarantees correct operation of the flail mower for a period of 12 (twelve) months, provided all instructions in accordance with this manual have been followed.

- flail mower must only be operated by persons who have thoroughly read this manual and who are well aware of the danger which may occur if these instructions are not followed. The above also applies to the persons responsible for adjustment and maintenance of the flail mower.
- flail mower must only be used for the purposes for which it is designed.
- all safety instructions must be carefully taken into account.
- only original Votex spare parts and prescribed grease and oil type must be used.
- local regulations regarding accident prevention, transport security and traffic regulations must be strictly adhered to.

#### - **IMPORTANT;**

This instruction manual applies to the original Votex technical specifications. Votex B.V. cannot be held responsible for any damage whatsoever, caused by unauthorized technical modification of the flail mower or use of non Votex spare parts.

This also applies to use of non specified grease, incorrect or insufficient maintenance or sub standard repairs, without prior consultation with Votex B.V.

#### - **We draw your attention to the fact that;**

When instructions in this manual have not been followed, Votex cannot accept any warranty claim during the warranty period.

- Votex B.V. plies to the general delivery and payment conditions of the Metaalunie (metal union). These are filed at the Griffie van de Rechtbank, Rotterdam (office of the clerk for the court of justice in Rotterdam). In this are resumed the Algemene Handelsvoorwaarden Landbouwwerktuigen en Landbouwwerktuigen - A.H.L. (General trade conditions for agricultural implements and agricultural equipment).

## C Remarks.

ALL RIGHTS RESERVED.

Without preliminary, explicit permission of Votex B.V. its is NOT permissible to duplicate and/or make public by print, photocopy, microfilm or in whatsoever other form the contents of this manual.

Same applies to the illustrations and diagrams therein.

Votex B.V. reserves the right to modify its spare parts, if necessary, at any time without previous notice to its customers.

Also the contents of this manual may be altered accordingly without prior notice.

For more specific information about adjustment, maintenance and repair, not described for in this manual, we suggest that you to contact the technical department of your dealer.

## D Conversion table.

#### Length

$$1 \text{ m} = 100 \text{ cm} = 1000 \text{ mm}$$

#### Volume

$$1 \text{ m}^3 = 1000 \text{ dm}^3 = 1000 \text{ l}$$

#### Force and weight

$$1 \text{ N} = 0,102 \text{ kg (f)} = 0,102 \text{ kp}$$

#### Pressure and tension

$$1 \text{ bar} = 0,987 \text{ atm} = 100 \text{ kPa} = 100 \text{ kN/m}^2$$

#### Torque moment

$$1 \text{ Nm} = 0,102 \text{ kg (f) m}$$

#### Power

$$1 \text{ kW} = 1000 \text{ W} = 1,36 \text{ pk} = 1,36 \text{ cv} = 1,34 \text{ hp}$$

#### Speed of rotation

$$1 \text{ omw./min} = 1 \text{ rpm} = 1 \text{ U/min} = 1 \text{ tr/mn} = 1 \text{ min}$$

#### Speed

$$1 \text{ km/h} = 0,278 \text{ m/s}$$

### E Torque values.

All bolted joints have to be tightened according the values given in underneath table, unless indicated otherwise in this manual or parts list.

Thread	Torque values (Nm)
M 8	24
M 10	49
M 12	84
M 14	133
M 16	205
M 18	290
M 20	410

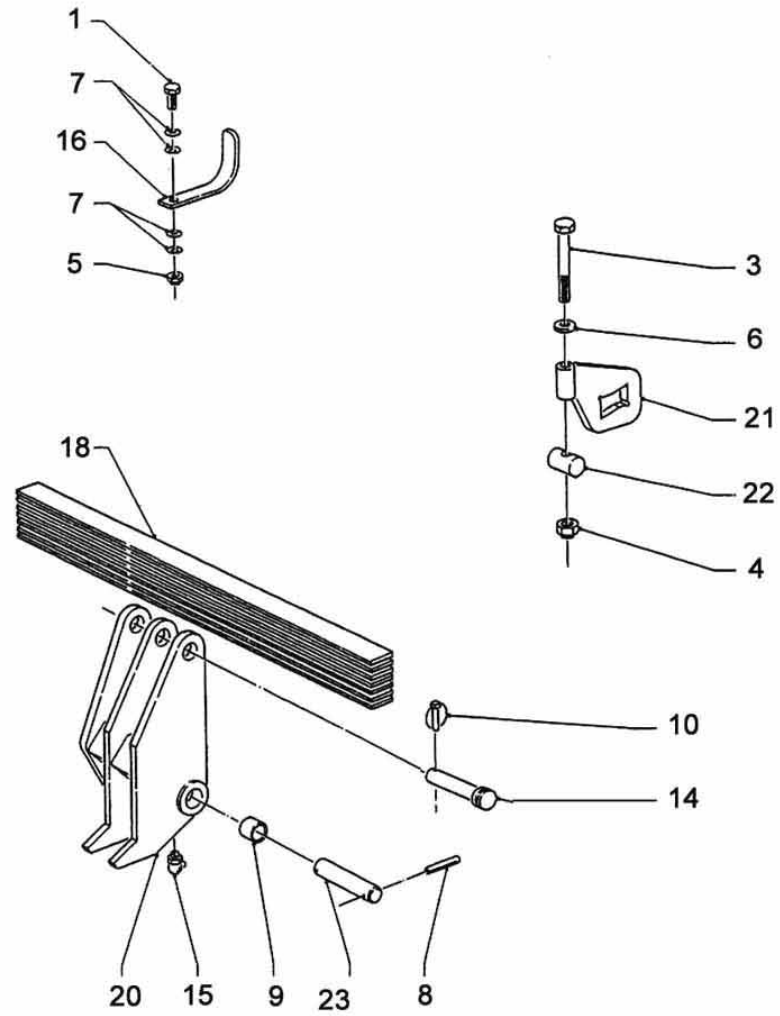
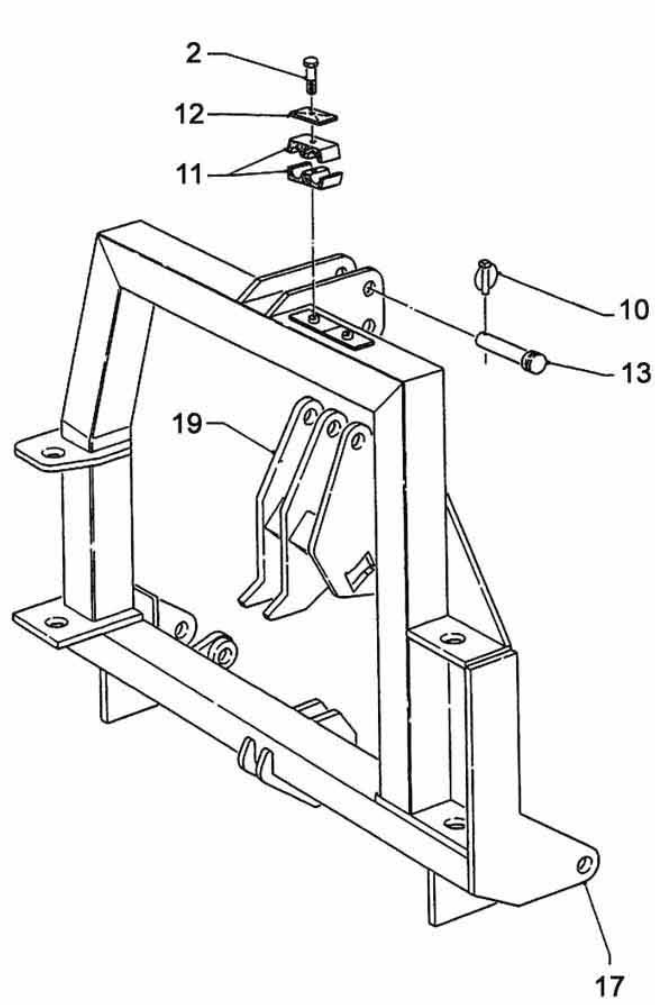
Votex Jumbo

Driepuntsframe

Three points linkage

Attelage 3-points

Dreipunktaufhängung



## Votex Jumbo

No	Onderdeel nummer	Type	Driepuntsframe				Omschrijving	Three points linkage	Three points linkage	Description	Attelage trois points	Attelage trois points	Dreipunkt aafhanging	Dreipunkt aafhanging	Technische info
			120	150	190	230									
1	10.02.120	1	1	1	1	Zeskanttapbout	Bolt	Bolt	Vis	Vis	Sechskantschraube	Sechskantschraube	M10x25-8.8		
2	10.04.095	2	2	2	2	Zeskantbout	Bolt	Bolt	Vis	Vis	Sechskantschraube	Sechskantschraube	M8x45-8.8		
3	10.04.273	1	1	1	1	Zeskantbout	Bolt	Bolt	Vis	Vis	Sechskantschraube	Sechskantschraube	M20x160-8.8		
4	11.02.020	1	1	1	1	Zeskantmoer	Nut	Nut	Écrou	Écrou	Mutter	Mutter	M20		
5	11.05.010	1	1	1	1	Borgmoer	Lock nut	Lock nut	Écrou autofreiné	Écrou autofreiné	Sicherungsmutter	Sicherungsmutter	M10		
6	12.11.020	1	1	1	1	Sluitring	Washer	Washer	Rondelle	Rondelle	Unterlegscheibe	Unterlegscheibe	M20		
7	12.40.010	4	4	4	4	Schotelveer	Disc spring	Disc spring	Rondelle ressort	Rondelle ressort	Tellerfeder	Tellerfeder	20x10.2x0.5		
8	14.14.060	4	4	4	4	Spanstift	Clamping bush	Clamping bush	Goupille elastique	Goupille elastique	Spannstifte	Spannstifte	10x60		
9	18.15.055	4	4	4	4	Glijlager	Bush	Bush	Bague d'usure	Bague d'usure	Gleitlager	Gleitlager	30.34.30A		
10	20.01.008	3	3	3	3	Borgclip	Linch pin	Linch pin	Goupille clips	Goupille clips	Klappstecker	Klappstecker	11mm		
11	20.01.080	4	4	4	4	Leidingbeugel dubbel	Clamp double	Clamp double	Bride double	Bride double	Rohrschelle doppelt	Rohrschelle doppelt			
12	20.01.082	2	2	2	2	Dekplaat	Clamp plate	Clamp plate	Plaque	Plaque	Platte	Platte			
13	20.01.132	1	1	1	1	Topstangpen	Top link pin	Top link pin	Broche troisieme point	Broche troisieme point	Bolzen	Bolzen			
14	20.01.133	2	2	2	2	Werktuigpen	Link pin	Link pin	Broche	Broche	Lenker bolzen	Lenker bolzen			
15	20.03.003	2	2	2	2	Smeernippel	Grease nipple	Grease nipple	Graisseur	Graisseur	Schmiernippel	Schmiernippel	M8x1.25-180°		
16	45.07.573	1	1	1	1	Ophangbeugel	Suspension bracket	Suspension bracket	Étrier de suspension	Étrier de suspension	Aufhängebügel	Aufhängebügel			
17	45.07.591	1	1	1	1	Driepuntsframe	Three points linkage	Three points linkage	Attelage trois points	Attelage trois points	Dreipunkt Aafhanging	Dreipunkt Aafhanging			
17a	45.07.607	1	1	1	1	Driepuntsframe	Three points linkage	Three points linkage	Attelage trois points	Attelage trois points	Dreipunkt Aafhanging	Dreipunkt Aafhanging	Front /left execution		
18	45.12.543	7	7	7	7	Bladveer	Leafspring	Leafspring	Lame de ressort	Lame de ressort	Blattfeder	Blattfeder	63x5x835mm		
19	45.12.546	1	1	1	1	Kantelbek	Tilting jaw	Tilting jaw	Machoire basculante	Machoire basculante	Anhängmaul kipbar	Anhängmaul kipbar			
20	45.12.550	1	1	1	1	Kantelbek	Tilting jaw	Tilting jaw	Machoire basculante	Machoire basculante	Anhängmaul kipbar	Anhängmaul kipbar			
21	45.12.553	1	1	1	1	Spanplaat	Clamping plate	Clamping plate	Plaque de serrage	Plaque de serrage	Spannplatte	Spannplatte			
22	45.12.556	2	2	2	2	Pen	Pin	Pin	Cheville	Cheville	Bolzen	Bolzen			
23	45.12.560	2	2	2	2	Scharnierpen	Hinge pin	Hinge pin	Axe de charnière	Axe de charnière	Gelenkbolzen	Gelenkbolzen			

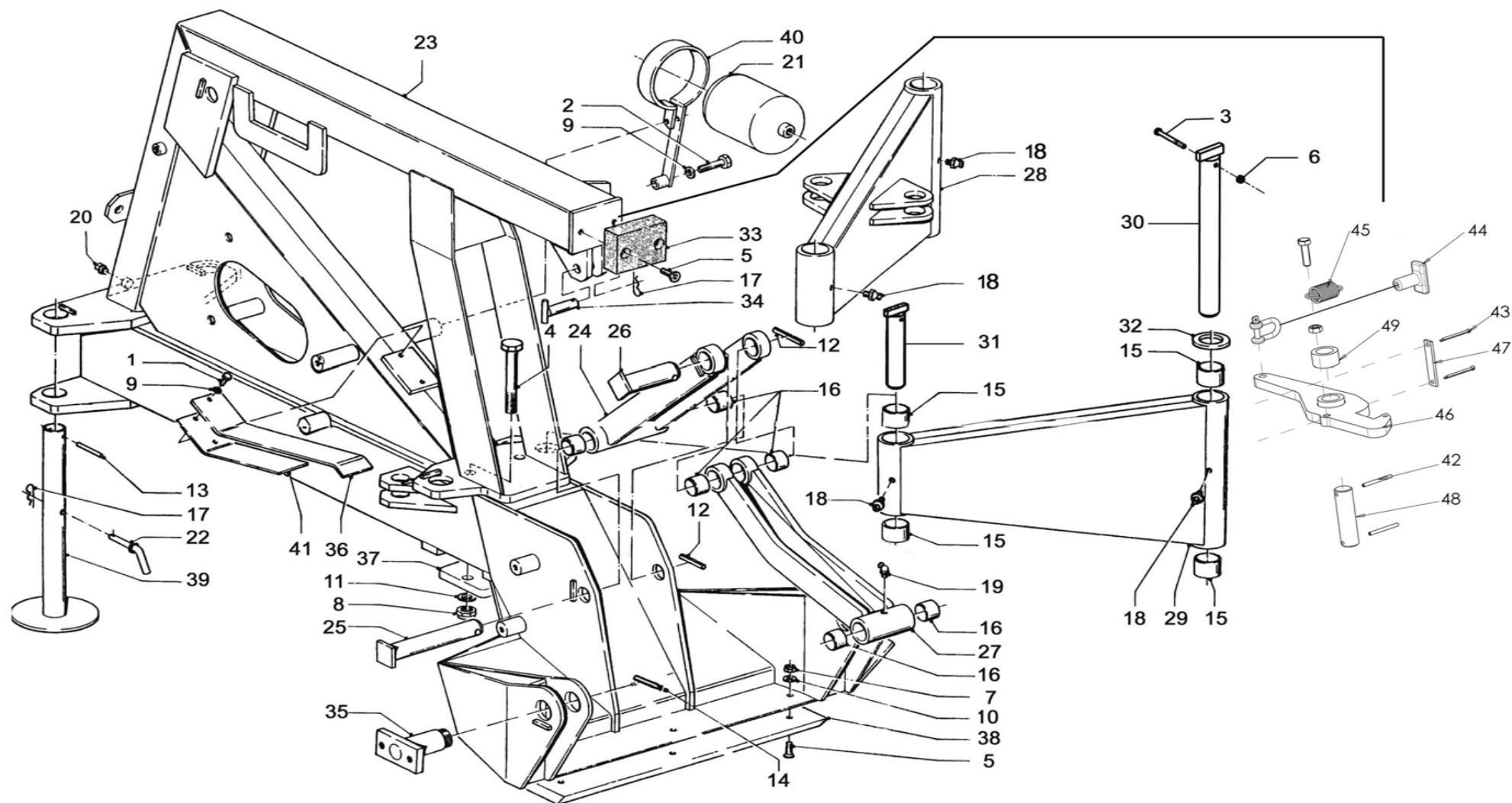
Votex Jumbo

Hoofdframe

Main frame

Chassis principale

Hauptrahmen



## Votex Jumbo

no.	<u>onderdeel nummer</u>	<u>Aantal</u>			<u>Hoofdframe</u>	<u>Main frame</u>	<u>Chassis principale</u>	<u>Hauptrahmen</u>	<u>Technische info</u>
		120	190	230	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	
1	10.02.118	6	6	6	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x20-8.8
2	10.04.125	2	2	2	Zeskantbout	Bolt	Vis	Sechskantschraube	M10x50-8.8
3	10.04.101	4	4	4	Zeskantbout	Bolt	Vis	Sechskantschraube	M8x75-8.8
4	10.04.225	2	2	2	Zeskantbout	Bolt	Vis	Sechskantschraube	M16x200-8.8
5	10.29.121	5	5	5	Verzonken schroef	Socket screw	Vis à tête fraisée	Senkschraube	M10x30
6	11.05.008	3	3	3	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M8
7	11.05.010	3	3	3	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M10
8	11.05.016	2	2	2	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M16
9	12.01.010	8	8	8	Veerring	Spring washer	Rondelle grower	Federring	M10
10	12.11.010	4	4	4	Sluitring	Washer	Rondelle	Unterlegscheibe	M10
11	12.11.016	4	4	4	Sluitring	Washer	Rondelle	Unterlegscheibe	M16
12	14.10.040	4	4	4	Spanstift	Clamping bush	Goupille elastique	Spannstifte	6x40
13	14.10.060	1	1	1	Spanstift	Clamping bush	Goupille elastique	Spannstifte	6x60
14	14.12.060	2	2	2	Spanstift	Clamping bush	Goupille elastique	Spannstifte	8x60
15	18.15.050	8	8	8	Glijlager	Bush	Bague d'usure	Gleitlager	40.44.30A
16	18.15.054	6	6	6	Glijlager	Bush	Bague d'usure	Gleitlager	30.34.20A
17	20.01.029	2	2	2	Borgveer dubbel	Gripclip double	Goupille beta double	Federstecker doppelt	4mm
18	20.03.003	4	4	4	Smeernippel	Grease nipple	Graisser	Schmiernippel	M8x1.25-180°
19	20.03.005	2	2	2	Smeernippel	Grease nipple	Graisser	Schmiernippel	M8x1.25-90°
20	20.09.002	1	1	1	Aftapplug	Draining plug	Bouchon de vidange	Ablaßhahn	1/4"
21	26.03.025	1			Accumulator	Accumulator	Accumulateur	Accumulator	0.70L 40bar
	26.03.025				Accumulator	Accumulator	Accumulateur	Accumulator	0.70L 40bar
	26.03.005		1		Accumulator	Accumulator	Accumulateur	Accumulator	0.70L 50bar
	26.03.008			1	Accumulator	Accumulator	Accumulateur	Accumulator	0.70L 65bar
22	43.05.120	1	1	1	Vergrendelpen	Locking pin	Axe de verouillage	Bolzen	
23	45.06.081	1	1	1	Hoofdframe	Main frame	Châssis principal	Hauptrahmen	
24	45.06.090	1	1	1	Kantelarm	Tilting arm	Bras basculante	Lenkerarm	
25	45.06.100	1	1	1	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	



## Votex Jumbo

			<b>Hoofdframe</b>	<b>Main frame</b>	<b>Chassis principale</b>	<b>Hauptramen</b>	
<u>no.</u>	<u>onderdeel nummer</u>	<u>Aantal</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
26	45.06.110	2	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
27	45.06.121	1	Kantelarm	Tilting arm	Bras basculante	Lenkerarm	
28	45.07.391	1	Scharnierarm	Hinge arm	Bras d'charnière	Gelenkarm	
29	45.07.401	1	Scharnierarm	Hinge arm	Bras d'charnière	Gelenkarm	
30	45.07.411	2	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
31	45.07.422	2	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
32	45.07.450	8	Bronzen ring	Bronze washer	Rondelle en bronze	Bronze ring	
33	45.11.060	1	Rubber buffer	Rubber buffer	Buttoir en caoutchouc	Gummipuffer	100x60x20mm
34	45.11.080	1	Blokkeerpen	Lock pin	Axe de verrouillage	Bolzen	
35	45.11.290	2	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
36	45.11.300	1	Bladveer	Leafspring	Lame de ressort	Blattfeder	
37	45.11.311	1	Scharnierstrip	Hinge plate	Plaque de charnière	Gelenkplatte	
38	45.11.320	1	Slijtplaat	Wearing plate	Tôle d'usure	Sohle	
39	45.11.330	1	Steunpoot	Parking leg	Béquille	Stütze	
40	45.11.341	1	Accumulatorhouder	Accumulatorholder	Porte accumulateur	Akkumulatorbehälter	
40a	45.11.503	1	Accumulatorhouder dubbel	Accumulatorholder double	Porte accumulateur double	Akkumulatorbehälter doppelt	Front machine
41	45.11.350	1	Bladveer	Leafspring	Lame de ressort	Blattfeder	
42	14.07.040	2	Spanstift	Clamping bush	Goupille elastique	Spannstifte	4x40
43	14.25.032	2	Splitpen	Split pin	Goupille fendue	Splinte	3.2x36
44	20.01.208	1	Trekkoord	Pull wire	Corde	Latzschnur	
45	20.01.314	1	Trekveer	Draw spring	Ressort de traction	Abzugfeder	
46	45.11.474	1	Haak	Hook	Crochet	Haken	
47	45.11.493	1	Bevestigingsstrip	Fixation strip	Plaque de fixation	Befestigungsstreife	
48	45.11.540	1	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
49	45.11.543	1	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	

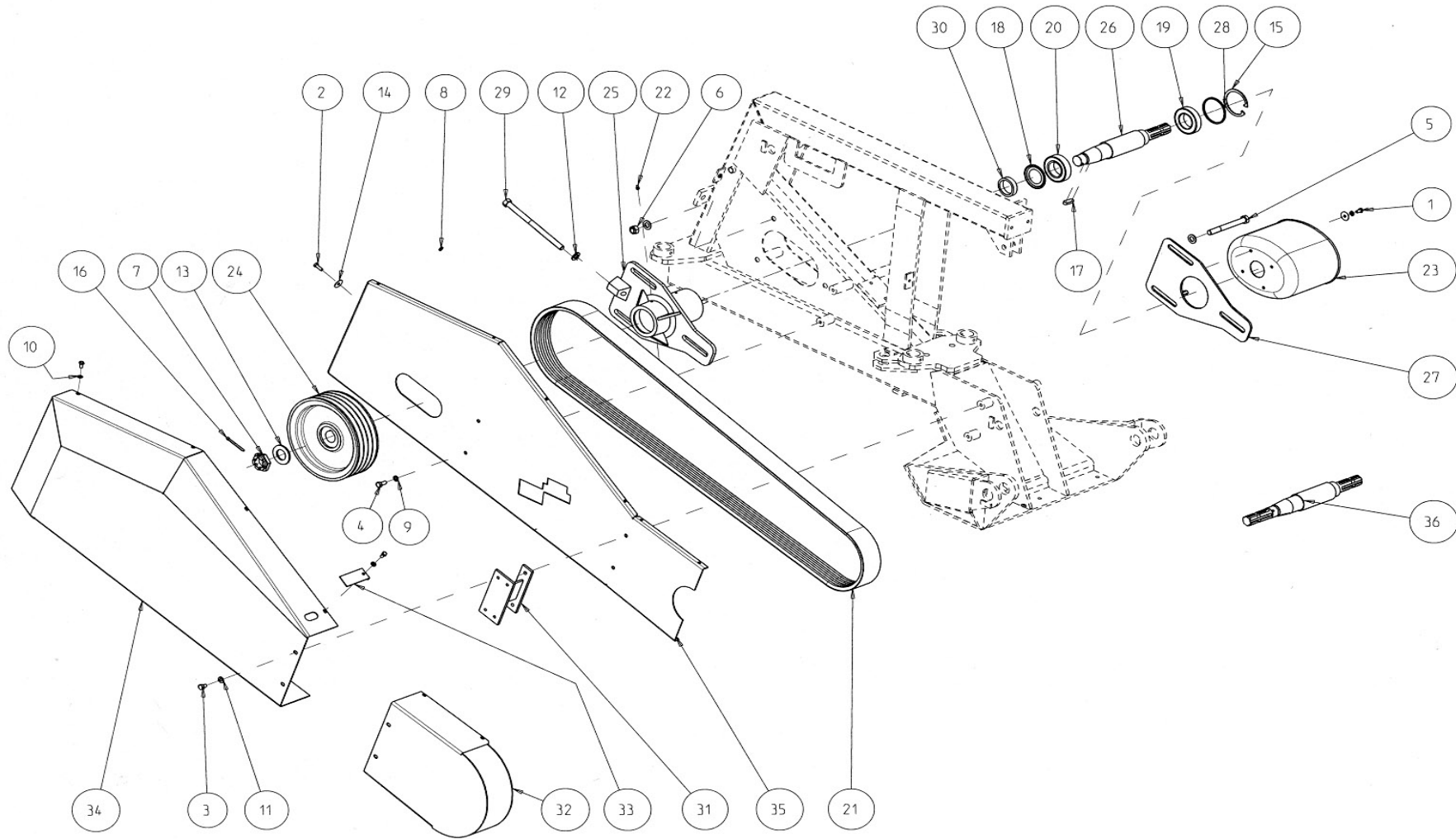
# Votex Jumbo

## Aandrijving

## Drive

## Transmission

## Antrieb



45.20.098

## Votex Jumbo

			<b>Aandrijving</b>	<b>Drive</b>	<b>Transmission</b>	<b>Antrieb</b>	
<u>no.</u>	<u>onderdeel nummer</u>	<u>Aantal 120</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
1	10.02.087	13	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M8x16-8.8
2	10.02.091	1	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M8x25-8.8
3	10.02.116	4	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x16-8.8
4	10.02.120	2	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x25-8.8
5	10.04.221	3	Zeskantbout	Bolt	Vis	Sechskantschraube	M16x150-8.8
6	11.05.016	3	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M16
7	11.09.536	1	Kroonmoer	Castle nut	Écrou à crénaux	Kronenmutter	M36x1.5
8	12.01.008	1	Veerring	Spring washer	Rondelle grower	Federring	M8
9	12.01.010	4	Veerring	Spring washer	Rondelle grower	Federring	M10
10	12.11.008	14	Sluitring	Washer	Rondelle	Unterlegscheibe	M8
11	12.11.010	4	Sluitring	Washer	Rondelle	Unterlegscheibe	M10
12	12.11.016	7	Sluitring	Washer	Rondelle	Unterlegscheibe	M16
13	12.11.036	1	Sluitring	Washer	Rondelle	Unterlegscheibe	M36
14	12.15.008	5	Carrosseriering	Mudwingwasher	Rondelle de carrosserie	Kotflügelscheibe	M8x30x1.5
15	12.31.090	1	Zekeringsring	Circlip	Circlip	Sicherungsringe	90x3
16	14.30.063	1	Splitpen	Split pin	Goupille fendue	Splinte	6.3x63-94
17	15.08.040	1	Inlegspie	Sunk key	Clavette	Paßfeder	12x8x40-
18	17.05.008	1	Afdichtring	Seal ring	Bague d'étanchéité	Dichtungsring	6210 AV
19	18.04.011	1	Kogellager	Ball bearing	Roulement à billes	Kugellager	6210-RS1
20	18.09.002	1	Tonlager	Spherical roller bearing	Roulement à tonneau	Sphere rol lager	22210CC/W33
21	19.08.001	1	Powerband	Powerbelt	Courroie "power belt"	Kraftband	4HB3100 EL
22	20.03.003	1	Smeernippel	Grease nipple	Graisneur	Schmiernippel	M8x1.25-180°
23	27.10.149	1	Afscherming	PTO shaft guard	Protection transmission	GelenkwelleSchutz	P82.25
24	36.01.700	1	V-snaarschijf	V-belt pulley	Poulie à gorges	Keilriemenscheibe	280SPB4
25	45.09.470	1	Lagerhuis	Bearing house	Palier à roulement	Lagergehäuse	

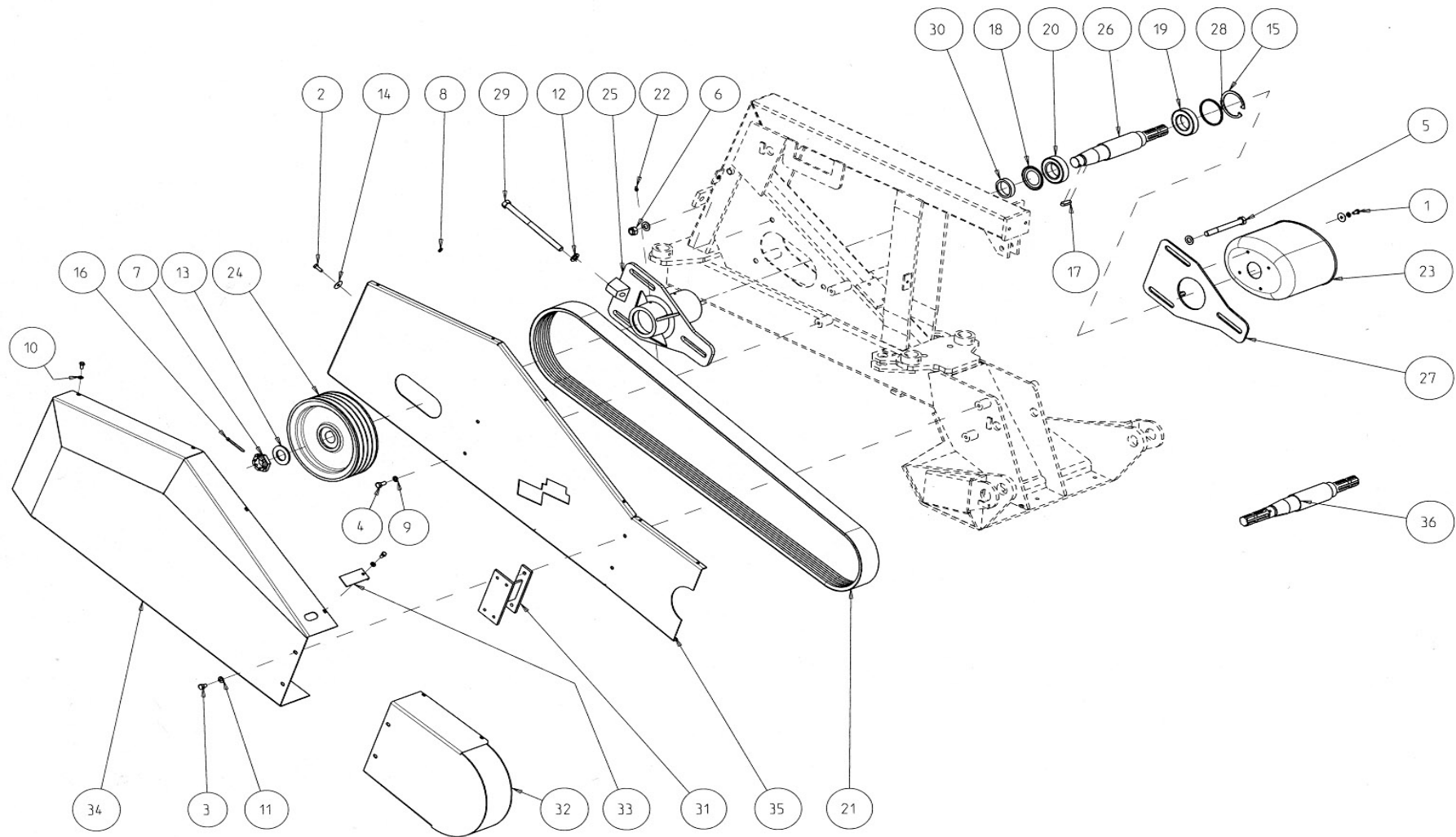
# Votex Jumbo

## Aandrijving

## Drive

## Transmission

## Antrieb



## Votex Jumbo

			<b>Aandrijving</b>	<b>Drive</b>	<b>Transmission</b>	<b>Antrieb</b>	
<u>nr.</u>	<u>onderdeel nummer</u>	<u>aantal</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
26	45.09.481	1	Aandrijfvas	Drive shaft	Arbre d'entraînement	Antriebswelle	
27	45.09.490	1	Klemplaat	Clamping plate	Plaque de serrage	Spannplatte	
28	45.09.500	1	Afstandsring	Distance ring	Rondelle d'entretoise	Distanzring	
29	45.09.510	1	Spanbout	Clamping bolt	Boulon de serrage	Spannvorrichtung	
30	45.09.546	1	Afstandsring	Distance ring	Rondelle d'entretoise	Distanzring	
31	45.10.380	1	Steun	Support	Support de	Stutze	
32	45.10.390	1	V-snaar afschermkap	V-belt guard	Protection de courroie	KeilriemenSchutzblech	
33	45.10.453	1	Afdichtplaat	Protection guard	Protection	Schutzblech	
34	45.10.580	1	V-snaar afschermkap	V-belt guard	Protection de courroie	KeilriemenSchutzblech	
35	45.10.583	1	Afschermplaat	Protection guard	Protection	Schutzblech	
36	45.09.484	1	Aandrijfvas (alleen bij afvoerband)	Drive shaft (only with conveyer belt)	Arbre d'entraînement Seulement avec bande de déchargement latérale	Antriebswelle Nur mit	Afvoerband

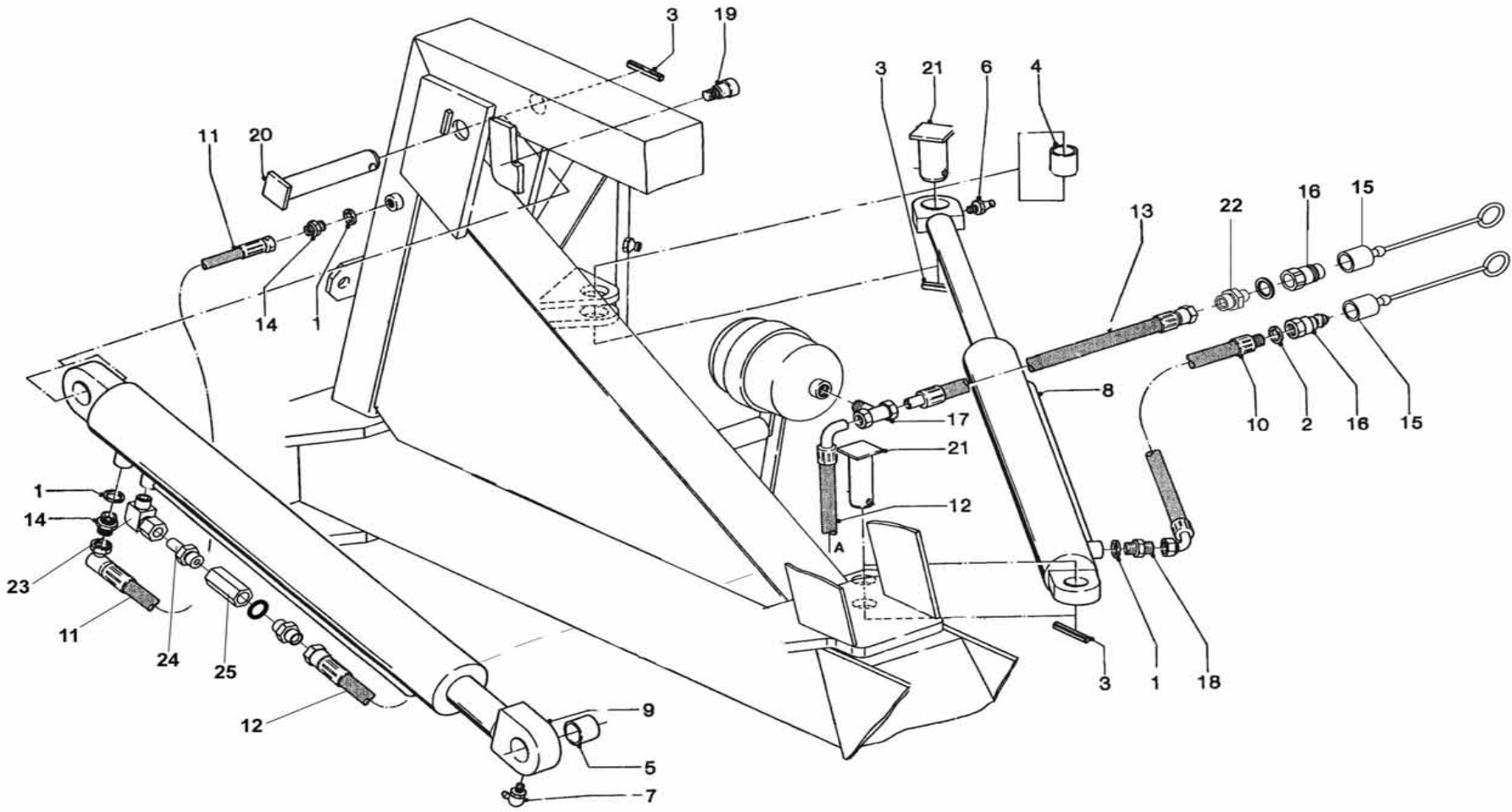
Votex Jumbo

Cilinders

Hydraulic rams

Verins hydrauliques

Hydraulik zylinder



**Votex Jumbo**

			<b>Cilinders</b>	<b>Hydraulic rams</b>	<b>Verins</b>	<b>Hydraulik zylinder</b>	
<u>no.</u>	<u>onderdeel nummer</u>	<u>aantal 120</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
1	77.26.186	5	Usit ring	Seal ring	Rondelle joint	Dichtungsring	3/8"
2	77.26.188	3	Usit ring	Seal ring	Rondelle joint	Dichtungsring	1/2"
3	14.10.040	3	Spanstift	Clamping bush	Goupille elastique	Spannstifte	6x40
4	18.15.054	2	Glijlager	Bush	Bague d'usure	Gleitlager	30.34.20A
5	18.15.055	2	Glijlager	Bush	Bague d'usure	Gleitlager	30.34.30A
6	20.03.003	2	Smeernippel	Grease nipple	Graisseur	Schmiernippel	M8x1.25-180°
7	20.03.005	2	Smeernippel	Grease nipple	Graisseur	Schmiernippel	M8x1.25-90°
8	26.01.180	1	Hydrauliekcilinder	Hydraulic cylinder	Verin hydraulique	Hydraulikzylinder	
8a	17.04.001	1	Afdichtingsset	Seal set	Jeu de joints	Dichtungssatz	50x32
9	26.01.190	1	Hydrauliekcilinder	Hydraulic cylinder	Verin hydraulique	Hydraulikzylinder	
9a	17.04.009	1	Afdichtingsset	Seal set	Jeu de joints	Dichtungssatz	80x45
10	26.05.460	2	Hydrauliekslang	Hydraulic hose	Tuyau hydraulique	Hydraulikschlauch	3/8 L=2250
11	26.05.490	1	Hydrauliekslang	Hydraulic hose	Tuyau hydraulique	Hydraulikschlauch	3/8 L=460
12	26.05.502	1	Hydrauliekslang	Hydraulic hose	Tuyau hydraulique	Hydraulikschlauch	3/8 L=700
13	26.05.241	1	Hydrauliekslang	Hydraulic hose	Tuyau hydraulique	Hydraulikschlauch	3/8 L=2000
14	26.10.001	3	Nippel	Nipple	Mamelon	Doppelnippel	3/8-3/8"BSP"
15	26.10.244	3	Stofkap	Dust cap	Capuchon de protection	Staubkappe	1/2"rood
16	26.10.010	3	Snelkoppeling	Hydraulic coupling	Raccord rapide hydraulique	Kupplungsstecker	1/2BSP
17	26.10.167	1	Koppeling T	Coupling T	Raccord en T	Kupplung T	12/M18X1.5
18	26.10.211	1	Nippel bewerkt	Nipple processed	Mamelon labourée	Doppelnippel bewerkt	1.5mm
19	26.10.556	1	Ontluchtingsnippel	Air release nipple	Reniflard d'air	Entlüfter	R3/8
20	45.06.110	1	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
21	45.07.430	2	Scharnierpen	Hinge pin	Axe de charnière	Gelenkbolzen	
22	26.10.348	1	Nippel bewerkt	Nipple processed	Mamelon labourée	Doppelnippel bewerkt	3/8-1/2BSP 2mm
23	26.10.016	1	Koppeling	Coupling	Raccord	Kupplung	12-R3/8
24	26.10.130	1	Koppeling	Coupling	Raccord	Kupplung	3/8BSP-12mm"
25	80.26.057	1	Slangbreukbeveiliging	Security valve (hose break)	Clapet de sécurité	Schlauchbruchsicherheitsventil	40 L

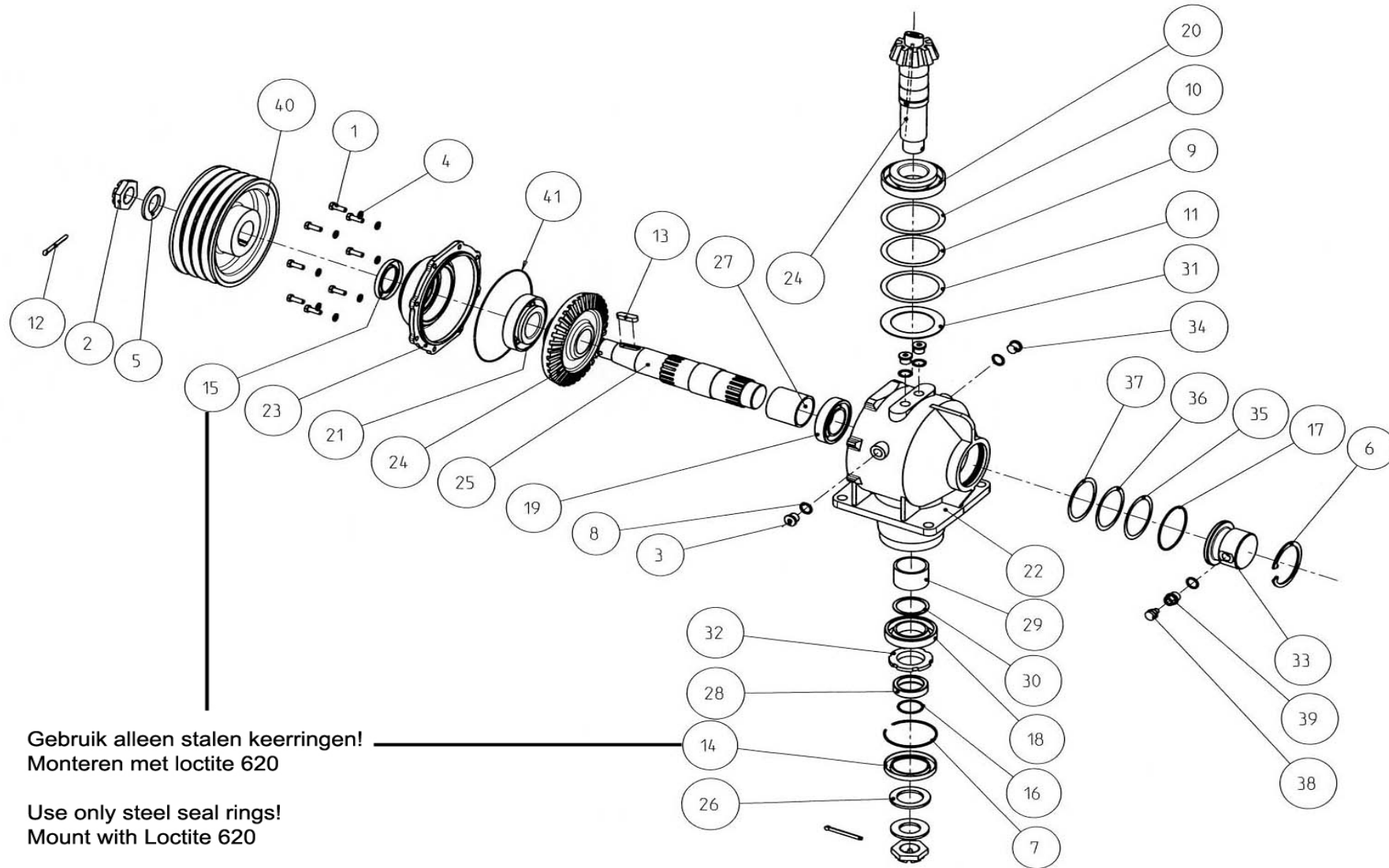
Votex

Tandwielkast

Gearbox

Boitier à renvoie d angle

Getriebe



Gebruik alleen stalen keerringen!  
Monteren met loctite 620

Use only steel seal rings!  
Mount with Loctite 620

## Votex Jumbo

no.	onderdeel nummer	type				Tandwielkast	Gearbox	Boitier à renvoie d'angle	Getriebe	technische info
		120	150	190	230	Omschrijving	Discription	Designation	Beschreibung	
1t/m40	45.09.560	1	1	1	1	Tandwielkast+poelie	Gearbox + pulley	Boite d'engrenages+ poulie	Zahnradkaste+scheibe	1:2.,5
1t/m39	28.01.193	1	1	1	1	Tandwielkast	Gearbox	Boitier à renvoie d'angle	Getriebe	1:2,6
1	10.02.091	8	8	8	8	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M8x25-8.8
2	11.09.536	2	2	2	2	Kroonmoer	Castle nut	Écrou à crénaux	Kronenmutter	M36x1.5
3	11.11.318	3	3	3	3	Kraagplug	Plug	Bouchon fileté	Verslúschraube	M18x1.5
4	12.01.008	8	8	8	8	Veerring	Spring washer	Rondelle grower	Federring	M8
5	12.11.036	2	2	2	2	Sluitring	Washer	Rondelle	Unterlegscheibe	M36
6	12.31.090	1	1	1	1	Zekeringsring	Circlip	Circlip	Sicherungsringe	90x3
7	12.32.590	1	1	1	1	Zekeringsring	Circlip	Circlip	Sicherungsringe	SB90
8	13.02.004	4	4	4	4	Koperring	Copper washer	Rondelle en cuivre	Kupferring	18x24x1.5
9	13.03.021	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	90x110x0.1
10	13.03.022	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	90x110x0.3
11	13.03.023	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	90x110x0.5
12	14.30.063	2	2	2	2	Splitpen	Split pin	Goupille fendue	Splinte	6.3x63-94
13	15.08.040	1	1	1	1	Inlegspie	Sunk key	Clavette	Paßfeder	12x8x40-
14	17.01.044s	1	1	1	1	Keerring	Seal ring	Joint d'étanchéité	Simmerring	60x90x10
15	17.01.054s	1	1	1	1	Keerring	Seal ring	Joint d'étanchéité	Simmerring	50x80x10
16	17.02.028	1	1	1	1	O-ring	O-ring	Joint torique	O-ring	45x3
17	17.02.042	1	1	1	1	O-ring	O-ring	Joint torique	O-ring	90x3
18	18.11.008	1	1	1	1	Kegellager	Tapered rolling bearing	Roulement à rouleau conique	Kegellager	30210-J2
19	18.11.009	1	1	1	1	Kegellager	Tapered rolling bearing	Roulement à rouleau conique	Kegellager	32210-J2/Q
20	18.11.017	1	1	1	1	Kegellager	Tapered rolling bearing	Roulement à rouleau conique	Kegellager	31310 J2/QCL7C
21	18.11.019	1	1	1	1	Kegellager	Tapered rolling bearing	Roulement à rouleau conique	Kegellager	30310/
22	28.02.210	1	1	1	1	Tandwielkasthuis	Gearbox case	Boitier	Getriebegehäuse	
23	28.03.035	1	1	1	1	Tandwielkastdeksel	Gearbox cover	Couvercle	Getriebedeckel	
24	28.05.068	1	1	1	1	Pignonas+kegelwiel	Crownwheel+pignon	Jeu de pignons d'angle	Kegelradsatz	1:2,6
25	28.06.021	1	1	1	1	Aandrijfás	Drive shaft	Arbre d'entraînement	Antriebachse	
26	28.07.020	1	1	1	1	Afstandsring	Distance ring	Rondelle d'entretoise	Distanzring	
27	28.07.025	1	1	1	1	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	

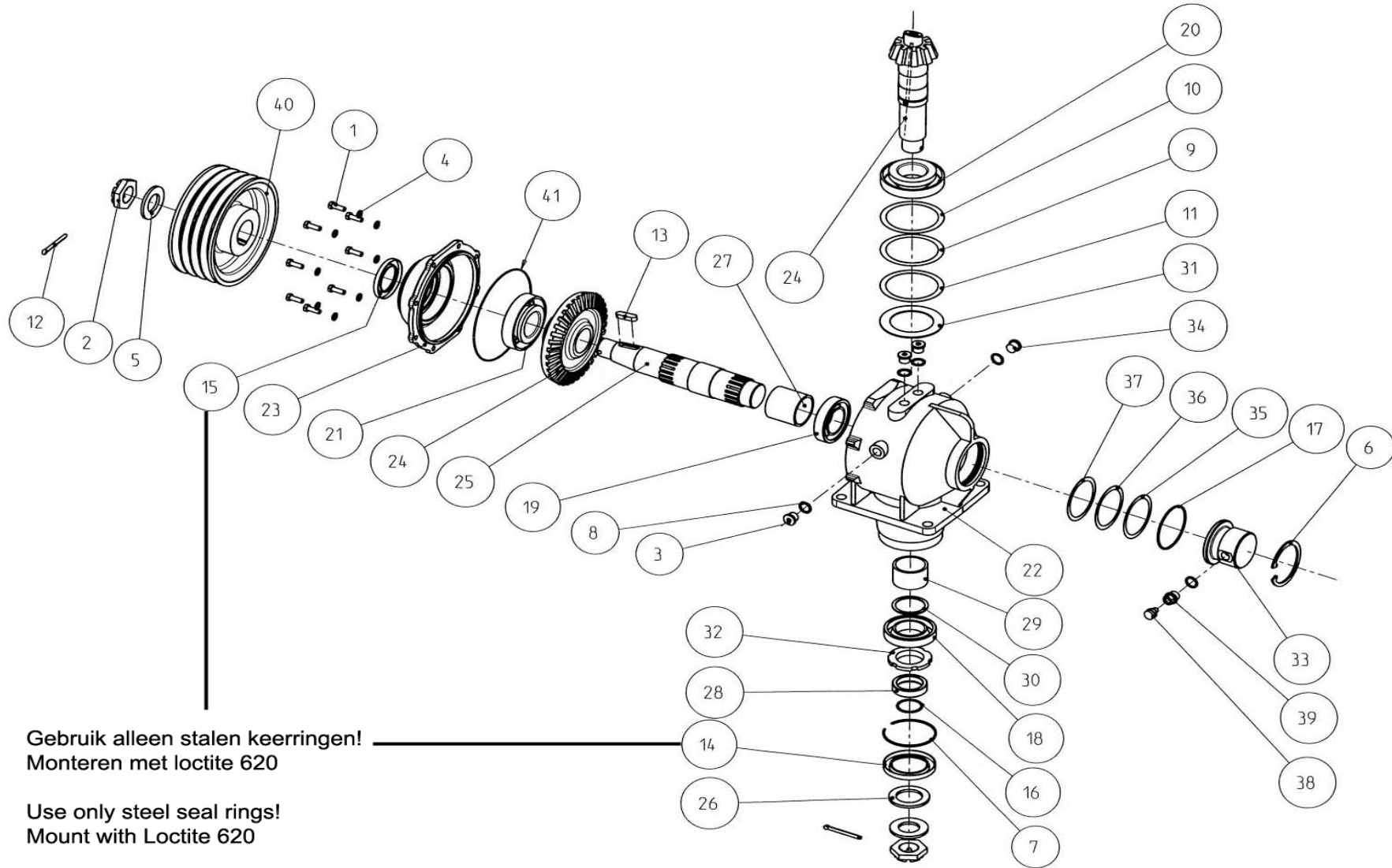
Votex

Tandwielkast

Gearbox

Boitier à renvoie d angle

Getriebe



**Votex Jumbo**

<u>no.</u>	<u>onderdeel nummer</u>	<u>type</u>				<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>					
28	28.07.027	1	1	1	1	Loopring	Distance ring	Rondelle d'entretoise	Laufring	
29	28.07.039	1	1	1	1	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	
30	28.07.040	1	1	1	1	Steunring	Reinforcing ring	Rondelle de support	Stützscheibe	
31	28.07.041	1	1	1	1	Steunring	Reinforcing ring	Rondelle de support	Stützscheibe	
32	28.08.051	1	1	1	1	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M50x1.5
33	28.08.057	1	1	1	1	Ontluchtingspot	Air release pot	Pot de reniflard d'air	Entlüftungstopf	
34	28.08.053	1	1	1	1	Magneet aftapplug	Magnetic plug	Bouchon magnétique	Magnetpfropfen	M18x1.5
35	28.09.041	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	75x90x0.1mm
36	28.09.042	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	75x90x0.3mm
37	28.09.043	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	75x90x0.5mm
38	28.08.056	1	1	1	1	Ontluchtingsnippel	Air release nipple	Reniflard d'air	Entlüfter	M18X1.5
39	28.08.058	1	1	1	1	Verloopnippel	Reduction nipple	Raccord de reduction	Reduktionsnippel	
40	36.01.710	1	1	1	1	V-snaarschijf	V-belt pulley	Poulie à gorges	Keilriemenscheibe	212SPB4
41	80.28.194	1	1	1	1	O-ring	O-ring	Joint torique	O-ring	188x2
1t/m39	28.01.193L	1	1	1	1	Tandwielkast	Gearbox	Boitier à renvoie d'angle	Getriebe	1:2,6
1t/m40	45.09.561	1	1	1	1	Tandwielkast+poelie	Gearbox + pulley	Boite d'engrenages+ poulie	Zahnradkaste+scheibe	1:2.,6 front links

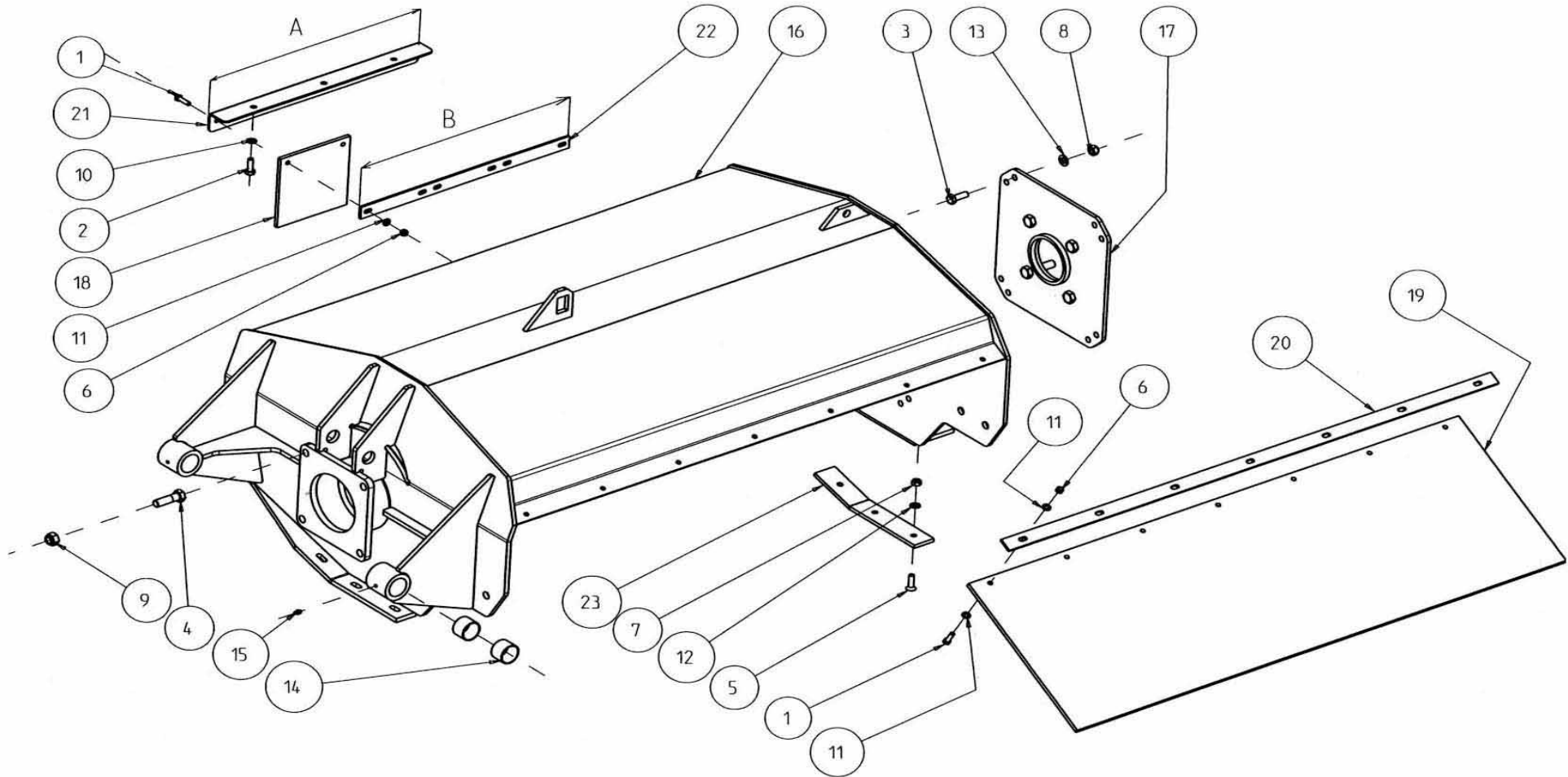
Votex Jumbo

Maaigedeelte

Cutting house

Carter de broyage

Mähergehäuse



## Votex Jumbo

no.	onderdeel nummer	type				Omschrijving	Discription	Designation	Beschreibung	technische info
		120	150	190	230					
1	10.02.092	21	27	33	39	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M8x30-8.8
2	10.02.121	7	9	11	13	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x30-8.8
3	10.02.153	8	8	8	8	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M12x35-8.8
4	10.04.209	4	4	4	4	Zeskantbout	Bolt	Vis	Sechskantschraube	M16x55-8.8
5	10.29.122	6	6	6	6	Verzonken schroef	Socket screw	Vis á tête fraisée	Senkschraube	M10x35
6	11.05.008	21	27	33	39	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M8
7	11.05.010	6	6	6	6	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M10
8	11.05.012	8	8	8	8	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M12
9	11.05.016	4	4	4	4	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M16
10	12.01.010	7	9	11	13	Veerring	Spring washer	Rondelle grower	Federring	M10
11	12.11.008	28	36	44	52	Sluitring	Washer	Rondelle	Unterlegscheibe	M8
12	12.11.010	6	6	6	6	Sluitring	Washer	Rondelle	Unterlegscheibe	M10
13	12.11.012	8	8	8	8	Sluitring	Washer	Rondelle	Unterlegscheibe	M12
14	18.15.050	4	4	4	4	Glijlager	Bush	Bague d'usure	Gleitlager	40.44.30A
15	20.03.003	2	2	2	2	Smeernippel	Grease nipple	Graisneur	Schmiernippel	M8x1.25-180°
16	45.01.764	1				Maaigedeelte	Cutting head	Carter de broyage	Mähergehäuse	120 left execution
	45.01.767		1			Maaigedeelte	Cutting head	Carter de broyage	Mähergehäuse	150 left execution
	45.01.771			1		Maaigedeelte	Cutting head	Carter de broyage	Mähergehäuse	190 left execution
	45.01.774				1	Maaigedeelte	Cutting head	Carter de broyage	Mähergehäuse	230 left execution
17	45.04.221	1	1	1	1	Lagerplaat	Bearingplate	Plaque de palier	Lagerplatte	
18	45.05.232	7	9	11	13	Rubberflap	Rubbersheet	Protection en caoutchouc	Gummistreifen	174x174x8mm
19	45.05.332	1				Rubberflap	Rubbersheet	Protection en caoutchouc	Gummistreifen	1240x230x9mm
	45.05.342		1			Rubberflap	Rubbersheet	Protection en caoutchouc	Gummistreifen	1600x230x9mm
	45.05.352			1		Rubberflap	Rubbersheet	Protection en caoutchouc	Gummistreifen	1960x230x9mm
	45.05.362				1	Rubberflap	Rubbersheet	Protection en caoutchouc	Gummistreifen	2320x230x9mm
20	45.05.370	1				Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	1200 ELVZ
	45.05.380		1			Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	1500 ELVZ
	45.05.390			1		Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	1900 ELVZ
	45.05.400				1	Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	2300 ELVZ
21	45.05.913	1		1	1	Hoeklijn	Support	Support	Stütze	A=526mm
	45.05.923	1	1	2		Hoeklijn	Support	Support	Stütze	A=702mm
	45.05.933		1		2	Hoeklijn	Support	Support	Stütze	A=878mm
22	45.05.916	1		1	1	Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	B=526mm
	45.05.926	1	1	2		Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	B=702mm
	45.05.936		1		2	Klemstrip	Clamping strip	Barre de serrage	Klemmleiste	B=878mm
23	45.11.480	2	2	2	2	Slijtplaat	Wearing plate	Tôle d'usure	Sohle	

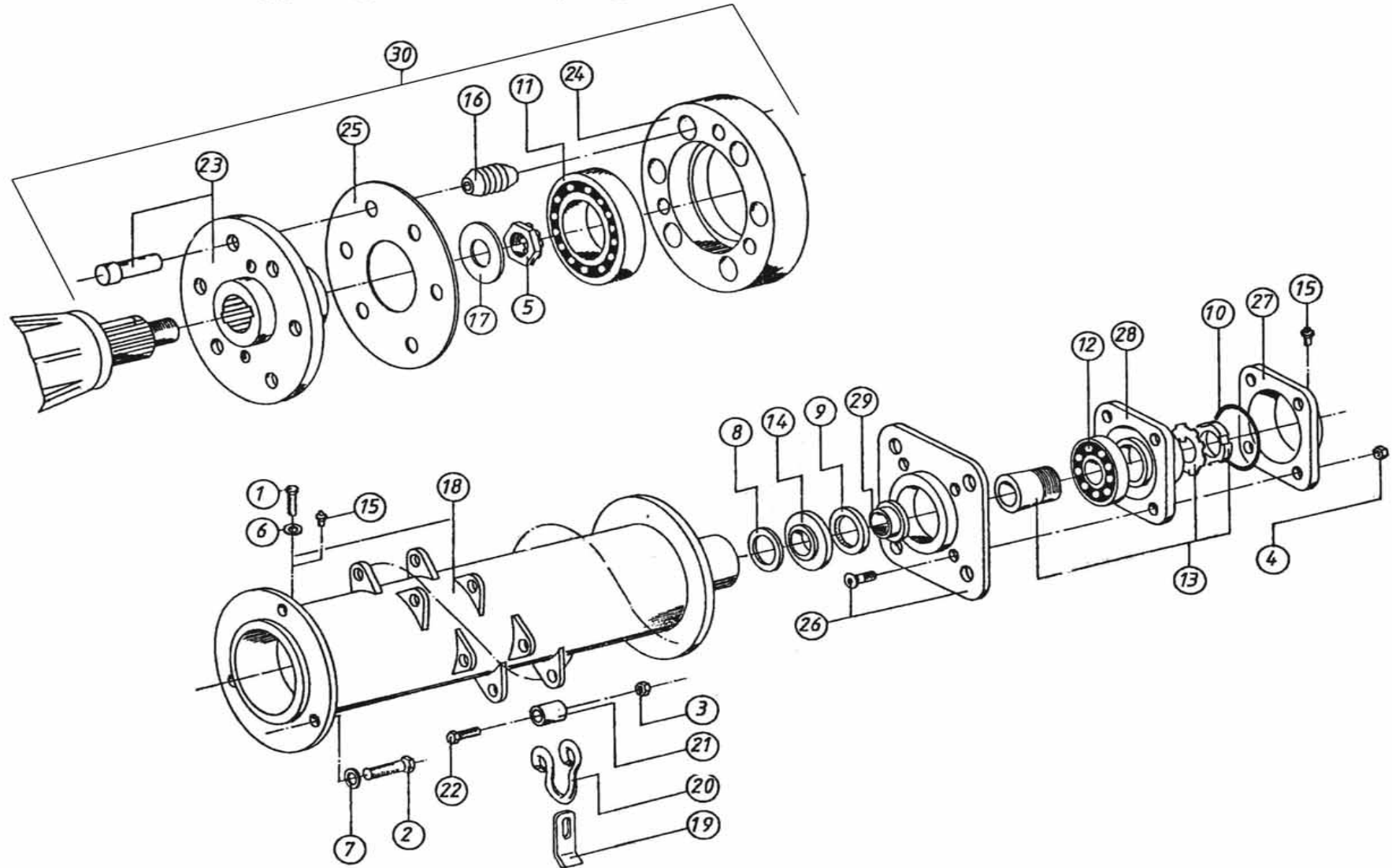
Vortex Jumbo

Rotoras en koppeling

Rotorshaft and coupling

Axe du rotor et accouplement

Messerwelle und ankupplung



**Votex Jumbo**

no.	onderdeel nummer	type				Rotoras en koppeling	Rotor shaft and coupling	Axe du rotor et accouplement	Messerwelle und ankupplung	technische info
		120	150	190	230	Omschrijving	Discription	Designation	Beschreibung	
1	10.02.084	1	1	1	1	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M8x10-8.8
2	10.02.153	3	3	3	3	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M12x35-8.8
3	11.05.014	36	48	60	72	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M14
4	11.05.016	4	4	4	4	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M16
5	11.09.536	1	1	1	1	Kroonmoer	Castle nut	Écrou à crénaux	Kronenmutter	M36x1.5
6	12.01.008	1	1	1	1	Veerring	Spring washer	Rondelle grower	Federring	M8
7	12.01.012	3	3	3	3	Veerring	Spring washer	Rondelle grower	Federring	M12
8	13.03.003	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	56x72x0.5
	13.03.004	xx	xx	xx	xx	Shim	Shim	Rondelle de réglage	Paßscheibe	56x72x1.0
9	17.01.021	1	1	1	1	Keerring	Seal ring	Joint d'étanchéité	Simmerring	65x100x10
10	17.02.009	1	1	1	1	O-ring	O-ring	Joint torique	O-ring	134x4
11	18.08.005	1	1	1	1	Kogellager	Ball bearing	Roulement à billes	Kugellager	1214ETN9
12	18.08.003	1	1	1	1	Kogellager	Ball bearing	Roulement à billes	Kugellager	2212EKTN9
13	18.50.001	1	1	1	1	Trekbus	Clamping sleeve	Bague conique	Spannhüls	H312
14	18.53.013	1	1	1	1	Labyrinth ring	Labyrinth ring	Joint labyrinth	Labyrinth ring	Z-013
15	20.03.003	2	2	2	2	Smeernippel	Grease nipple	Graisseur	Schmiernippel	M8x1.25-180°
16	20.04.003	6	6	6	6	Rubber huls	Rubber sleeve	Tube en caoutchouc	Gummihülse	60-65°SH
17	12.11.036	1	1	1	1	Sluitring	Washer	Rondelle	Unterlegscheibe	M36
18	45.02.396	1				Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	
	45.02.256		1			Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	
	45.02.266			1		Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	
	45.02.616				1	Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	RM 2307
19	45.03.190	36	48	60	72	Klepel	Flail	Fléau	Schlegelmesser	40x12
20	45.03.200	36	48	60	72	Klepelbeugel	Flail bow	Manille	Schlegelmesserbügel	
21	45.03.210	36	48	60	72	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	

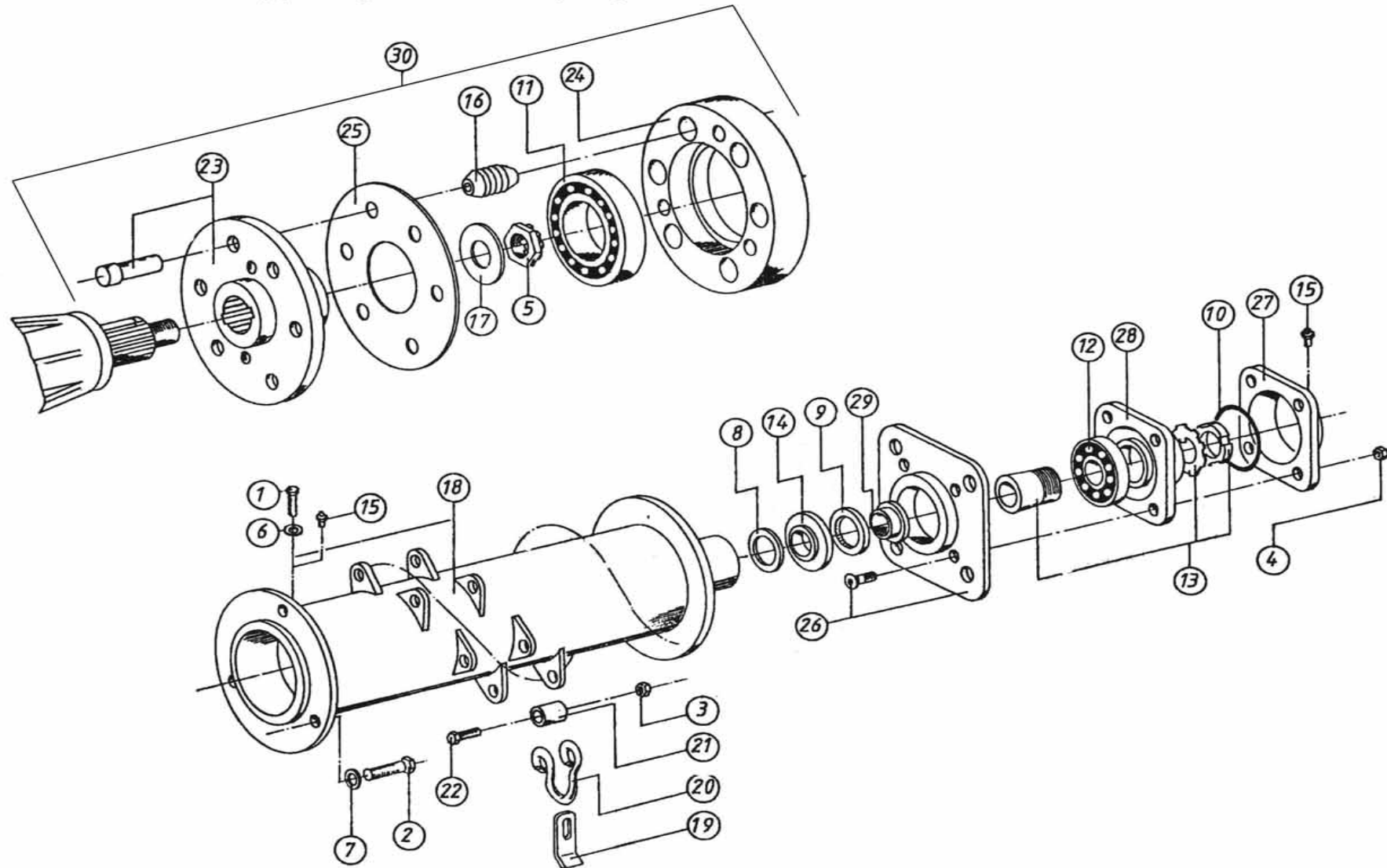
Vortex Jumbo

Rotoras en koppeling

Rotorshaft and coupling

Axe du rotor et accouplement

Messerwelle und ankopplung



## Votex Jumbo

<u>no.</u>	<u>onderdeel nummer</u>	<u>type</u>				<b>Rotoras en koppeling</b>	<b>Rotor shaft and Coupling</b>	<b>Axe du rotor et accouplement</b>	<b>Messerwelle und ankupplung</b>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	
22	45.03.220	36	48	60	72	Zeskantbout	Bolt	Vis	Sechskantschraube	M14x88/20-12.9
23	45.04.191	1	1	1	1	Koppelingsnaaf	Coupling hub	Moyeu d'accouplement	Kupplungsnaabe	
24	45.04.210	1	1	1	1	Koppelingsschijf	Coupling disc	Disque d'accouplement	Kupplungsscheibe	
25	45.04.200	1	1	1	1	Rubberpakking	Rubber dicsc	Disque en caoutchouc	Gummischeibe	
26	45.04.220	1	1	1	1	Lagerplaat	Bearingplate	Plaque de palier	Lagerplatte	
27	45.04.070	1	1	1	1	Lagerdeksel	Bearing cover	Couvercle de palier	Lagerdeckel	
28	45.04.090	1	1	1	1	Lagerhuis	Bearing house	Palier à roulement	Lagergehäuse	
29	45.04.100	1	1	1	1	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	
30	45.04.196	1	1	1	1	Rotorkoppeling cpl.	Rotor coupling cpl.	Accouplement de rotor cpl.	Rotor kupplung kpl.	

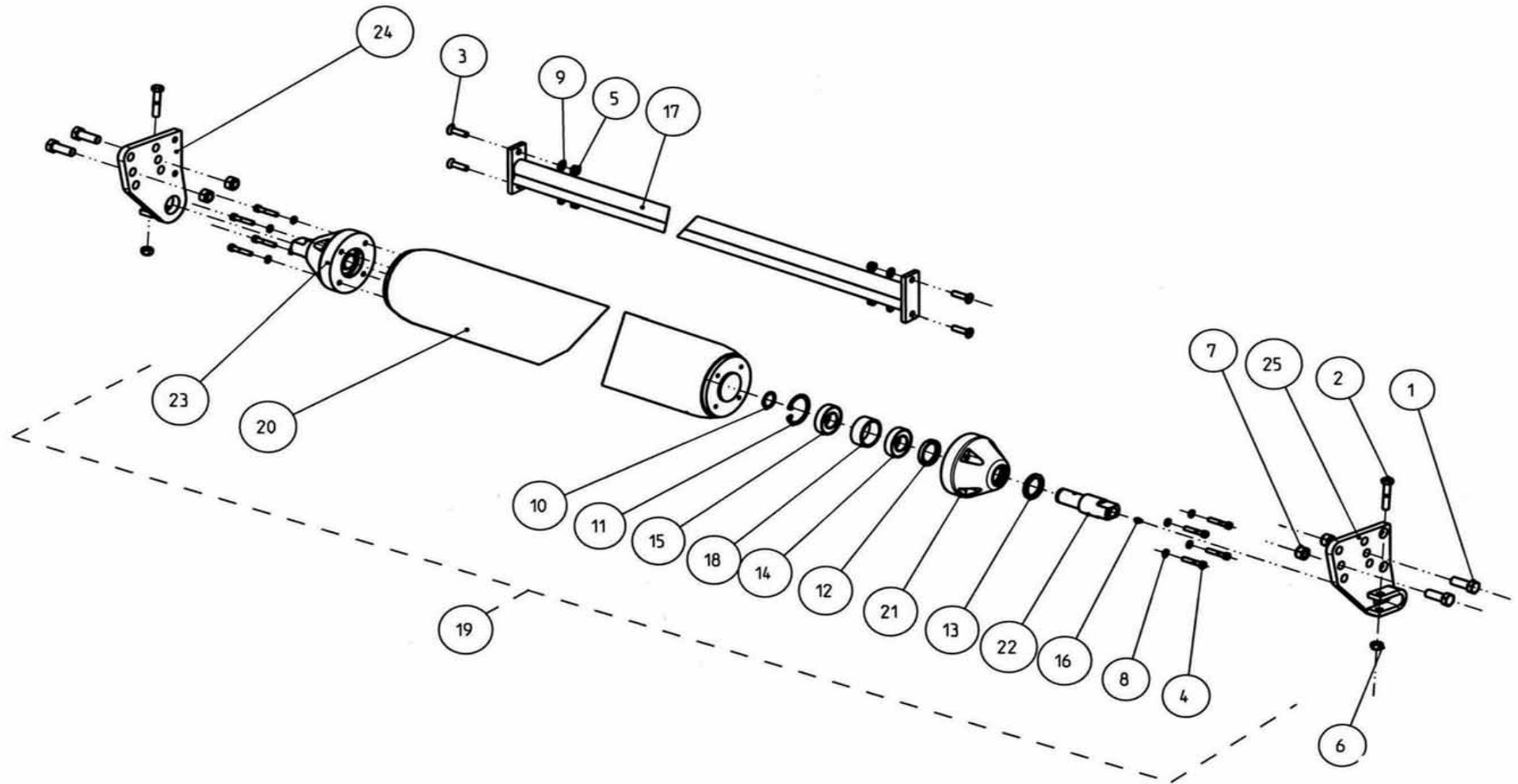
Votex Jumbo

Looprol

Roller

Rouleau

Laufrolle



## Votex Jumbo

no.	onderdeel nummer	type				Omschrijving	Discription	Designation	Beschreibung	technische info
		120	150	190	230					
1t/m25	45.05.021	1				Looprol set cpl.	Roller set cpl.	Ens. rouleau+fixations	Laufwalze satz kpl.	L=1250/D159
	45.05.015		1			Looprol set cpl.	Roller set cpl.	Ens. rouleau+fixations	Laufwalze satz kpl.	L=1610/D159
	45.05.016			1		Looprol set cpl.	Roller set cpl.	Ens. rouleau+fixations	Laufwalze satz kpl.	L=1970/D159
	45.05.017				1	Looprol set cpl.	Roller set cpl.	Ens. rouleau+fixations	Laufwalze satz kpl.	L=2330/D159
1	10.02.207	4	4	4	4	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M16X45-8.8
2	10.04.158	2	2	2	2	Zeskantbout	Bolt	Vis	Sechskantschraube	M12x60-8.8
3	10.29.123	4	4	4	4	Verzonken schroef	Socket screw	Vis à tête fraisée	Senkschraube	M10x40
4	10.28.595	8	8	8	8	Cilinderkopschroef	Cilinderheadscrew	Vis à tête cilindrique	Zylinderkopfschraube	M8x45-12.9
5	11.05.010	4	4	4	4	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M10
6	11.05.012	2	2	2	2	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M12
7	11.05.016	4	4	4	4	Borgmoer	Lock nut	Écrou autofreiné	Sicherungsmutter	M16
8	12.01.008	8	8	8	8	Veerring	Spring washer	Rondelle grower	Federring	M8
9	12.11.010	4	4	4	4	Sluitring	Washer	Rondelle	Unterlegscheibe	M10
10	12.30.030	2	2	2	2	Zekeringsring	Circlip	Circlip	Sicherungsringe	30x1.5
11	12.31.062	2	2	2	2	Zekeringsring	Circlip	Circlip	Sicherungsringe	62x2
12	17.01.045	2	2	2	2	Keerring	Seal ring	Joint d'étanchéité	Simmerring	40x55x8
13	17.05.007	2	2	2	2	Viltring	Felt ring	Joint de feutre	Filzdichtung	
14	18.01.005	2	2	2	2	Kogellager	Ball bearing	Roulement à billes	Kugellager	6206
15	18.04.007	2	2	2	2	Kogellager	Ball bearing	Roulement à billes	Kugellager	6206-RS1
16	20.03.003	2	2	2	2	Smeernippel	Grease nipple	Graisseur	Schmiernippel	M8x1.25-180°
17	45.05.470	1				Schraper	Scraper	Racloire	Schürfleiste	L=1250
	45.05.480		1			Schraper	Scraper	Racloire	Schürfleiste	L=1610
	45.05.490			1		Schraper	Scraper	Racloire	Schürfleiste	L=1970
	45.05.500				1	Schraper	Scraper	Racloire	Schürfleiste	L=2330
18	45.05.650	2	2	2	2	Afstandsbus	Distance bush	Bague d'entretoise	Distanzbüchse	
19	45.05.836	1				Looprol cpl.	Roller cpl.	Rouleau cpl.	Laufwalze kpl.	L=1250
	45.05.703		1			Looprol cpl.	Roller cpl.	Rouleau cpl.	Laufwalze kpl.	L=1610
	45.05.710			1		Looprol cpl.	Roller cpl.	Rouleau cpl.	Laufwalze kpl.	L=1970
	45.05.716				1	Looprol cpl.	Roller cpl.	Rouleau cpl.	Laufwalze kpl.	L=2330

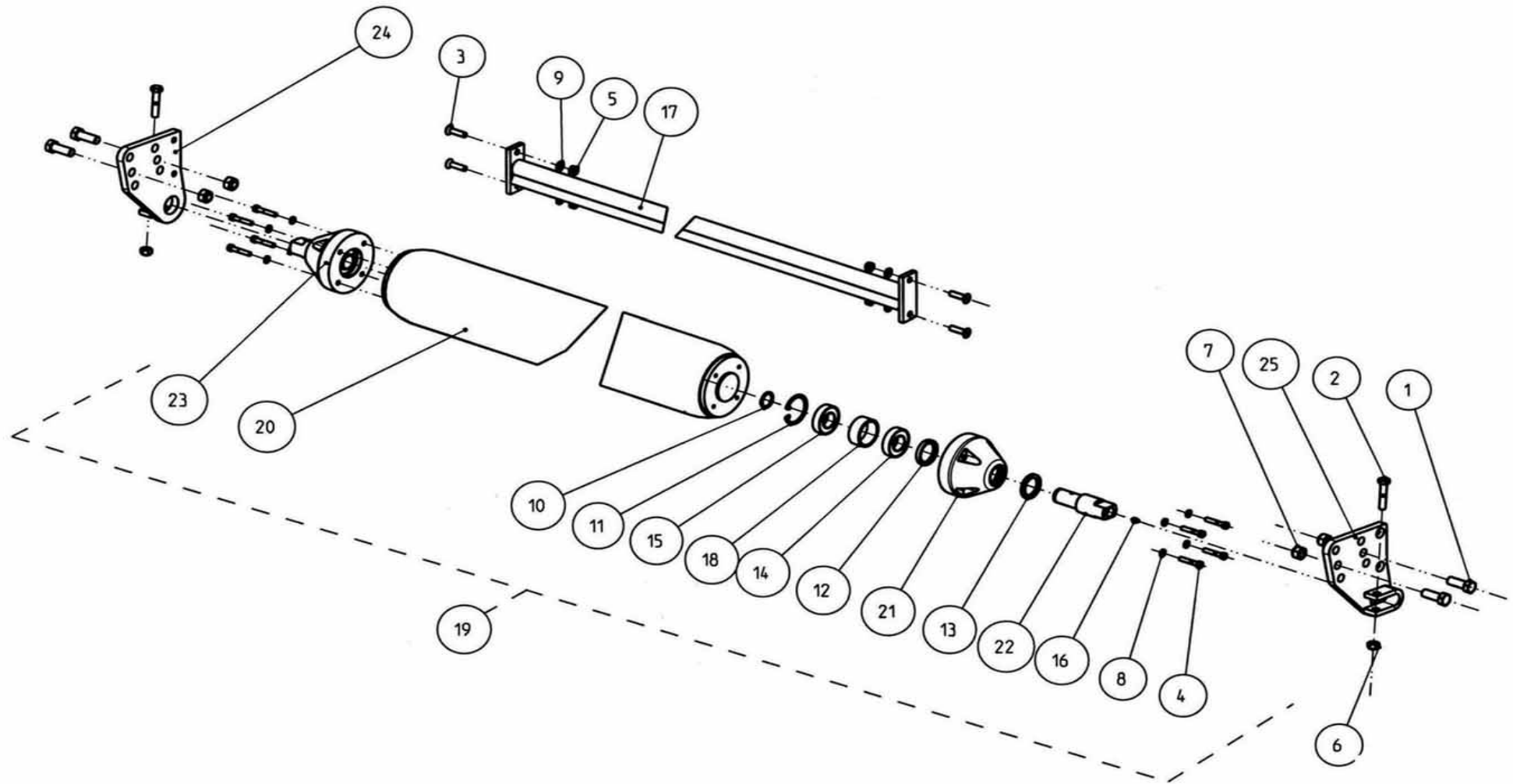
Votex Jumbo

Looprol

Roller

Rouleau

Laufrolle



**Votex Jumbo**

no.	<u>onderdeel nummer</u>	<u>type</u>				<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>					
20	45.05.833	1				Looprolbuis	Roller tube	Tube de rouleau	Laufwalze rohr	159/ 1032
	45.05.706		1			Looprolbuis	Roller tube	Tube de rouleau	Laufwalze rohr	159/1392
	45.05.713			1		Looprolbuis	Roller tube	Tube de rouleau	Laufwalze rohr	159/1752
	45.05.720				1	Looprolbuis	Roller tube	Tube de rouleau	Laufwalze rohr	159/2112
21	45.05.733	2	2	2	2	Looprolprop	Roller plug	Cône à roulements	Laufwalzefropfenn	
22	45.05.736	2	2	2	2	Looprolas	Roller shaft	Arbre	Laufwalze welle	
23	45.05.740	2	2	2	2	Looprolprop cpl.	Roller plug cpl.	Cône à roulements cpl.	Laufwalzefropfenn kpl.	
24	45.05.744	1	1	1	1	Looprolhouder links	Roller support left	Support de rouleau gauche	Laufwalzestutz links	
25	45.05.747	1	1	1	1	Looprolhouder rechts	Roller support right	Support de rouleau droite	Laufwalzestutz rechts	

**Votex Jumbo**

no.	<u>onderdeel nummer</u>	<u>type</u>				<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>					
1-14	27.01.239a	1	1	1		Kruiskoppelingsas en vrijloop	PTO shaft and freewheel	Transmission à cardan et roue libre	Gelenkwelle mit freilauf	W2400.SD25 1010mm
	27.01.256a				1	Kruiskoppelingsas en vrijloop	PTO shaft and freewheel	Transmission à cardan et roue libre	Gelenkwelle mit freilauf	W2500.SD25 1010mm



## **Votex Jumbo**

**Opties Options Options Options**

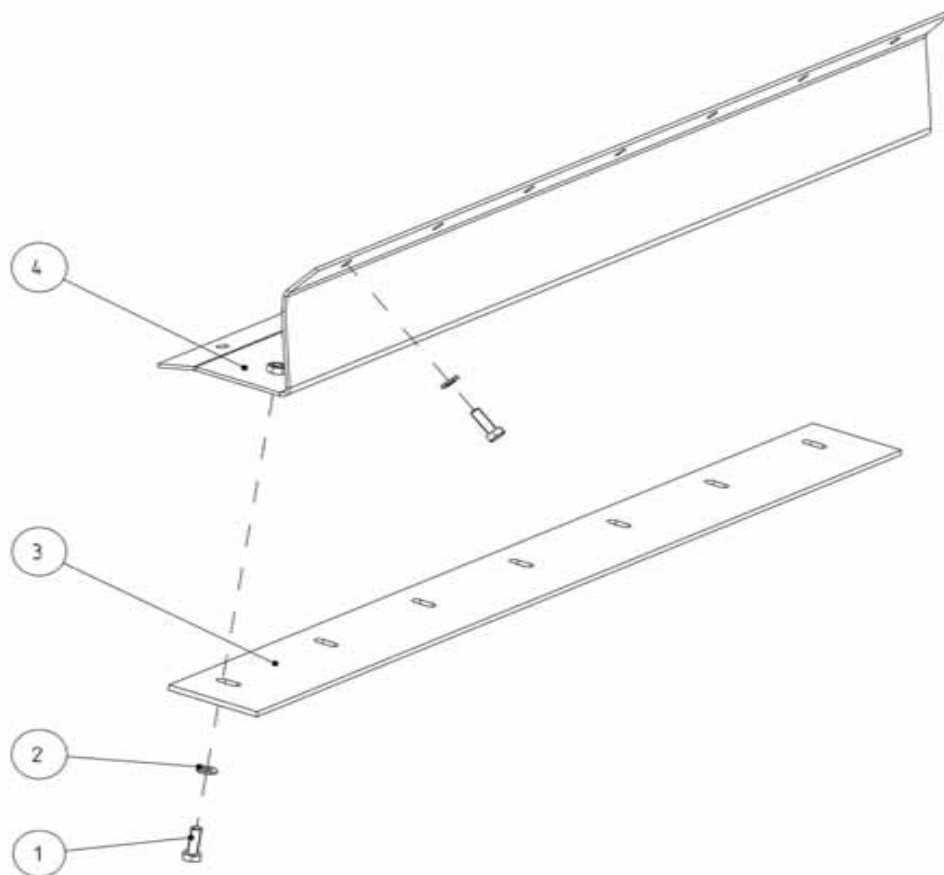
Votex Jumbo

Verhakselstrip

Chopping strip

Contre-lame

Führungsstrebe



## Votex Jumbo

no.	<u>onderdeel nummer</u>	<u>type</u>				<b>Verhakselstrip</b>	<b>Chopping strip</b>	<b>Contre lame</b>	<b>Führungsstrebe</b>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>	<u>Op verzoek gemonteerd</u>	<u>Upon request mounted</u>	<u>Monté sur demande</u>	<u>Auf anfrage montiert</u>	
1	10.02.121	14	18	22	26	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x30-8.8
2	12.11.010	14	18	22	26	Sluitring	Washer	Rondelle	Unterlegscheibe	M10
3	45.13.100	1				Verhakselstrip	Chopping strip	Contre lame	Führungsstrebe	
	45.13.110		1			Verhakselstrip	Chopping strip	Contre lame	Führungsstrebe	
	45.13.120			1		Verhakselstrip	Chopping strip	Contre lame	Führungsstrebe	
	45.13.140				1	Verhakselstrip	Chopping strip	Contre lame	Führungsstrebe	
4	45.13.266	1				Steunplaat	Support	Support	Stütze	
	45.13.270		1			Steunplaat	Support	Support	Stütze	
	45.13.273			1		Steunplaat	Support	Support	Stütze	
	45.13.276				1	Steunplaat	Support	Support	Stütze	

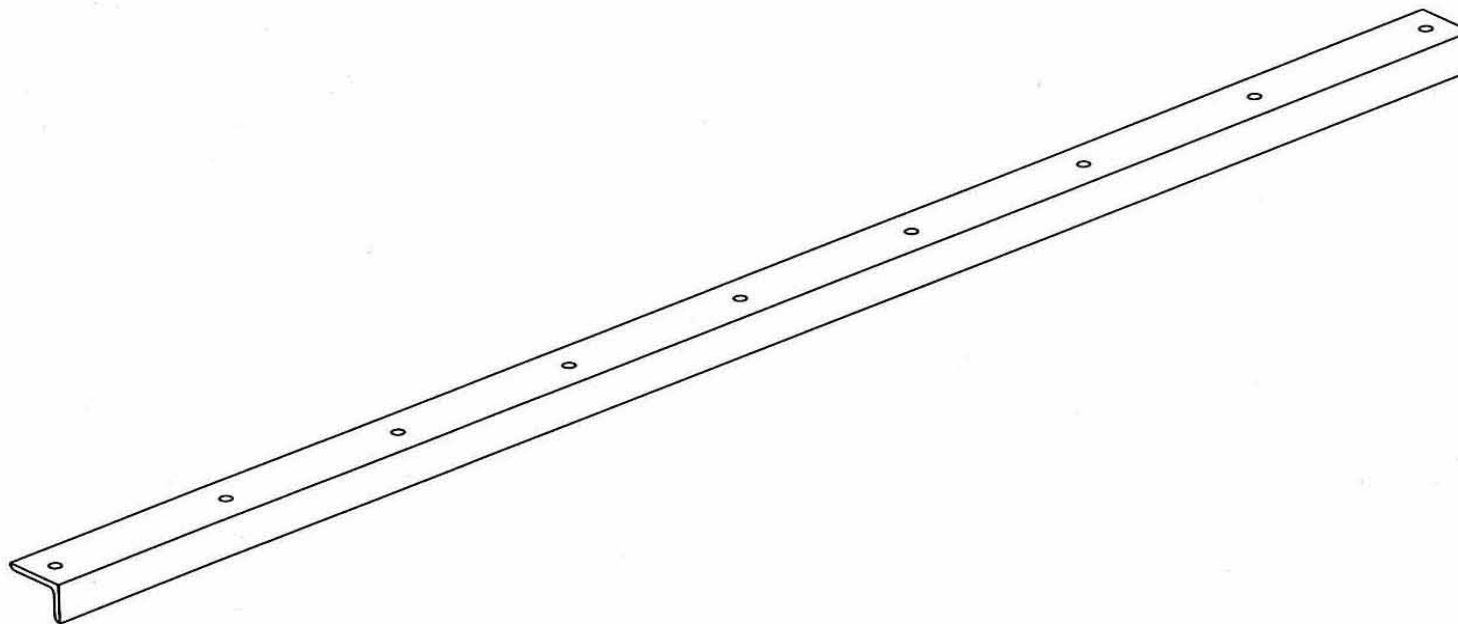
Votex Jumbo

Haksel hoeklijn

Chopping strip

Contre-lame

Führungsstrebe



## Votex Jumbo

<u>no.</u>	<u>onderdeel nummer</u>	<u>type</u>				<b>Haksel hoeklijn</b>	<b>Chopping strip</b>	<b>Contre lame</b>	<b>Führungsstrebe</b>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>	<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	
1	45.13.243	1				Hakselhoeklijn	Chopping strip	Contre lame	Führungsstrebe	1200
	45.13.246		1			Hakselhoeklijn	Chopping strip	Contre lame	Führungsstrebe	1500
	45.13.250			1		Hakselhoeklijn	Chopping strip	Contre lame	Führungsstrebe	1900
	45.13.253				1	Hakselhoeklijn	Chopping strip	Contre lame	Führungsstrebe	2300

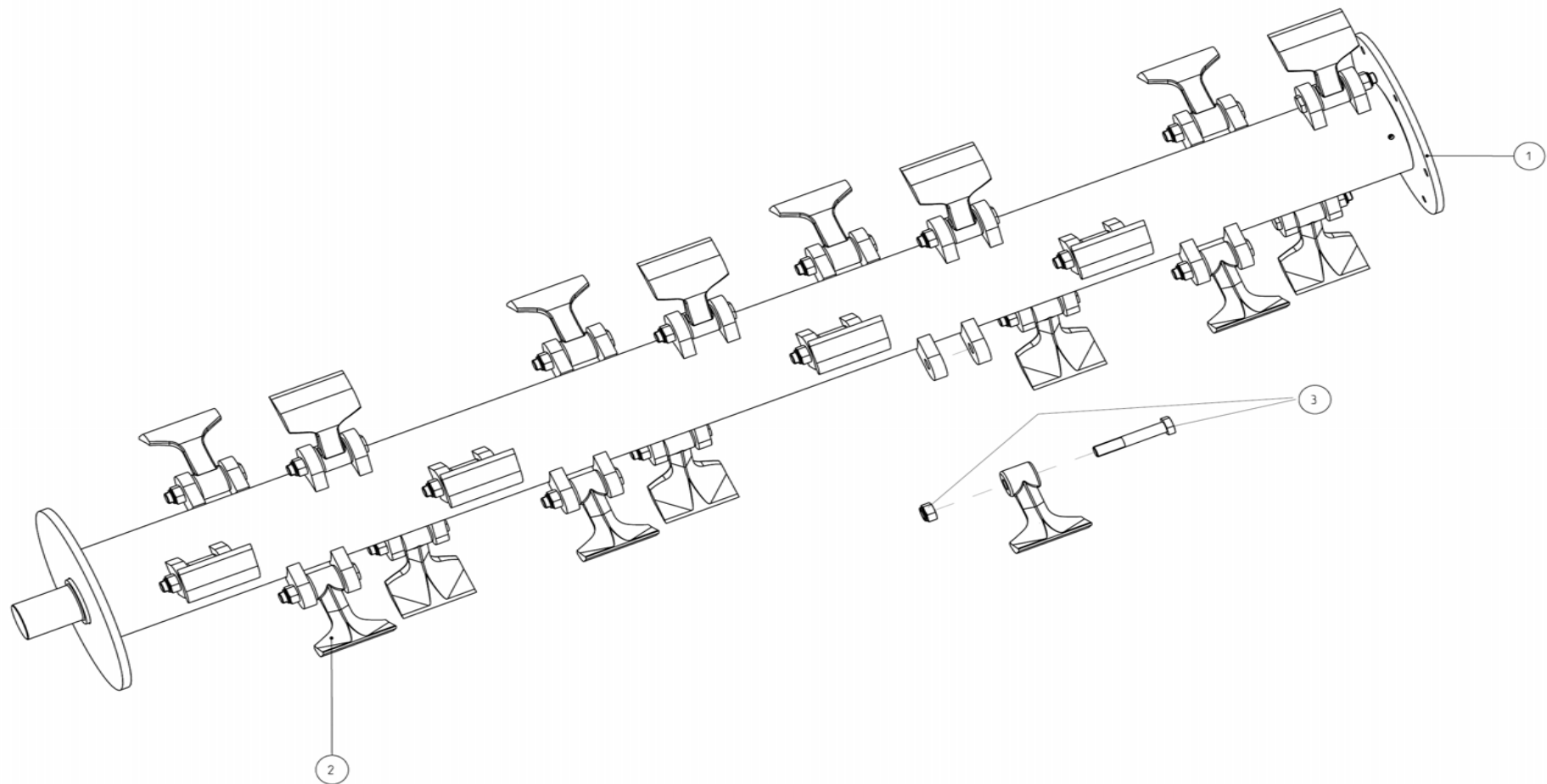
Votex Jumbo

Rotoras

Rotorshaft

Rotor

Messerwelle



## Votex Jumbo

<u>no.</u>	<u>onderdeel nummer</u>	<b>Rotoras</b>				<u>Omschrijving</u>	<b>Rotor shaft</b> <u>Discription</u>	<b>Axe du rotor</b> <u>Designation</u>	<b>Messerwelle</b> <u>Beschreibung</u>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>					
1	45.02.395	1				Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	1,3 kg
	45.02.255		1			Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	1,3 kg
	45.02.265			1		Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	1,3 kg
	45.02.615				1	Rotoras kpl. m. klepels	Rotorshaft cpl.w.flails	Rotor cpl.avec fléaux	Messerwelle mit schlegel	230 1.3 kg klepels
2	45.03.260	12	16	20	24	Klepel	Flail	Fléau	Schlegelmesser	1.3 kg
3	45.03.263	12	16	20	24	Klepelbout+moer	Flail bolt+nut	Vis de fléau+écrou	Schlegelschraube+Mutter	M16x100-10.9

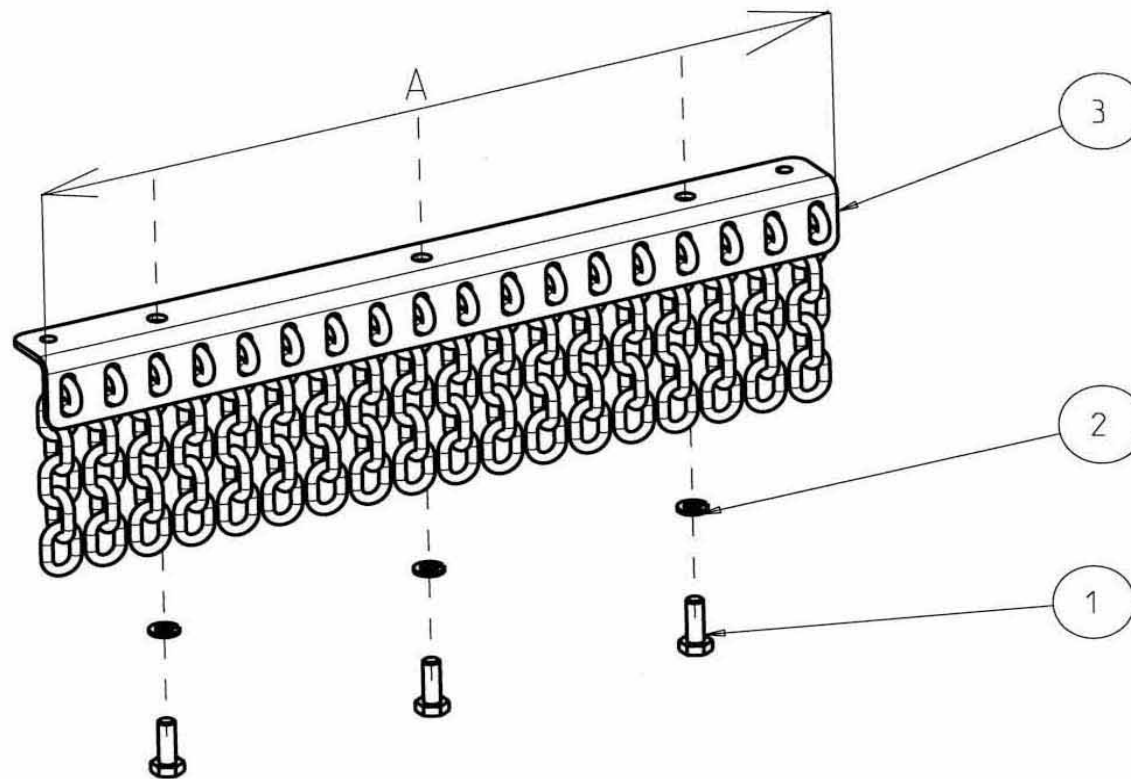
Vortex Jumbo

Kettingafscherming

Chain protection

Protection de chaîne

Kettenschutz



**Votex Jumbo****Kettingafscherming****Chain protection****Protection de chaine****Kettenschutz**

<u>no.</u>	<u>onderdeel nummer</u>	<u>type</u>				<u>Omschrijving</u>	<u>Discription</u>	<u>Designation</u>	<u>Beschreibung</u>	<u>technische info</u>
		<u>120</u>	<u>150</u>	<u>190</u>	<u>230</u>					
1	10.02.121	7	9	11	13	Zeskanttapbout	Bolt	Vis	Sechskantschraube	M10x30-8.8
2	12.01.010	7	9	11	13	Veerring	Spring washer	Rondelle grower	Federring	M10
3	45.05.940	1		1	1	Kettingafscherming	Chain protection	Protection de chaine	Kettenschutzblech	A=526mm
	45.05.943	1	1	2		Kettingafscherming	Chain protection	Protection de chaine	Kettenschutzblech	A=702mm
	45.05.946		1		2	Kettingafscherming	Chain protection	Protection de chaine	Kettenschutzblech	A=878mm