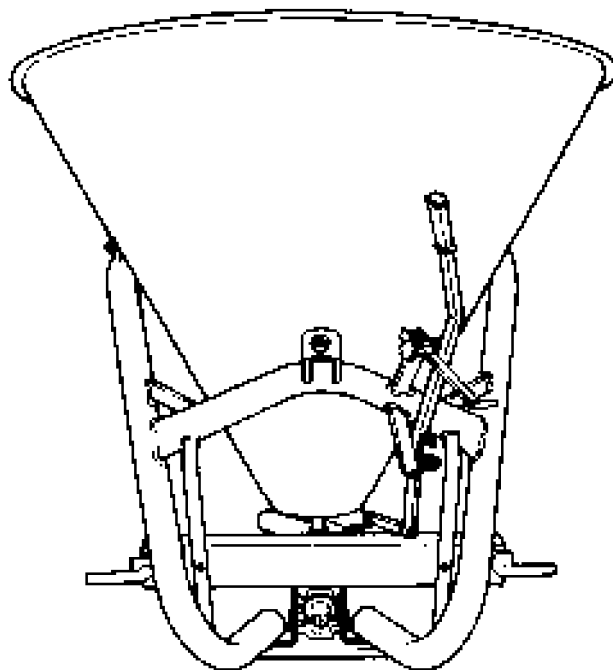


ROTOMECH

Operator's Manual

HOP

Fertiliser Spreader
Series 100, 160, 300 & 500



The operator's manual is a technical service guide and must always accompany the machine.

MEHOPEB

SAFETY

Take note! This safety alert symbol found throughout this manual is used to call your attention to instructions involving your personal safety and the safety of others. Failure to follow these instructions can result in injury or death.



*This symbol means:
ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!*

Signal Words

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The appropriate signal words for each has been selected using the following guidelines:



DANGER: indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING: indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

SAFETY



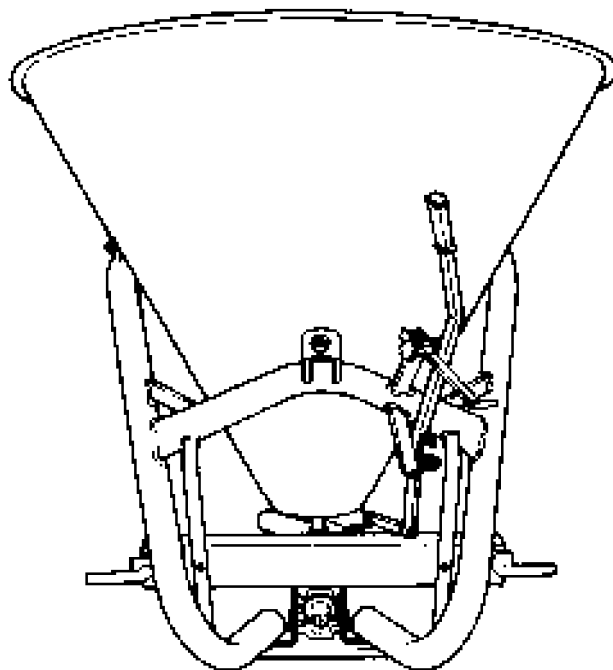
CAUTION: indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

ROTOMECH

Operator's Manual

HOP

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Series 100, 160, 300 & 500



The operator's manual is a technical service guide and must always accompany the machine.

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1 - GENERAL INFORMATION

Thank you and congratulations for having chosen our implement.
Your new fertiliser spreader is a technologically advanced machine constructed of high quality sturdy components that will fulfil your working expectations.
Read this manual carefully. It will instruct you on how to operate and service your fertiliser spreader safely and correctly. Failure to do so could result in personal injury and or equipment damage.

1.01 - General





CAUTION: all hardware is metric. Only metric tools should be used. Other tools that do not fit properly can slip and cause injury.



CAUTION: right hand and left hand sides of the implement are determined by facing in the direction the implement will travel when going forward.

1.02 - Model and Serial Number ID

Attached to the frame is an ID plate showing the model and serial number. Record your implement model and serial number in the space provided below. Your dealer needs this information to give you prompt, efficient service when you order parts.

 ROTOMECC S.p.A. 37054 NOGARA (VERONA) ITALY PH.: 39.(0).442.510400 r.a.		
MOD.		N.
KW.	KG.	YEAR

Carefully read the warranty section¹, detailing coverage and limitations of this warranty. **Warranty** is provided for customers who operate and maintain their equipment as described in this manual. Warranty registration is accomplished by the dealer completing and forwarding, within 14 days from the date of purchase, the **Warranty**

¹ See chapter 8 - Warranty.

Registration Form to the Company, along with a copy of the dealer's invoice. It is in your best interest to insure that this has been done.

Warranty does not cover the following:

1. cleaning, transporting, mailing and service call charges.
2. Normal wear items.
3. Depreciation or damage caused by normal wear, accidents, improper maintenance, improper protection or improper use.
4. The use of non original spare parts and accessories.

Your Authorised Company Dealer has genuine parts in stock. Only these approved replacement parts should be used. This limited warranty covers defective material and workmanship. The cost of normal maintenance or repairs for accidents or improper use, and related labour will be borne by the owner.

2 - SAFETY PRECAUTIONS

Safety is the primary concern in the design and manufacture of our products. Unfortunately our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It is the operator's responsibility to read and understand all safety and operating instructions in the manual and to follow these.

Allow only properly trained personnel to operate the fertiliser spreader. Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembling or operating, to acquaint yourself with the machines. It is the spreader owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating, reads and understands the operator's manuals and is instructed in safe and proper use.

2.01 - Preparation



1. Before operating equipment read and understand the operator's manual and the safety signs (**see fig. 2**).
2. Thoroughly inspect the implement before initial operation to assure that all packaging materials, i.e. wires, bands, and tape have been removed.
3. Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining and/or repairing the implement.
4. Operate the fertiliser spreader only with a tractor equipped with an approved Roll-Over-Protective-System (ROPS). Always wear your seat belt. Serious injury or even death could result from falling off the tractor.
5. Clear area of stones, branches or other debris that might be thrown, causing injury or damage.
6. Operate only in daylight or good artificial light.
7. Ensure fertiliser spreader is properly mounted, adjusted and in good operating condition.
8. Ensure that all safety shielding and safety signs are properly installed and in good condition.

2.02 - Starting and Stopping



1. Be sure that no one is near the machine prior to engaging or while the machine is working.
2. Be sure the tractor is in **Neutral** before starting engine.
3. Equipment operating power is supplied from tractor PTO. Refer to your tractor manual for PTO engagement and disengagement instructions. Always operate PTO at 540 rpm. Know how to stop the tractor and machine quickly in case of an emergency.
4. When engaging PTO, the engine rpm should always be low. Once engaged and ready to start working, raise PTO speed to 540 rpm and maintain throughout operation.
5. Check the tractor master shield over the PTO stub shaft. Make sure it is in good condition and fastened securely to the tractor. Purchase a new shield if old shield is damaged or missing.
6. After striking an obstacle, disengage the PTO, shut the tractor down and thoroughly inspect for damage before restarting.

2.03 - Messages and Signs

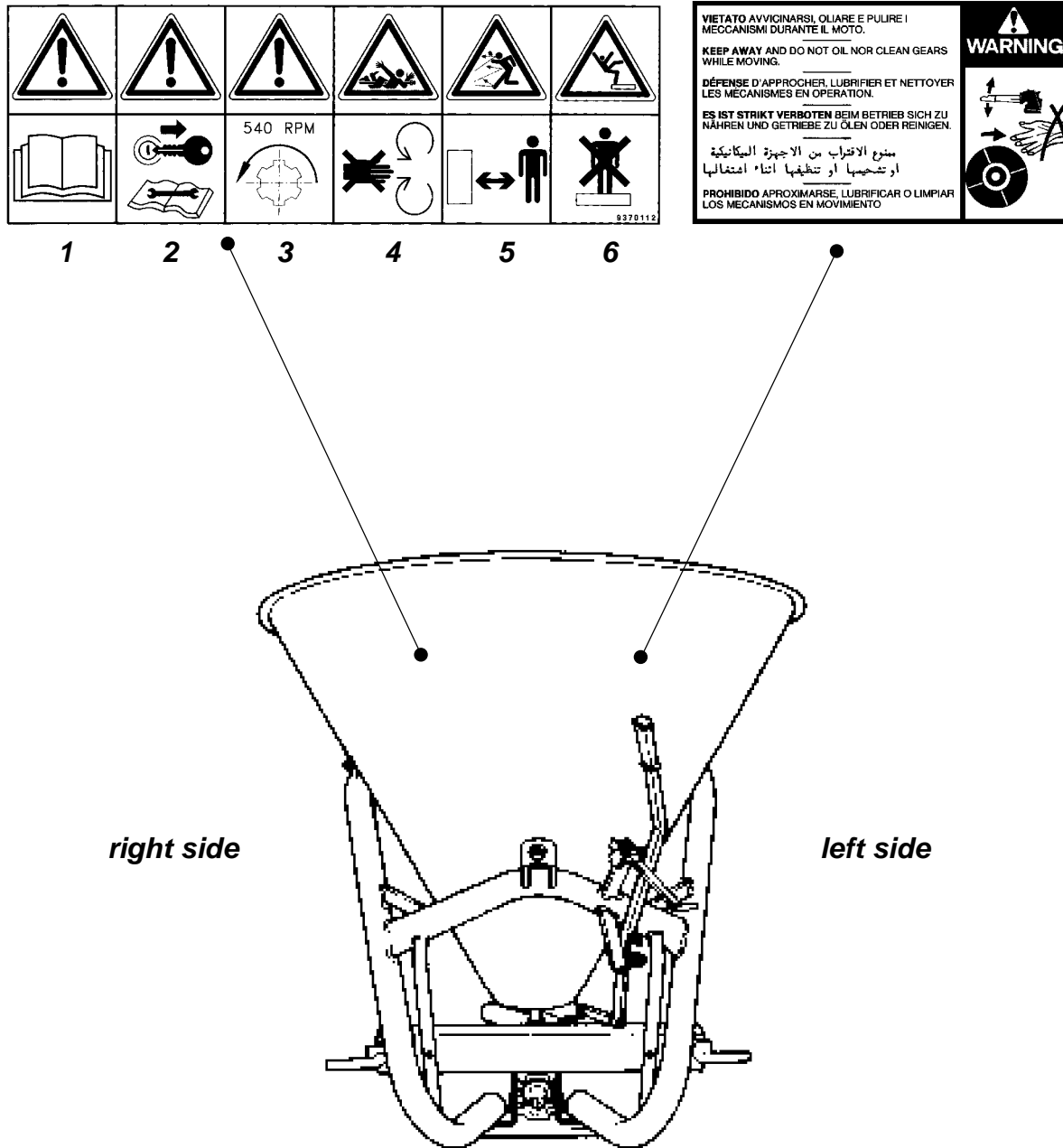


1. Read and adhere to all safety and operating decals on this machine (**see fig. 2**).
2. Before dismounting tractor: allow moving parts to stop, stop engine, set brake and remove the key of unattended equipment.
3. Keep away from rotating blades and driveline.
4. Keep guards and shields in place and in good condition.
5. Do not use with bystanders in area.
6. Allow no riders on tractor or machine.
7. Allow moving parts to stop before repair.
8. Securely support equipment before working underneath.

Additional warning and operating decals are available at no extra charge. Please specify model and serial number when ordering.

Fig. 2 - Safety decals; replace immediately if damaged.

- 1. Read this manual carefully.**
- 2. Before maintenance operations, disengage PTO and shut tractor down.**
- 3. 540 rpm PTO only.**
- 4. Keep away from rotating driveline.**
- 5. Keep away, thrown objects.**
- 6. Never allow passengers.**



3 - OPERATION

Hop fertiliser spreader, versatile and ideal for granular or powdered fertilisers; may also be used as a salt spreader for snow or ice covered roads during winter months. Available in 4 sizes with hopper capacity of 100, 150, 250 and 350 litres. Hop fertiliser spreaders are designed for tractors from 16 to 30 HP at 540 rpm equipped with cat. 1 three point hitch (for Hop 100 and Hop 160 also cat. 0). Standard fixed agitator with optional wheel agitator available for powder fertiliser or salt.

3.01 - Operational Safety



CAUTION: our spreaders are designed considering safety as the most important target and are the safest available in today's market. Unfortunately, human carelessness can override the safety features built into our machines. Injury prevention and work safety, aside from the features on our spreaders, is very much due to the responsible use of the equipment. It must always be operated prudently following with great care, the safety instructions laid out in this manual.



1. The use of this equipment is subject to certain hazards which cannot be prevented by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using.
2. Do not operate the tractor and spreader when you are tired, sick or when using medication.
3. Only use this model implement with 540 rpm tractors with horsepower in the correct power range².
4. Keep all helpers and bystanders at least several meters from a spreader. Only properly trained people should operate this machine.
5. Accidents are most likely to occur with machines that are loaned or rented to someone who has not read the operator's manual and is not familiar with a spreader.
6. Always stop the tractor, set brake, shut off the tractor engine, remove the ignition key, and allow spreader moving parts to come to a complete stop before dismounting tractor. Never leave equipment unattended with the tractor running.
7. Never place hands or feet into hopper with tractor engine running or before you are sure all motion has stopped. Stay clear of all moving parts.

² See table 2, page 19.

8. Do not allow riders on the spreader or tractor at any time. There is no safe place for riders.
9. Before backing up, disengage the implement and look behind carefully.
10. Install and secure all guards and shields before starting or operating.
11. Keep hands, feet, hair and clothing away from moving parts.
12. This implement is designed for use only on tractors with 540 rpm power take off.
13. Never operate tractor and spreader under trees with low hanging limbs. Operators can be knocked off the tractor.
14. The parts of this machine have been designed and tested for rugged use. However, they could fail upon impact with heavy, solid objects such as steel guard rails and concrete abutments. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the implement to contact such obstacles.
15. Stop spreader immediately upon striking an obstruction. Turn engine off, remove key, inspect and repair any damage before resuming operation.
16. Stay alert for holes, rocks and roots in the terrain and other hidden hazards. Keep away from drop-offs.
17. Use extreme care and maintain minimum ground speed when transporting on hillside, over rough ground and when operating close to ditches or fences. Be careful when turning sharp corners.
18. Reduce speed on slopes and sharp turns to minimise tipping or loss of control. Be careful when changing directions on slopes. Do not start or stop suddenly on slopes. Avoid operation on steep slopes.
19. Inspect the entire machine periodically³. Look for loose fasteners, worn or broken parts, and leaky or loose fittings.
20. Use only the driveline supplied with the machine. Do not use it if it is missing any shield or safety protection.
21. Pass diagonally through sharp dips and avoid sharp drops to prevent "hanging up" tractor and spreader.
22. Avoid sudden starts and stops while travelling up or downhill.
23. Always operate down slopes; never across the face. Avoid operation on steep slopes. Slow down on sharp turns and slopes to prevent tipping and or loss of control.
24. All remote control devices (cables, ropes, rods, flexible lines, etc.) should be positioned in a way to prevent manoeuvres which could lead to accidents or damages.
25. Before loading the fertiliser in the hopper read carefully the instructions printed on the fertiliser canvas bag concerning the precautions to be taken in case of toxicity or corrosivity of the product. Before loading switch off the engine and remove the ignition key.

³ See chapter 4 - Maintenance.

3.02 - Set-up

Notice to dealer: pre-delivery set-up and service including lubrication is the responsibility of the authorised dealer. It is up to him to assure that the machine is in perfect condition and ready to be used. It is his responsibility to ensure that the customer is aware of all safety aspects and operational procedures for the spreader. He must also fill out the Pre-delivery checklist⁴ prior to delivering the spreader.



CAUTION: stand clear of bands when cutting as they could be under sufficient tension to cause them to fly loose. Take care in removing bands and wire, they often have extremely sharp edges and cut very easy.

3.03 - Pre-Operational Check

Check each of the following, carefully, prior to engaging the equipment:

1. the driveline cross & bearings has been greased.
2. No wrappings or foreign objects are on the machine or driveline.
3. All hardware is tight⁵.
4. Check the tractor to ensure correct direction of PTO and rpm speed⁶.
5. Ensure all safety shields and guards are in their place and tightly attached.
6. No people or animals are in the work area.



DANGER: always stay clear of rotating driveline and blades when the PTO is engaged.



WARNING: disengage the PTO, apply the parking brake, shut off the engine and remove the key before attaching or removing the driveline, or performing any maintenance or adjustments on the machine.

3.04 - Driveline

Carefully read and file away the driveline operator's manual supplied by the manufacturer. **The following does not substitute for the information found in the driveline manual.**

⁴ See chapter 7 - Pre-delivery Checklist.

⁵ See table 1, page 18.

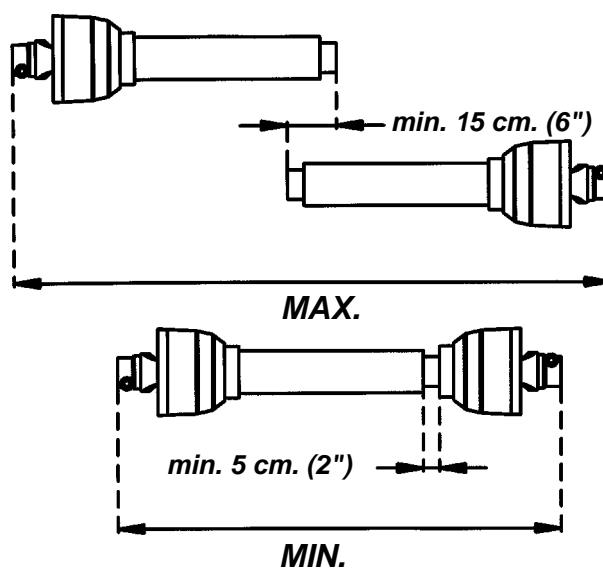
⁶ See table 2, page 19.



DANGER: only use the original driveline supplied with this machine and always with the safety shielding.

In the collapsed position the driveline should be approximately 5 cm. (2+) from bottoming out to prevent possible damage to the tractor or implement. When the PTO is in the maximum extended position, the ideal minimum overlap of the two halves should be approximately 15 cm. (6+) (see fig. 3).

Fig. 3



If it is determined that the driveline is too long. Follow these procedures to adjust the length.

1. Separate the two driveline halves. Connect one half to the tractor PTO and the other half to the implement.
2. Raise and lower the implement with the 3 point hitch to find the position where the driveline is shortest. Hold the half shafts side by side and mark the desired length on the outer female tube guard leaving a 5 cm. (2+) gap between the end of the guard tube and bell guard.
3. Cut off both guard tubes the same amount as marked in step 2.
4. Shorten both drive tubes the same amount as the guard tubes.
5. De-burr and clean filings from drive tubes and apply grease to outside of inner telescoping tube.

Reassemble the driveline halves and connect to tractor and implement. Raise and lower machine again to be sure driveline does not bottom out in the shortest position and has a minimum overlap of 15 cm. (6+) in the longest position.

3.05 - Attaching to the Tractor

Unit may be used on tractors equipped with a standard rear PTO with horsepower in the correct power range⁷ and cat. 1 three point hitch (for Hop 100 and Hop 160 also cat. 0).



DANGER: never attempt to attach the implement to the tractor or make any adjustments to it without first turning the tractor off.



CAUTION: check the tractor PTO rpm to ensure it is set at 540 and turns clockwise.



CAUTION: be sure the tractor tire pressure is correct. It is important to strictly follow the safety guidelines and instructions laid out in the tractor manual.

To attach the implement to the tractor do the following:

Back the tractor up to the implement in order to slip the tractor hitch arms over the hitch pins bolted to the frame. **Turn off the tractor engine.**

Tighten the tractor arms side movement with either the sway chains or blocks to limit side swing.

Connect the top link, locking it in place with the top hitch pin. Adjust it so the implement is as near parallel to the ground as possible with the spreading disc at a distance of 70-80 cm. above the ground level.

Install the end of the driveline with the safety slip clutch to the machine and the opposite end to the tractor PTO. Be sure each end is connected securely with either the locking pin or bolt and nut. Connect the driveline chains to the tractor and to the machine to prevent the protective shielding from rotating during operation. If it was necessary to remove the PTO protection to do any of the above operations, do not forget to replace it.

3.06 - Start-up

Prior to start working do the following:

1. make sure there are no obstructions.
2. With the engine in neutral and tractor rpm low, engage the PTO and very slowly bring the tractor rpm up to $\frac{3}{4}$ its normal working speed, gradually increase the rpm until a PTO speed of 540 is reached. Never operate over 540 rpm.
3. Run machine under a no-load condition for a short while to assure that everything is functioning properly.

⁷ See table 2, page 19.

4. Adjust all settings for the desired quantity distribution and spread pattern.
5. Shift the transmission to a slow speed gear and start forward, increase the ground speed by shifting upward until the desired speed is obtained. Do not use in reverse unless absolutely necessary and only after careful observation of the area behind the spreader.

Before starting to use, never forget that the **operator is responsible** for the following:

1. safe and correct driving of the tractor and spreader.
2. To learn precise, safe operating procedures for both the tractor and the spreader.
3. To ensure all maintenance and lubrication has been performed on the spreader.
4. To have read and understood all safety aspects for the spreader in the operator's manual.
5. To have read and understood all safety decals on the spreader.
6. Checking to see if front weights need to be added to the tractor in order to maintain balance.
7. Checking the tractor tires for the proper pressure in accordance to the tractor operator's manual.
8. Checking that all shielding is on the machine and securely in place.
9. Making sure the proper attire is worn. Avoiding loose fitting clothing which can become entangled. Wearing sturdy, tough-soled work shoes and protective equipment for eyes, hands, ears and head. Never operate tractor or implements in bare feet, sandals or sneakers.
10. Checking area for stones, branches and other debris that might be thrown.
11. Ensuring proper lighting is available, sunlight or good artificial lighting.

3.07 - Operating Techniques

The quantity of material distributed per acre depends on the following factors:

1. spreader ground speed.
2. Unit weight and size of the material to be spread.
3. Spreading width.
4. Position of the lever.

The working speed depends on ground conditions. Only a test run will enable you to gauge the optimal working speed for your conditions.

Spread adjustment for the Hop 100 model:

The Hop's spreading is adjustable in three ways by:

1. regulating the **spread pattern**,
2. regulating the **amount of material to be spread**,
3. regulating the **spreading width** (when the machine is equipped with deflector).

To regulate the **spread pattern** slide (to the left or right) the lever (**see #5**) which is located under the hopper and runs through the slot in the disc shielding (**see #4**). To shift the lever right or left, loosen the knob over the slotted shield. This moves the

spread pattern from 180° at position 0 (in the centre), to either mostly 90° right with the lever shifted all the way to the left or mostly 90° left when shifted to the right completely (see fig. 4).

To regulate the **amount of material to be spread**, using the same lever as above, slide it in and out to regulate the size of opening at the bottom of the hopper. Use the scale located near the lever to gauge the size opening needed. Example: if it is determined that the appropriate opening desired is position #6, loosen the knob so the blocking plate will slide. Push the lever in until the hole is completely closed and move the blocking plate to position #6 and tighten the knob. To spread, pull the lever back until it stops in position #6.

To regulate the **spreading width** (when the machine is equipped with deflector), you should use the rear deflector. Move the deflector up and down to change the spreading distance. The higher the deflector is up the further the spread width, the lower the less distance the material travels.

In order to give a guide to the operator, **table 3⁸** gives the amount of material distributed (kg/ha) at two spreading widths (4 meters and 6 meters) versus the lever position. **For example, with the lever in position 6, at a working speed of 6 km/h and with a spreading width of 6 meters, the quantity of material that will be distributed will be 370 kg/ha.**

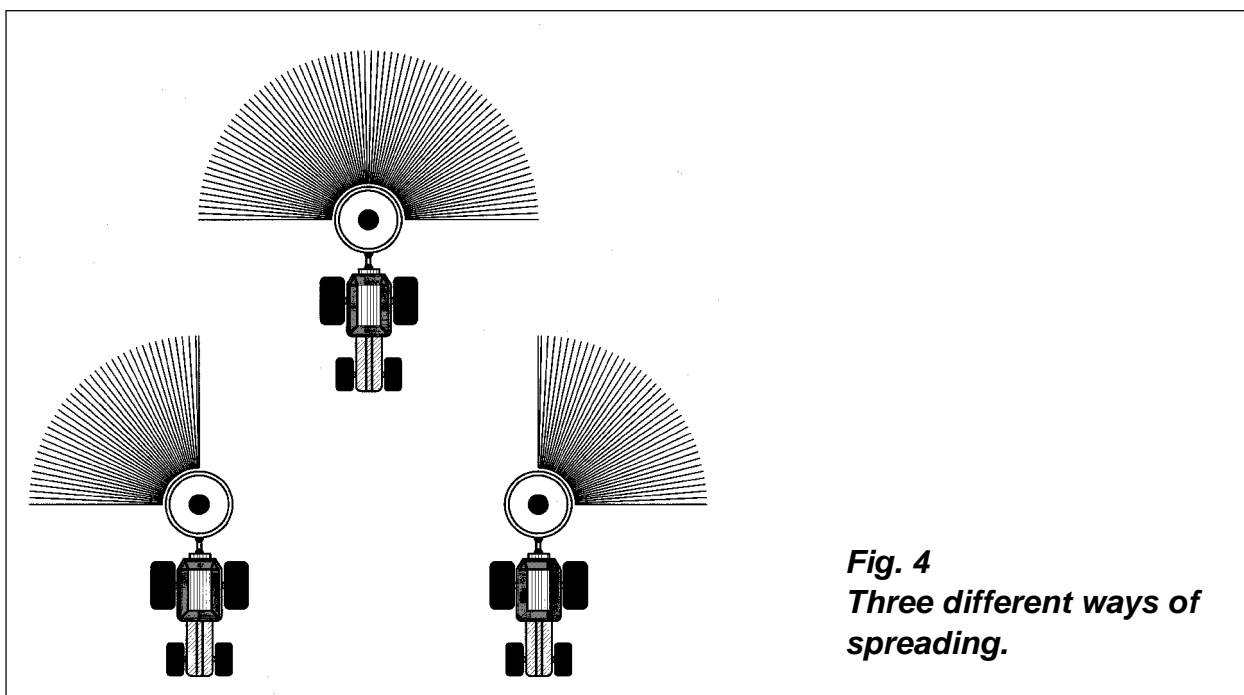


Fig. 4
Three different ways of spreading.

Spread adjustment for the Hop 160, 300 & 500 models:

The 160, 300 and 500 Hop fertiliser spreaders have three ways of regulating material distribution:

⁸ See table 3, page 19.

1. adjusting the **spread position**.
2. Adjusting the **quantity of material being spread**.
3. Adjusting the **spreading width** (when the spreader is equipped with deflector).

Adjusting the spread position: the machine can be adjusted to spread to the centre, or off to either of the two sides. This is accomplished by opening the left gate (#6), right gate (#5) or both. When spreading centre behind the tractor, both gates should be open. To spread more towards the right, operate the spreader with the right gate open and the left gate closed. To spread more to the left, close the right gate and leave the left open. By leaving one of the gates open, the spread tends to be heavier in that direction. The side that the closed gate is on will have some material dispersed to it, though not as heavy.

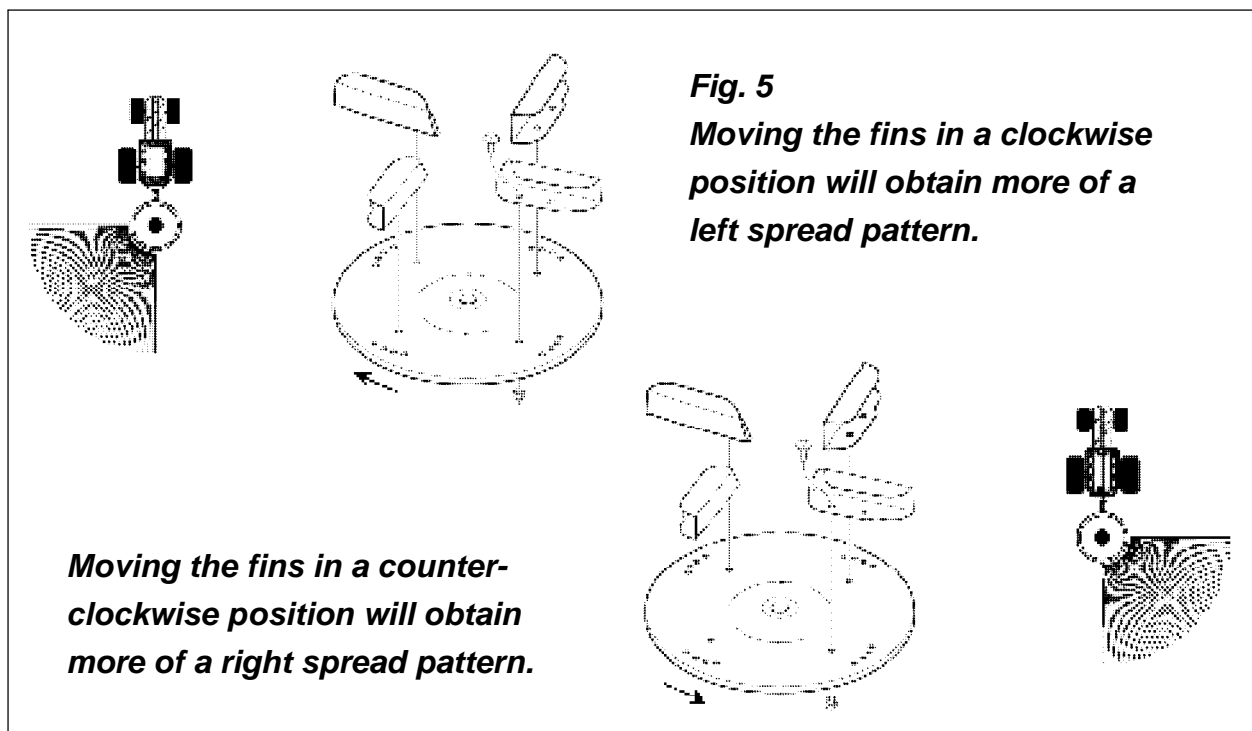
To open only one gate:

1. pull down the lever (#9) thereby closing both gates.
2. Completely loosen the knob on the gate to be left closed.

When the lever is pulled open, the gate with the loose knob will remain closed.

One further adjustment (only for Hop 300 & 500), or means of correcting a spreading pattern, is to move the fins (#20) that are bolted to the spinner disc (#19). Moving the fins counter-clockwise makes the material spread more to the right, whereas moving the fins forward (clockwise) will move the spread pattern more towards the left (see fig. 5).

If, for example, the material being spread tends to be thrown centre-right, to correct the spread more towards the left. Simply, move the fins backwards (counter-clockwise) and close the right gate.



Adjusting the quantity of material being spread: to adjust the amount of material being spread, move the levers in and out (**#14**), thereby closing and opening the gates located in the bottom of the hopper.

Use the slide scale (**#17**) to regulate the amount of opening desired. Completely close the gates by pushing the lever (**#18**) up. Loosen the plastic knob and move it down to the desired number on the scale. Tighten the knob. When the lever (**#14**) is pulled down, it should go down no further than the stop plate on the sliding scale.

Using table 4⁹, determine the approximate amount of material to be spread in Kg/hectare at 8 meters or 13 meters spreading width and put the lever into that position on the sliding scale.

Example: with the lever in position 5, a ground speed of 8 km/h, spreading at 13 meters, the output should be approximately 276 kg/hectare.



CAUTION: for emergency reasons learn how to stop the tractor and spreader quickly.

3.08 - Uneven Terrain



WARNING: be careful of roll-over when operating tractor and spreader over uneven ground.

In extremely uneven terrain rear wheel weights, front tractor weights, and/or tire ballast should be used to improve stability.

When operating over uneven terrain, observe the type of terrain and develop a safe working pattern. Whenever traction or stability is poor, first test drive over the terrain.

Operate the spreader up and down steep slopes, not across slopes, to prevent the tractor from tipping. Avoid sudden stops and starts, and slow down before changing directions on a slope.

Pass diagonally through sharp dips and avoid sharp drops to prevent hanging up of the tractor and spreader.

Slow down on sharp turns and slopes to prevent tipping or loss of control.

Watch for holes, roots or other hidden objects. Do not use near the edge of a gully, ditch or stream bank.

TABLE 1 - TORQUE SPECIFICATIONS

⁹ See table 4, page 17.

Diameter	Class 8.8		Class 10.9	
	N.m	lb.ft	N.m	lb.ft
M 8	25	18	35	26
M 10	50	37	70	52
M 12	90	66	125	92
M 14	140	103	200	148
M 16	215	155	305	225
M 18	295	217	420	309
M 20	420	302	590	438

When using locks, nuts, increasing torque values by 5%.

TABLE 2 - HOP - TECHNICAL FEATURES

Series Hop				
Model	HP	Carrying weight Lt	Weight kg	Loading height cm
Hop 100	16-30	105	37	200-700
Hop 160	16-30	150	46	200-700
Hop 300	16-30	250	57	600-1400
Hop 500	16-30	350	62	600-1400

Optional equipment: wheel agitator for powder fertiliser or salt, siderow discharge (only Hop 300 & 500), deflector shield.

TABLE 3 - HOP 100 - SWATH SPREADING PATTERNS (kg/ha)

Lever position	Spreading width 4 meters		Spreading width 6 meters	
	2 km/h	6 km/h	2 km/h	6 km/h
0	0	0	0	0
1	268	77	178	52,5
2	532,5	154	352,5	105
3	806,5	238	532	160,5
4	1.092,5	351	729,5	228
5	1.388,5	455,5	924,5	303,5
6	1.684	560	1.116,5	370
7	1.970,5	676	1.314	453,5
8	2.266,5	806,5	1.510,5	532
9	2.560	927,5	1.702,5	617,5
10	2.848,5	1.048,5	1.898	698

TABLE 4 - HOP 160, 300, 500 - SWATH SPREADING PATTERNS (kg/ha)

Lever position	Spreading width 8 meters			Spreading width 13 meters		
	2 km/h	4 km/h	8 km/h	2 km/h	4 km/h	8 km/h
0	0	0	0	0	0	0
1	168	83	60	102	51	37
2	452	226	113	276	138	69
3	904	452	226	552	276	138
4	1.356	678	339	828	414	207
5	1.808	904	452	1.104	552	276
6	2.260	1.130	565	1.380	690	345
7	2.712	1.356	678	1.656	828	414
8	3.164	1.582	791	1.932	966	483
9	3.616	1.808	904	2.208	1.104	552

4 - MAINTENANCE



DANGER: stop engine, lock parking brake and remove key before performing any service or maintenance.

Never rely on the tractor lift system. Install blocks or stands under the machine to prevent it from falling. Always use personal protection devices, such as glasses or gloves when performing maintenance.

Keep fingers out of slots to prevent injury.

4.01 - Maintenance Safety



1. Good maintenance is your responsibility.
2. Keep service area clean and dry. Be sure electrical outlets and tools are properly grounded. Use adequate light for the job at hand.
3. Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
4. Make no repair or adjustments with the tractor engine running. Before working on the machine, disengage the PTO, shut off the engine, set the brakes, and remove the ignition key.
5. Be certain all moving parts on attachment have come to a complete stop before attempting to perform maintenance.
6. Never work under equipment unless it is blocked securely.
7. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance.
8. Never trust the tractor hydraulics alone to support the machine. Before repairing or adjusting, the machine should be lowered and allowed to rest on a stand.
9. Periodically tighten all bolts, nuts and screws and check that all cotter pins are properly installed to ensure unit is in a safe condition.
10. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.
11. After servicing, be sure all tools, parts and service equipment are removed.
12. Never replace hex bolts with less than grade five bolts unless otherwise specified, i.e. shear bolts¹⁰.
13. When the machine is not hooked to the tractor, the driveline must be supported by the storage hook to the top link.

¹⁰ Refer to table 1 - Torque Specifications, for head identification marking.

14. Where replacement parts are necessary for periodic maintenance and servicing, genuine replacement parts must be used to restore your equipment to original specifications. The company will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
15. Unauthorised modifications to the machine may impair the function and/or safety of the machine and reduce its life. If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.

4.02 - Service

Before beginning work:

1. apply a thick layer of grease to all exposed moving parts.
2. Apply a film of biodegradable oil in crevasses and corners in order to keep corrosive material from rusting areas that are difficult to clean.

After each use:

1. be sure to thoroughly wash the machine without using excessive pressure especially on the moving parts. It is particularly important to wash the implement after using salt or fertiliser. This will help prevent the caustic chemicals in the salt and fertiliser from destroying the metal of the machine.
2. Carefully dry the machine.
3. Apply a thick layer of grease to all exposed moving parts.
4. Apply a film of biodegradable oil in crevasses and corners.
5. Grease the driveline cross & bearings and telescopic tubes.

After seasonal use it is important to perform the following for prolonged storage:

1. wash and dry the spreader carefully.
2. Inspect the spreader and replace worn or damaged parts. If corrosive material has eaten under the paint, clean off the area with a wire brush and touch-up with primer and paint.
3. Tighten all hardware.
4. Cover the spreader from the elements in order to have it in perfect conditions for the start of the next season.

NOTE: the gearbox has been filled with EP grade grease from the factory. The grease never needs replacing unless internal work is done to the gearbox.

4.03 - Transport



CAUTION: do not tow tractor and spreader behind other vehicles. Use a properly equipped trailer with heavy tie-downs for towing operations.

Before transporting:

1. always select a safe ground speed that is appropriate for the terrain.
2. Beware of traffic on public roads. Install a SMV (Slow Moving Vehicle) sign when travelling on roads or streets.
3. Reduce ground speed when turning and take care that the spreader does not strike obstacles such as trees, fences or buildings.

5 - REPAIR PROCEDURES



CAUTION: all repair procedures must be done by authorised dealerships. It is not recommended that untrained individuals perform any repair work.

If cracks and scorings have occurred on the machine:

1. brush them using a wire brush and touch-up with primer and paint.
2. Store the implement on wooden boards.

5.01 - Suggested Spare Parts

It is suggested that the following spare parts be kept on hand for the spreader at all times to prevent a minor problem from delaying work:

Description	Quantity
Hop 100:	
Spreader disc	1
Threaded bushing	1
Agitator	1
Hop 160:	
Spreader disc	1
Agitator	1
Hop 300 & 500:	
Spinner disc wings	1 set
Agitator	1

6 - TROUBLESHOOTING



WARNING: be sure tractor engine is off, parking brake is locked, and key is removed before making any adjustments.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Non uniform spread pattern.	Spinner disc wings not positioned properly. Wrong gate opening.	Position spinner disc wings to the proper setting (see section 3.07 - Operating Techniques). Adjust gate openings.
Product not flowing to spinner disc.	Wet product. Powdered product.	Use dry product only. Use optional agitator.
PTO shaft turning but not the gearbox output shaft.	Roll pin missing or sheared on the spinner disc shaft. Broken Ring or Pinion Gear.	Replace roll pin. Replace Ring or Pinion Gear.
Narrow spread width.	Incorrect PTO speed. Hopper too far backwards.	Increase PTO speed to 540 rpm. Shorten the tractor's top link to position spreader so it runs level or inclined slightly forward toward the tractor.

7 - PRE-DELIVERY CHECKLIST

To the dealer: inspect the machine thoroughly after assembly to assure it is functioning properly before delivering it to the customer. The following checklist is a reminder of points to cover. Check off each item as it is found satisfactory or after proper adjustment is made.

- Gearbox oil level.
- Guards and shield properly fastened.
- Lubrication of grease fittings.
- All hardware properly tightened.
- All decals properly located and readable (**see fig. 2**).
- Blades properly installed, blade bolts & nuts tightened.
- Overall condition (touch up scratches, clean and polish).
- Test run, check for excessive vibration or overheating of bearings.
- Operator's Manual.

Review the operator's manual with the customer. Explain the following:

- Warranty.
- Safe operation and service.
- Correct machine installation and operation.
- Daily and periodic lubrication, maintenance and inspections.
- Troubleshooting.
- Operational procedures and storage.
- Parts and service.
- Remove and fill out the Delivery and Warranty Registration form.
- Give customer the operator's manual and encourage the customer to read the manual carefully.

IMPORTANT: warranty is not valid unless Delivery and Warranty Registration Form in operator's manual is completed in detail and mailed to the Company.

Model Number: _____

Serial Number: _____

Delivery Date: _____

Dealer's Signature: _____

8 - WARRANTY

The Company warrants its machine from defects in material and workmanship. The machines are warranted from the invoice date for the following periods.

1. **24 months** for private use.
2. **12 months** for commercial, contractual and public use.
3. **30 days** for loan or rental.

This warranty is valid only if the Warranty Registration Form is properly completed and sent to the Company within 14 days of delivery along with copy of the invoice.

This warranty is valid only if the machine is paid for in full.

The warranty coverage shall not be transferable from the first owner to any subsequent owner.

This document is the only warranty for this machine, any other promises, express or implied other than those set forth herein are not applicable.

The customer can not request any special provisions or changes to this warranty covering additional responsibilities or liability from the Company.

The Company determines whether the warranty covers the substitution or the repairing of the machine or parts.

The customer is responsible, in all cases, for expenses of lubricants, transportation, any custom duties and applicable taxes.

The substitution or the repair of parts under warranty do not extend the length of said warranty.

This limited warranty does not apply to and excludes drivelines and driveline related safety devices (shear pin yokes, shear pins, slip clutches, clutch discs), tires, belts, blades and other wear items.

At no time will the responsibility of the Company surpass the original purchase price of the machine. The purchaser agrees, not to have any rights to any compensation from the Company, including but not limited to, any eventual damages or accidents, loss of profit, loss of sales, injuries or damages of any kind or nature, or other accidents or losses which could result.

If during the period covered by this warranty, the machine fails to perform due to material or workmanship defects, the purchaser is to immediately make the Company aware of this defect. It is the Company's right to determine if the machine is to have parts replaced, repaired or the machine returned.

The Company will not accept any returned items without prior express written authorisation.

This warranty does not cover cost of labour for the replacement of parts.

Misuse or use of this machine other than ways outlined in the operator's manual or literature invalidates this warranty.

All obligations of the Company under this limited warranty shall be terminated if original parts of this machine have been modified or altered in any way, the machine has been repaired by unauthorised dealers, or when unauthorised spare parts have been used. The Company reserves the right to modify or update machines without the obligation of modifying or updating previously sold machines.

Venue: any judgements will be decided by the Verona Court.

EC Declaration of Conformity

according to Directive 2006/42/EC

We

ROTOMECC spa
Via Molino di Sopra, 56
37054 Nogara (Verona), Italy

declare under our sole responsibility, that the product

Fertiliser Spreader
Hop '100', '160', '300' & '500'

to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive 2006/42/EC.

For the relevant implementation of the safety and health requirements mentioned in the Directives, the following standards were consulted: EN 14017/2005 and ISO 4254-1.

Pio G. Figna
Chief Executive Officer

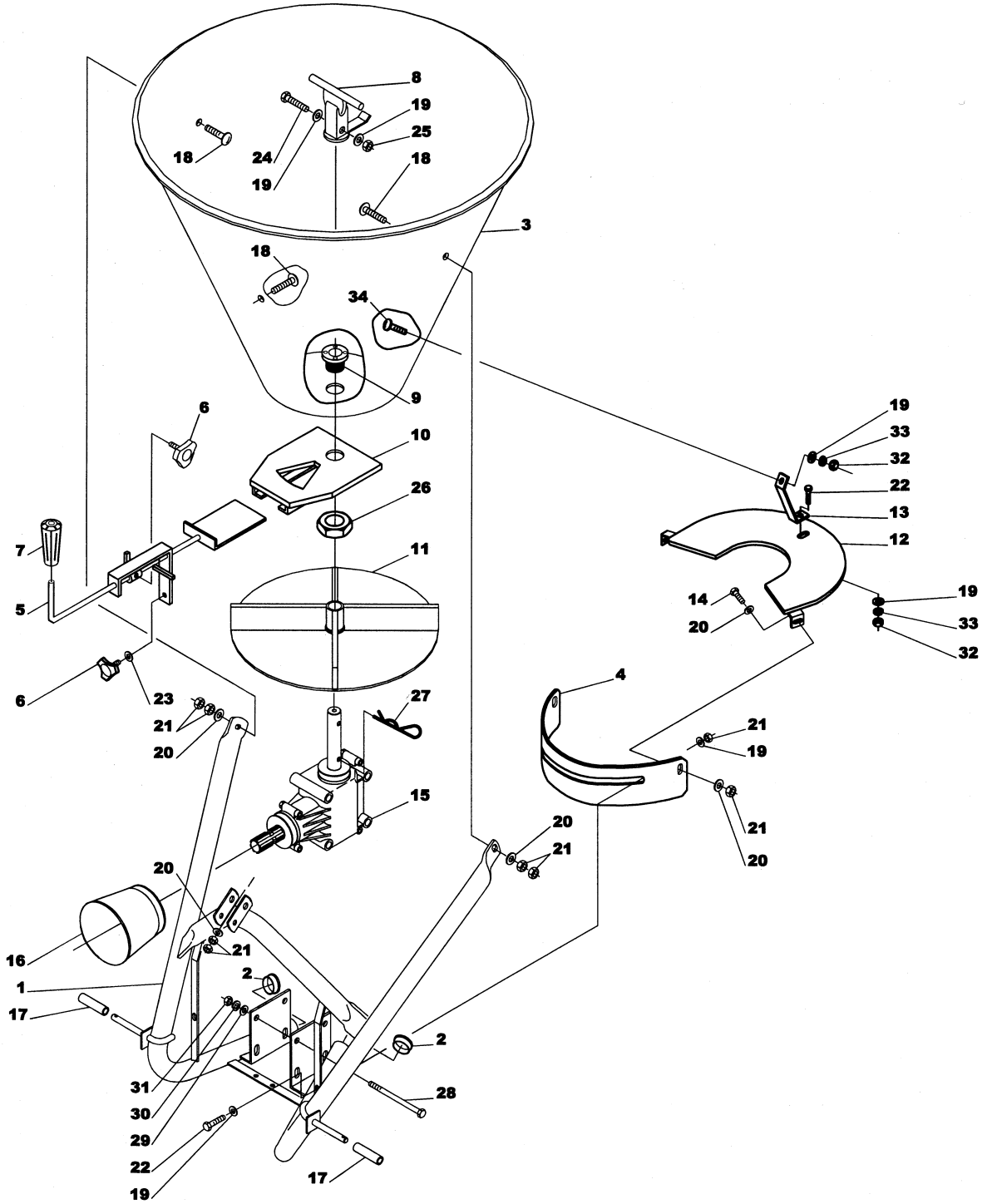
Nogara, lì

Determination of sound power level:

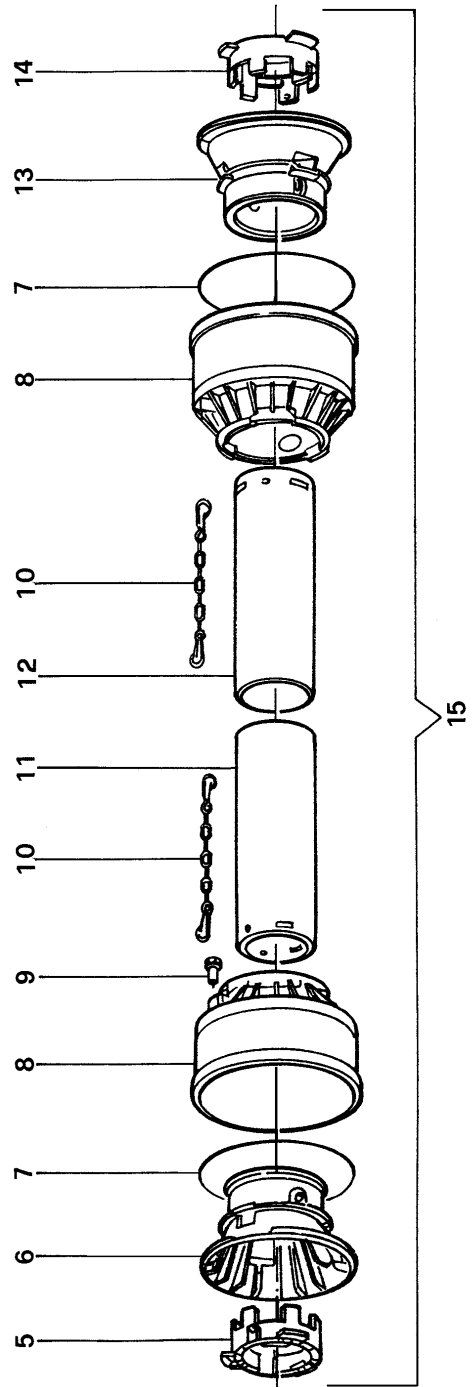
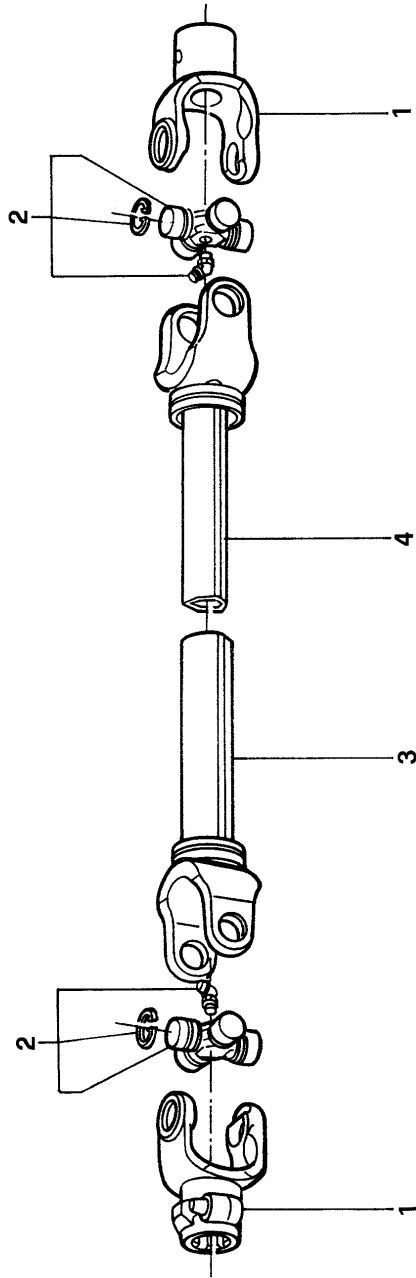
While working the spreader does not overcome the acoustic pressure of 80 dB.

9 - PARTS MANUAL

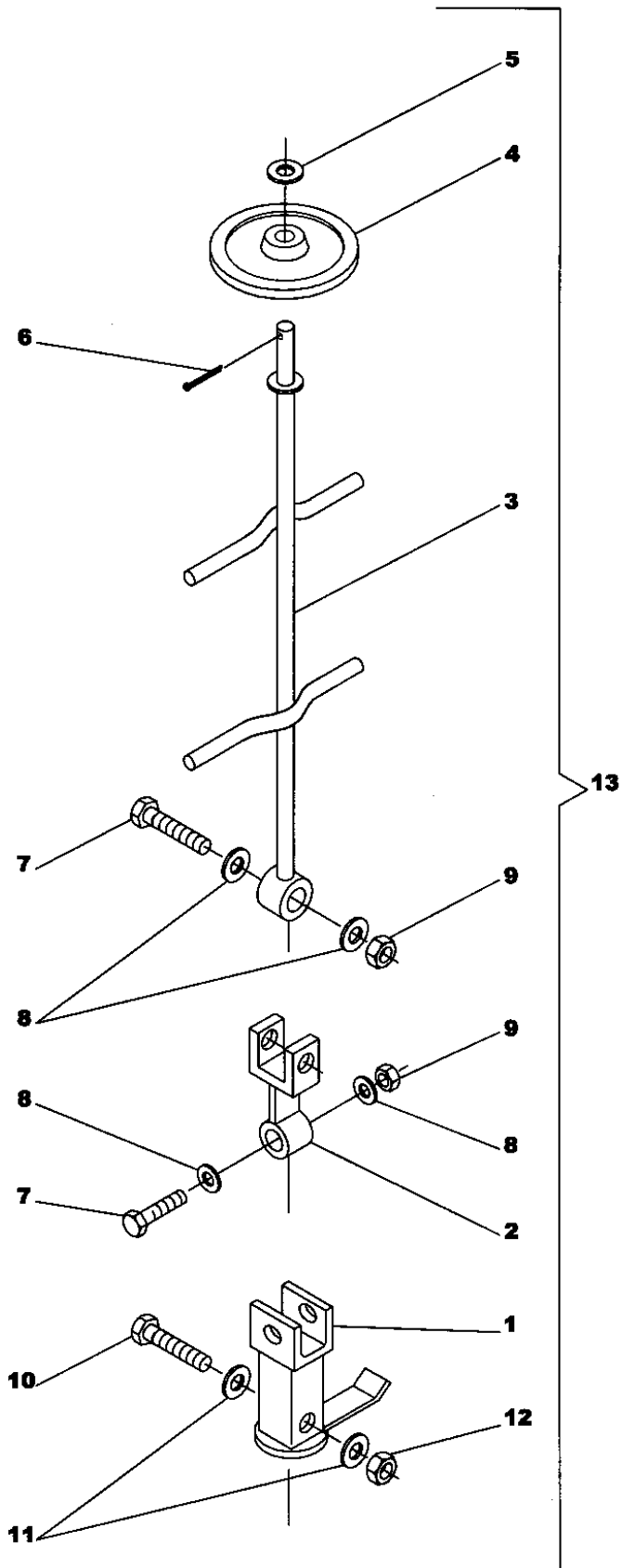
Hop 100



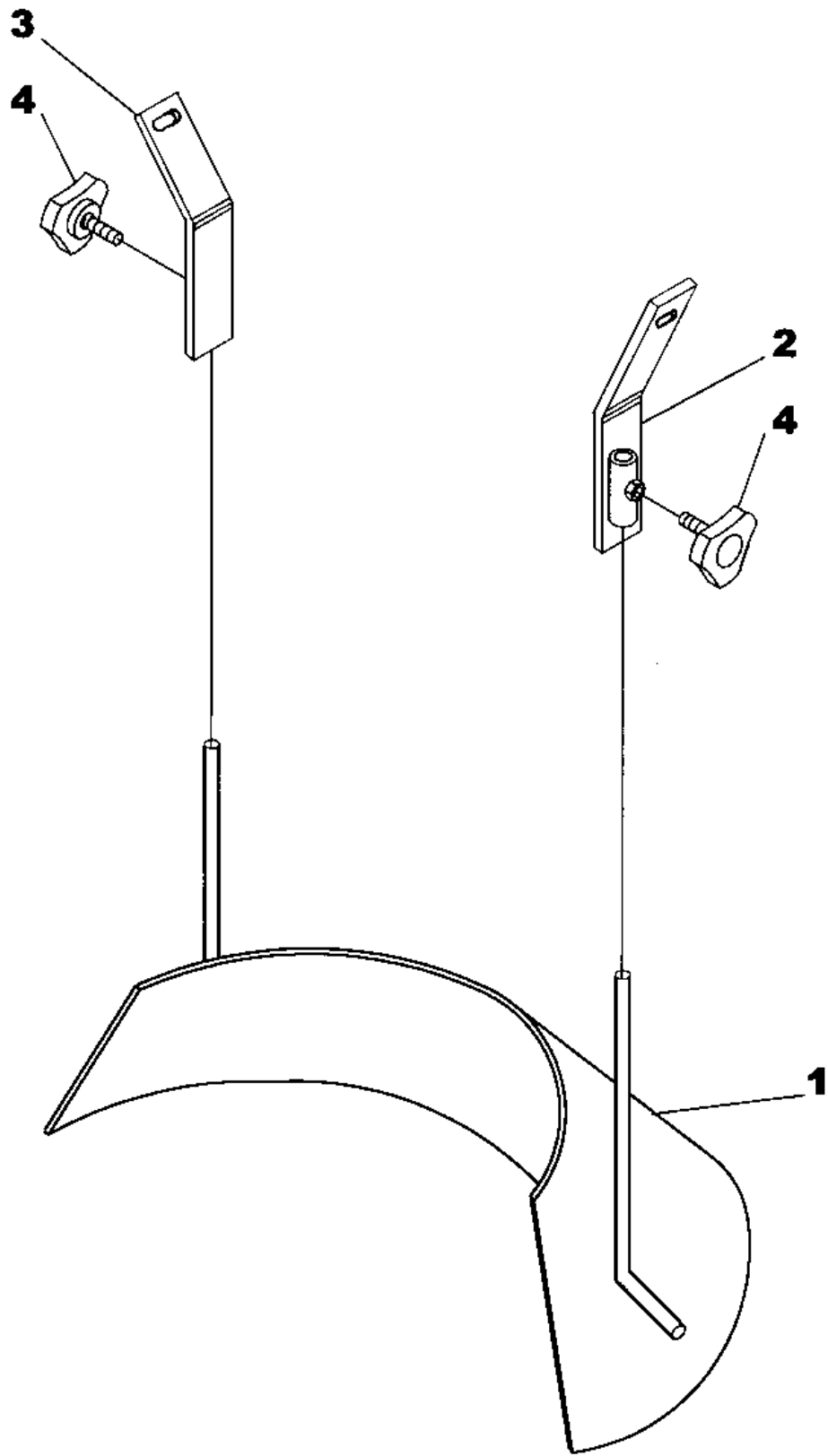
N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	501-660B	Telaio v.100	Frame v.100	Châssis v.100	Rahmen v.100	1
2	0014616	Tappo in gomma D.45	Rubber cap D.45	Bouchon D.45	Deckel D.45	2
3	501-661B	Tramoggia v.100	Hopper v.100	Trémie v.100	Trichter v.100	1
4	501-668B	Protezione	Protection	Protection	Schutz	1
5	501-630B	Gruppo registro portina	Shutter adjusting device	Groupe de réglage	Türeinsteilaggreat	1
6	501-631B	Volantino D.6x16	Adjustment knob D.6x16	Vis de fixation D. 6x16	Stellschraube D.6x16	2
7	501-639B	Pomello registro portina	Shutter regulation knob	Pommeau de réglage	Türeinsteilgriff	1
8	501-123B	Agitatore fisso	Stationary stirrer	Agitateur fixe	Feststehender Rührer	1
9	501-622B	Boccola filettata	Threaded bushing	Douille	Gewindebüchse	1
10	501-652B	Portina mobile	Mobile shutter	Plaque de réglage	Bewegliche Tür	1
11	501-650B	Disco spanditore	Spreader disc	Disque de distribution	Streuscheibe	1
12	0014627	Protezione	Protection	Protection	Schutz	1
13	0014338	Piatto di attacco	Attachment plate	Plaque d'attache	Anschlußplatte	1
14	0015012	Vite TE D.8x20	Bolt TE D.8x20	Vis TE D.8x20	Schraube TE D.8x20	2
15	501-670B	Gruppo scatola	Gearbox	Boîtier	Gehäusegruppe	1
16	0014466	Protezione cardano	Shaft protection	Protection arbre	Kardangelenschutz	1
17	0014710	Boccola per cat.1	Bushing for cat. 1	Douille pour cat. 1	Büchse für Kat. 1	2
18	501-663B	Vite TT D.8x25	Bolt TT D.8x25	Vis TT D.8x25	Schraube TT D.8x25	3
19	0015230	Rondella piana D.8x17	Flat washer D.8x17	Rondelle plate D.8x17	Flache Scheibe D.8x17	8
20	0014514	Rondella piana D.8x24	Flat washer D.8x24	Rondelle plate D.8x24	Flache Scheibe D.8x24	7
21	0001806	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	10
22	0046454	Vite TE D.8x16	Bolt TE D.8x16	Vis TE D.8x16	Schraube TE D.8x16	3
23	0011209	Rondella piana D.6x18	Flat washer D.6x18	Rondelle plate D.6x18	Flache Scheibe D.6x18	1
24	0015220	Vite TE D.8x35	Bolt TE D.8x35	Vis TE D.8x35	Schraube TE D.8x35	1
25	0091384	Dado autobloccante D.8	Locking nut D.8	Ecrou autobloquant D.8	Mutter D.8	1
26	501-651B	Dado D.30 BPF	Nut D.30 BPF	Ecrou D.30 BPF	Mutter D.30 BPF	1
27	501-657B	Copiglia a molla D.5	R shaped cotter pin D.5	Goupille ressort D.5	Federsplint D.5	1
28	0015273	Vite TE D.10x110	Bolt TE D.10x110	Vis TE D.10x110	Schraube TE D.10x110	4
29	0002034	Rondella piana D.10x21	Flat washer D.10x21	Rondelle plate D.10x21	Flache Scheibe D.10x21	4
30	0001280	Rondella grower D.10	Spring washer D.10	Rondelle élastique D.10	Scheibe D.10	4
31	0090150	Dado D.10	Nut D.10	Ecrou D.10	Mutter D.10	4
32	0046545	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	2
33	0003144	Rondella grower D.8	Spring washer D.8	Rondelle élastique D.8	Scheibe D.8	2
34	0084289	Vite TT D.8x20	Bolt TT D.8x20	Vis TT D.8x20	Schraube TT D.8x20	1



N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	1021010C	Forcella P.D.F.	PTO Yoke	Fourche P.D.F.	Aufsteckgabel	2
2	1001005C	Crociera	Cross & Bearing	Croisillon	Kreuzgelenk	2
3	1981034NC	Tubo esterno	Outer tube	Tube externe	Außenrohr	1
4	1991035NC	Tubo interno	Inner tube	Tube interne	Innenrohr	1
5	1781005C	Anello tubo esterno	Outer locking ring	Anneau tube externe	Außenrohrring	1
	1781210C	Anello tubo esterno dal 01/10/05	Outer locking ring since 01/10/05	Anneau tube externe dès 01/10/05	Außenrohrring ab 01/10/05	1
6	1784201C	Controcuffia tubo esterno	Outer tube rigid cone	Contre coiffe tube externe	Außenrohrgegentopf	1
7	1211233C	Anello di rinforzo	Stiffening ring	Anneau de renforcement	Verstärkungsring	2
	1213233C	Anello di rinforzo dal 01/10/05	Stiffening ring since 01/10/05	Anneau de renforcement dès 01/10/05	Verstärkungsring ab 01/10/05	2
8	1781003C	Cuffia esterna	Outer cone	Coiffe externe	Außenschutztopf	2
	1784203C	Cuffia esterna dal 01/10/05	Outer cone since 01/10/05	Coiffe externe dès 01/10/05	Außenschutztopf ab 01/10/05	2
9	1784212C	Spina di bloccaggio	Pin	Goupille	Haltestift	2
10	1006065C	Catenella	Chain	Chaîne	Kette	2
11	1770036C	Tubo protezione esterna	Female tube shield	Tube protection femelle	Außenschutzrohr	1
	1773032C	Tubo protezione esterna dal 01/10/05	Female tube shield since 01/10/05	Tube protection femelle dès 01/10/05	Außenschutzrohr ab 01/10/05	1
12	1871036C	Tubo protezione interna	Male tube shield	Tube protection mâle	Innenschutzrohr	1
	1872032C	Tubo protezione interna dal 01/10/05	Male tube shield since 01/10/05	Tube protection mâle dès 01/10/05	Innenschutzrohr ab 01/10/05	1
13	1784202C	Controcuffia tubo interno	Inner tube rigid cone	Contre coiffe tube interne	Innenrohrgegentopf	1
14	1781004C	Anello tubo interno	Inner locking ring	Anneau tube interne	Innenrohrring	1
	1781211C	Anello tubo interno dal 01/10/05	Inner locking ring since 01/10/05	Anneau tube interne dès 01/10/05	Innenrohrring ab 01/10/05	1
15	92SS1033C	Protezione completa	Complete shielding	Protection complète	Kompletter Schutz	1
	90SS1032C	Protezione completa dal 01/10/05	Complete shielding since 01/10/05	Protection complète dès 01/10/05	Kompletter Schutz ab 01/10/05	1
	8680105C	Cardano	PTO shaft	Arbre à cardan	Kardangelen	1
	0500474	Cardano dal 01/10/05	PTO shaft	Arbre à cardan	Kardangelen	1



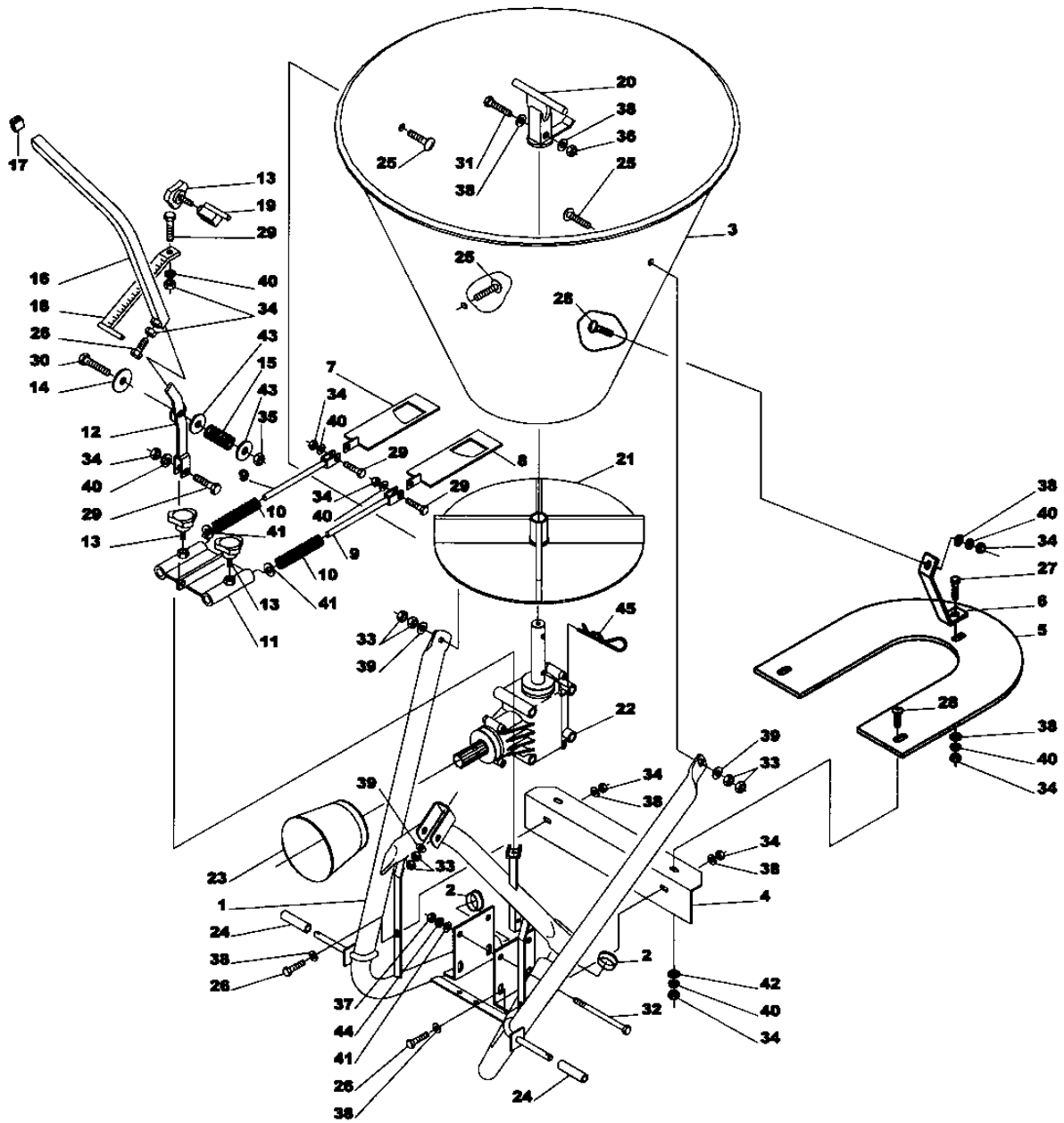
N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	0014721	Agitatore per polvere	Articulated powder stirrer	Agitateur pour poudre	Pulverrührer	1
2	0014730	Attacco asta agitatore	Agitator rod hitch	Attache tige pour agitateur	Rührerstangenkupplung	1
3	0014735	Asta snodata per polvere	Articulated stirrer beam	Tige articulée pour poudre	Gelenkstange für Pulver	1
4	502-005B	Ruota appoggio in gomma	Articulated stirrer wheel	Roue d'appui en caoutchouc	Stützrad aus Gummi	1
5	0002265	Rondella piana D.12	Flat washer D.12	Rondelle plate D.12	Flache Scheibe D.12	1
6	502-006B	Copiglia D.4x35	Cotter pin D.4x35	Goupille D.4x35	Splint D.4x35	1
7	0014477	Vite TE D.10x60	Bolt TE D.10x60	Vis TE D.10x60	Schraube TE D.10x60	2
8	0002034	Rondella piana D.10	Flat washer D.10	Rondelle plate D.10	Flache Scheibe D.10	4
9	0014106	Dado D.10	Nut D.10	Ecrou D.10	Mutter D.10	2
10	0014427	Vite TE D.8x45	Bolt TE D.8x45	Vis TE D.8x45	Schraube TE D.8x45	1
11	0015230	Rondella piana D.8	Flat washer D.8	Rondelle plate D.8	Flache Scheibe D.8	2
12	0091384	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	1
13	AA2-120	Agitatore a ruota	Agitator extension	Agitateur à roue	Rührer mit Rad	1



N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	501-653B	Deflettore per regolazione	Deflector shield	Défecteur pour le réglage	Umlenblech zur Einstellung	1
2	0214680	Attacco deflettore sinistro	Left deflector connection	Attelage déflecteur gauche	Linke Umlenblechankupplung	1
3	0114680	Attacco deflettore destro	Right deflector connection	Attelage déflecteur droit	Rechte Umlenblechankupplung	1
4	501-631B	Volantino D.6x16	Adjustment knob D.6x16	Vis de fixation D.6x16	Stellschraube D.6x16	2

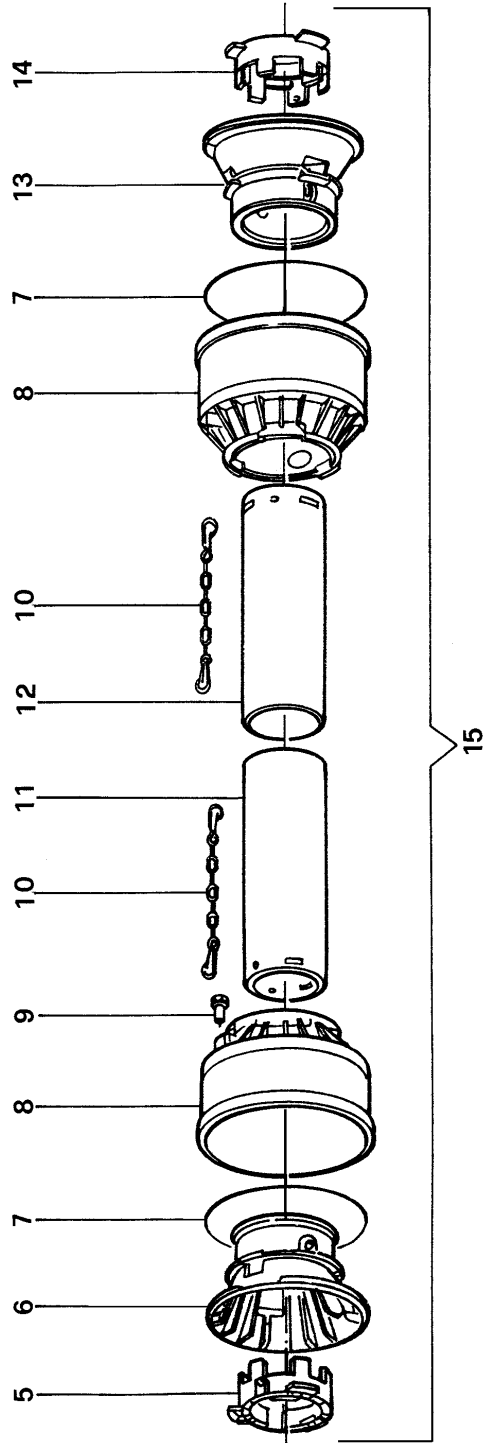
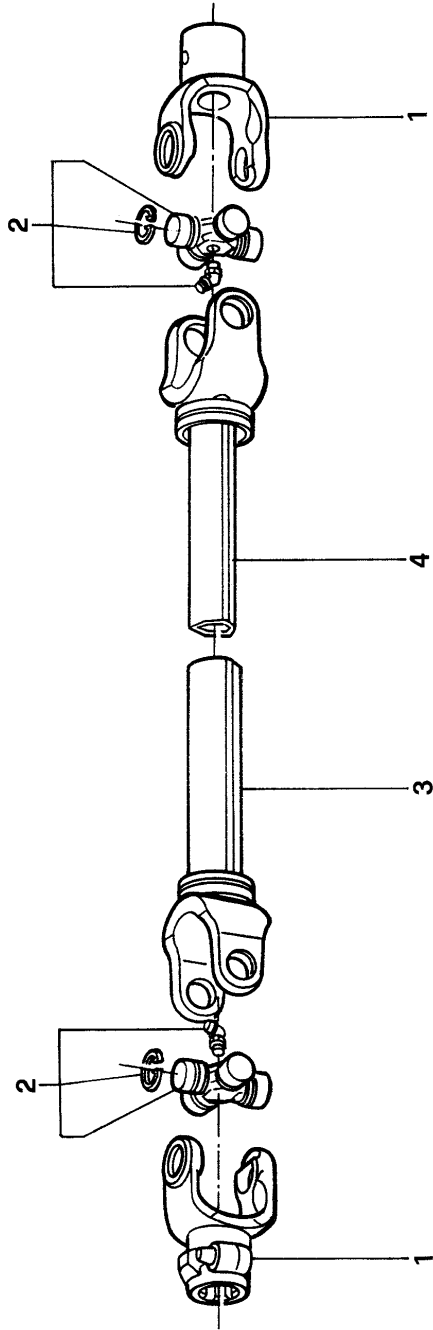
N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	0014601	Telaio v.160	Frame v.160	Châssis v.160	Rahmen v.160	1
2	0014616	Tappo in gomma D.45	Rubber cap D.45	Bouchon D.45	Deckel D.45	2
3	0214624	Tramoggia v.160	Hopper v.160	Trémie v.160	Trichter v.160	1
4	0014630	Protezione	Protection	Protection	Schutz	1
5	0014632	Protezione	Protection	Protection	Schutz	1
6	0014338	Piatto di attacco	Attachment plate	Plaque d'attache	Anschlußplatte	1
7	0114640	Portina destra	Right shutter	Plaque de réglage droite	Rechte Tür	1
8	0214640	Portina sinistra	Left shutter	Plaque de réglage gauche	Linke Tür	1
9	0014641	Tirante	Tie rod	Tirant complet	Komplette Spindel	2
10	502-024B	Molla tirante	Tension spring	Ressort	Zugfeder	2
11	502-025B	Piastra attacco tiranti	Tie attachment plate	Plaque	Zugstangenankupplungsplatte	1
12	502-002B	Supporto leva	Lever bracket	Support levier	DC-Hebelauflage	1
13	501-589B	Volantino D.8x15	Hand wheel D.8x15	Vis fixation couvercle D.8x15	Stellrad D.8x15	3
14	501-585B	Rondella nylon D.12x48x3	Nylon washer D.12x48x3	Rondelle en nylon D.12x48x3	Scheibe D.12x48x3	1
15	501-586B	Molla	Spring	Ressort	Feder	1
16	0014643	Leva	Lever	Levier	Hebel	1
17	0014391	Tappo in gomma	Rubber cap	Bouchon	Deckel	1
18	0014645	Indice graduato	Scaled rod	Index gradué	Gradanzeiger	1
19	502-008B	Fermo leva	Lever stop	Arrêt pour levier	Hebelfeststeller	1
20	501-597B	Agitatore fisso	Stationary stirrer	Agitateur fixe	Feststehender Rührer	1
21	0014647	Disco spanditore	Spreader disc	Disque de distribution	Streuscheibe	1
22	502-026B	Scatola ingranaggi	Gearbox	Boîtier	Gehäusegruppe	1
23	0014466	Protezione cardano	Shaft protection	Protection arbre	Kardangelenschutz	1
24	0014710	Boccola per cat.1	Bushing for cat. 1	Douille pour cat. 1	Büchse für Kat. 1	2
25	501-663B	Vite TT D.8x25	Bolt TT D.8x25	Vis TT D.8x25	Schraube TT D.8x25	3
26	0015012	Vite TE D.8x20	Bolt TE D.8x20	Vis TE D.8x20	Schraube TE D.8x20	3
27	0046454	Vite TE D.8x16	Bolt TE D.8x16	Vis TE D.8x16	Schraube TE D.8x16	1
28	0084289	Vite TT D.8x20	Bolt TT D.8x20	Vis TT D.8x20	Schraube TT D.8x20	3
29	0091446	Vite TE D.8x25	Bolt TE D.8x25	Vis TE D.8x25	Schraube TE D.8x25	4
30	0007128	Vite TE D.12x80	Bolt TE D.12x80	Vis TE D.12x80	Schraube TE D.12x80	1
31	0014427	Vite TE D.8x45	Bolt TE D.8x45	Vis TE D.8x45	Schraube TE D.8x45	1
32	0015273	Vite TE D.10x110	Bolt TE D.10x110	Vis TE D.10x110	Schraube TE D.10x110	4
33	0001806	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	6
34	0046545	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	11
35	0013345	Dado autobloccante D.12	Locking nut D.12	Ecrou autobloquant D.12	Mutter D.12	1
36	0091384	Dado autobloccante D.8	Locking nut D.8	Ecrou autobloquant D.8	Mutter D.8	1
37	0090150	Dado D.10	Nut D.10	Ecrou D.10	Mutter D.10	4
38	0015230	Rondella piana D.8x17	Flat washer D.8x17	Rondelle plate D.8x17	Flache Scheibe D.8x17	8

39	0014514	Rondella piana D.8x24	Flat washer D.8x24	Rondelle plate D.8x24	Flache Scheibe D.8x24	3
40	0003144	Rondella grower D.8	Spring washer D.8	Rondelle à ressort D.8	Scheibe D.8	9

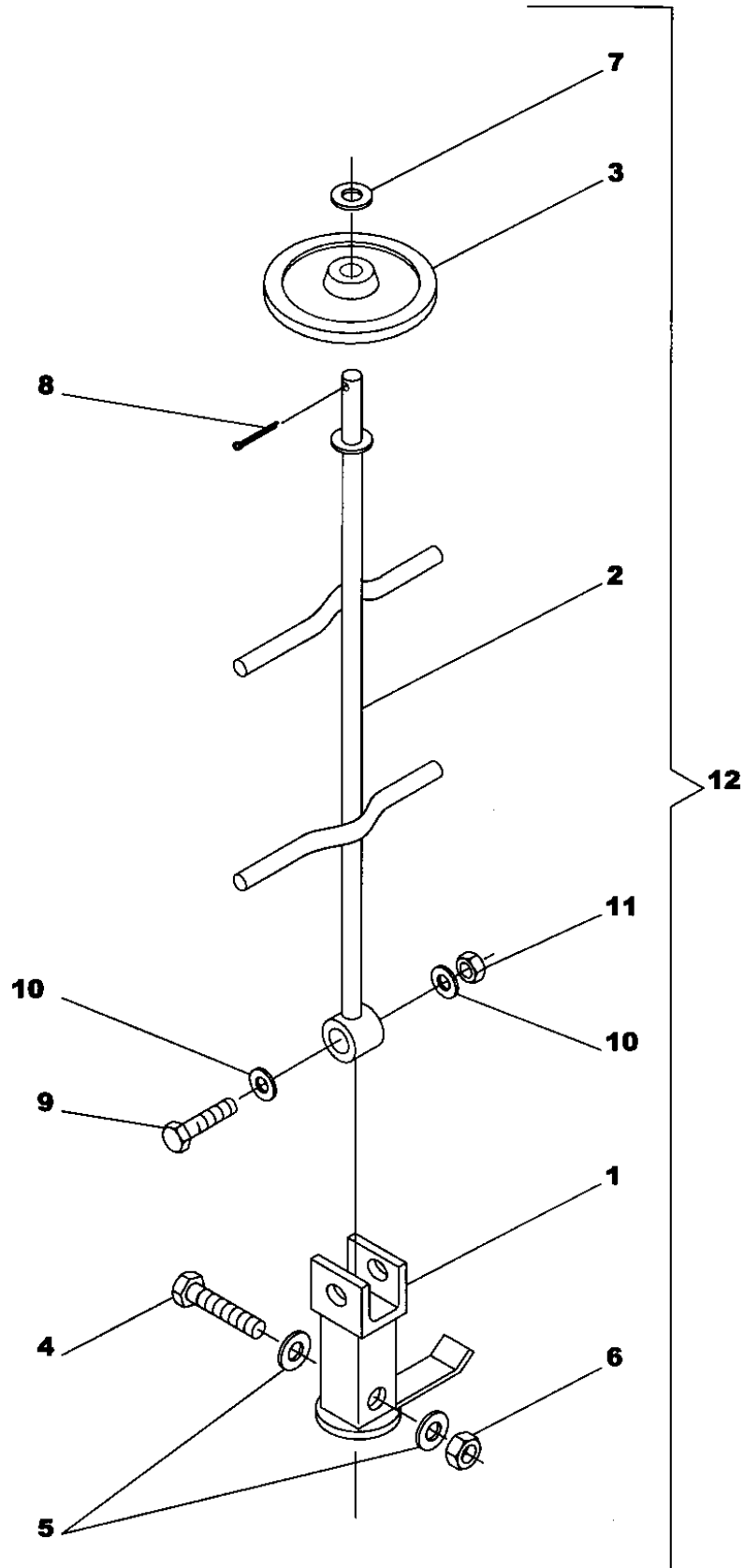
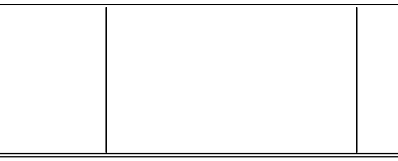


N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
41	0002034	Rondella piana D.10x21	Flat washer D.10x21	Rondelle plate D.10x21	Flache Scheibe D.10x21	6
42	0030157	Rondella piana D.10x30	Flat washer D.10x30	Rondelle plate D.10x30	Flache Scheibe D.10x30	2
43	0091435	Rondella piana D.14x28	Flat washer D.14x28	Rondelle plate D.14x28	Flache Scheibe D.14x28	2
44	0001280	Rondella grower D.10	Spring washer D.10	Rondelle élastique D.10	Scheibe D.10	4
45	501-657B	Copiglia a molla D.5	R shaped cotter pin D.5	Goupille ressort D.5	Federsplint D.5	1

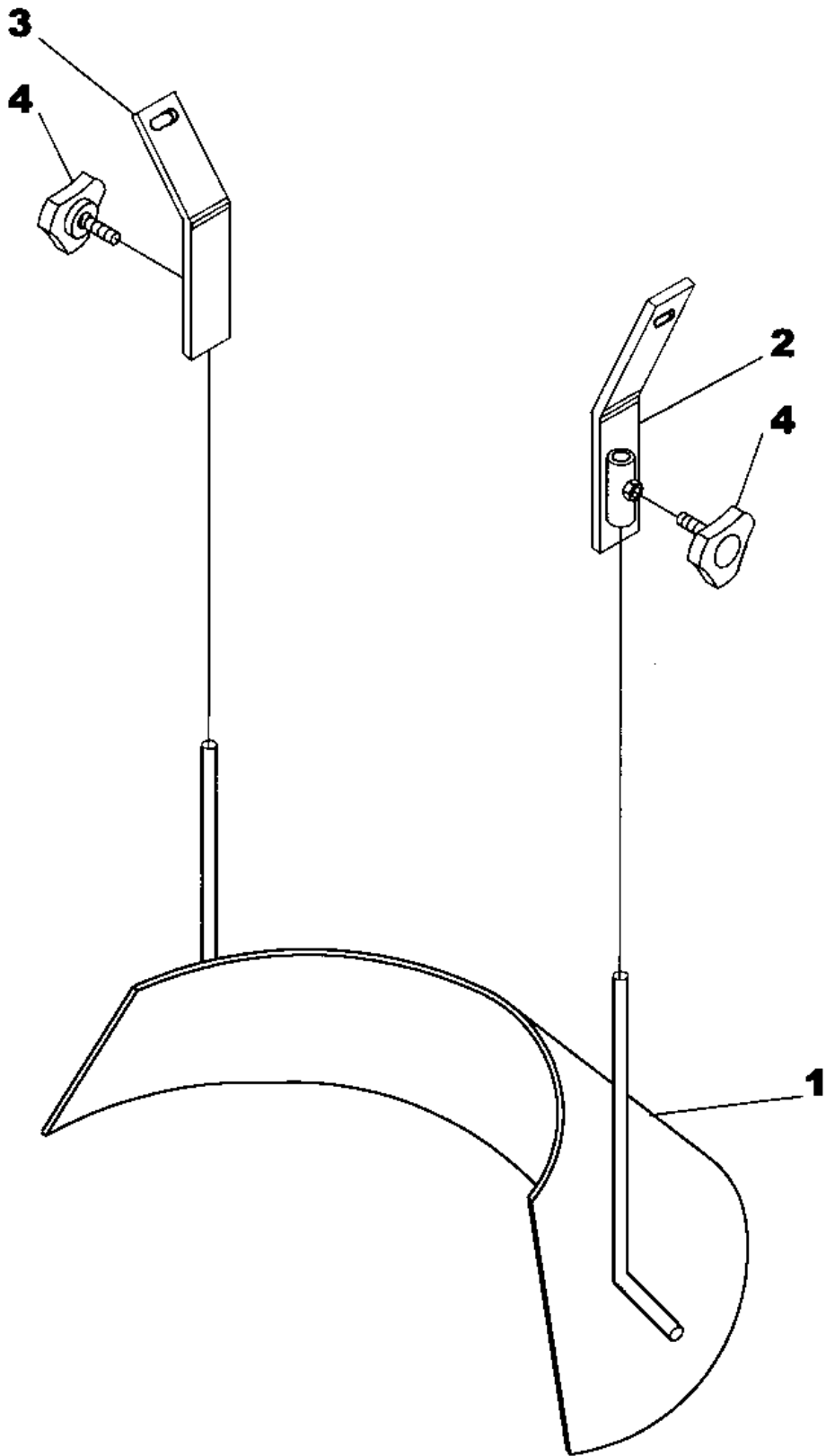
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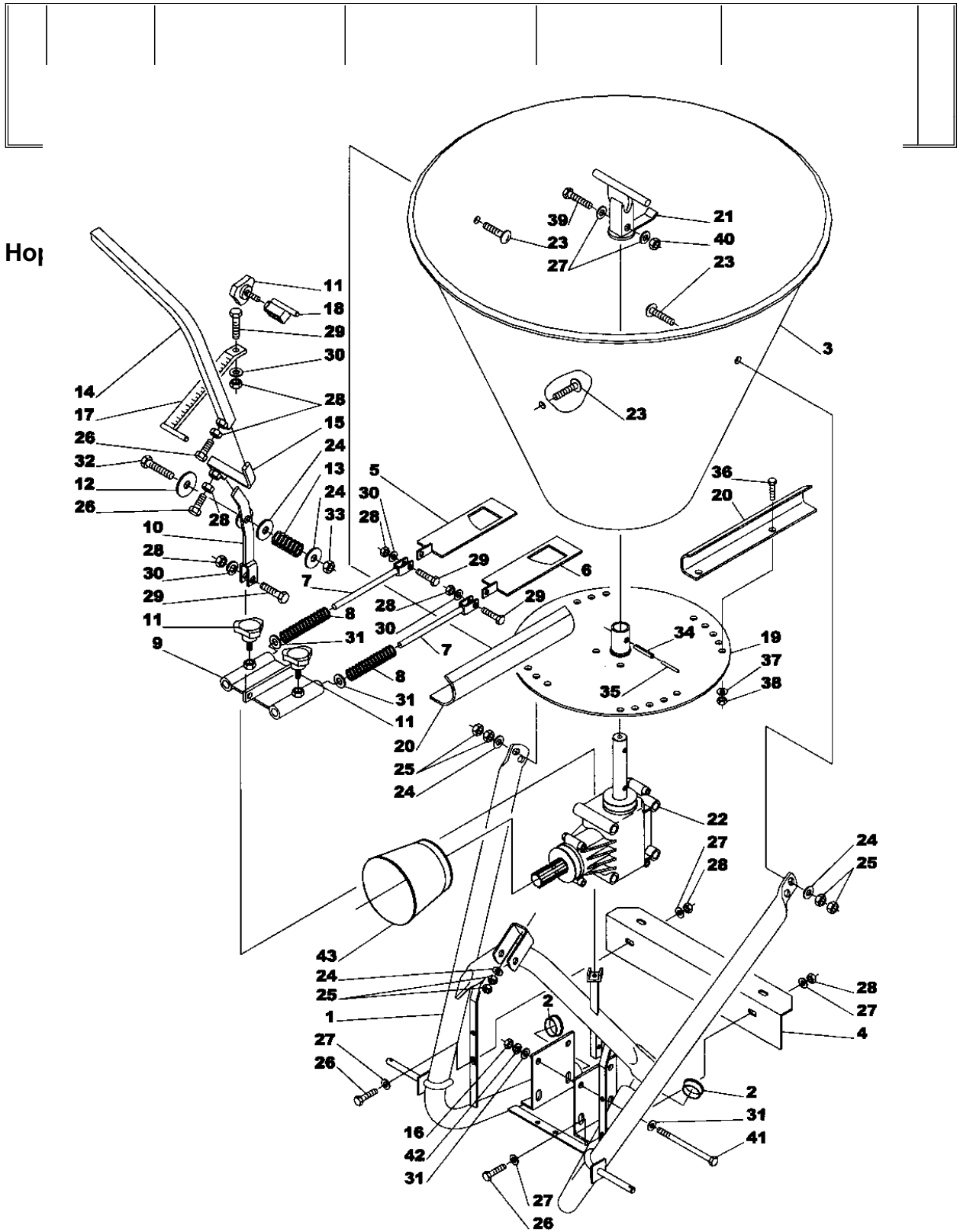
N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	1021010C	Forcella P.D.F.	PTO Yoke	Fourche P.D.F.	Aufsteckgabel	2
2	1001005C	Crociera	Cross & Bearing	Croisillon	Kreuzgelenk	2
3	1981034NC	Tubo esterno	Outer tube	Tube externe	Außenrohr	1
4	1991035NC	Tubo interno	Inner tube	Tube interne	Innenrohr	1
5	1781210C	Anello tubo esterno	Outer locking ring	Anneau tube externe	Außenrohrring	1
6	1784201C	Controcuffia tubo esterno	Outer tube rigid cone	Contre coiffe tube externe	Außenrohrgegentopf	1
7	1213233C	Anello di rinforzo	Stiffening ring	Anneau de renforcement	Verstärkungsring	2
8	1784203C	Cuffia esterna	Outer cone	Coiffe externe	Außenschutztopf	2
9	1784212C	Spina di bloccaggio	Pin	Goupille	Haltestift	2
10	1006065C	Catenella	Chain	Chaîne	Kette	2
11	1773032C	Tubo protezione esterna	Female tube shield	Tube protection femelle	Außenschutzrohr	1
12	1872032C	Tubo protezione interna	Male tube shield	Tube protection mâle	Innenschutzrohr	1
13	1784202C	Controcuffia tubo interno	Inner tube rigid cone	Contre coiffe tube interne	Innenrohrgegentopf	1
14	1781211C	Anello tubo interno	Inner locking ring	Anneau tube interne	Innenrohrring	1
15	90SS1032C	Protezione completa	Complete shielding	Protection complète	Kompletter Schutz	1
	0500474	Cardano	PTO shaft	Arbre à cardan	Kardangelenk	1



N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	502-019B	Agitatore per polvere	Articulated powder stirrer	Agitateur pour poudre	Pulverrührer	1
2	502-007B	Asta snodata per polvere	Articulated stirrer beam	Tige articulée pour poudre	Gelenkstange für Pulver	1
3	502-005B	Ruota appoggio in gomma	Articulated stirrer wheel	Roue d'appui en caoutchouc	Stützrad aus Gummi	1
4	0014490	Vite TE D.8x50	Bolt TE D.8x50	Vis TE D.8x50	Schraube TE D.8x50	1
5	0015230	Rondella piana D.8	Flat washer D.8	Rondelle plate D.8	Flache Scheibe D.8	2
6	0091384	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	1
7	0002265	Rondella piana D.12	Flat washer D.12	Rondelle plate D.12	Flache Scheibe D.12	1
8	502-006B	Copiglia D.4x35	Cotter pin D.4x35	Goupille D.4x35	Splint D.4x35	1
9	0014477	Vite TE D.10x60	Bolt TE D.10x60	Vis TE D.10x60	Schraube TE D.10x60	1
10	0002034	Rondella piana D.10	Flat washer D.10	Rondelle plate D.10	Flache Scheibe D.10	2
11	0014106	Dado D.10	Nut D.10	Ecrou D.10	Mutter D.10	1
12	AA3-120	Agitatore a ruota	Agitator extension	Agitateur à roue	Rührer mit Rad	1

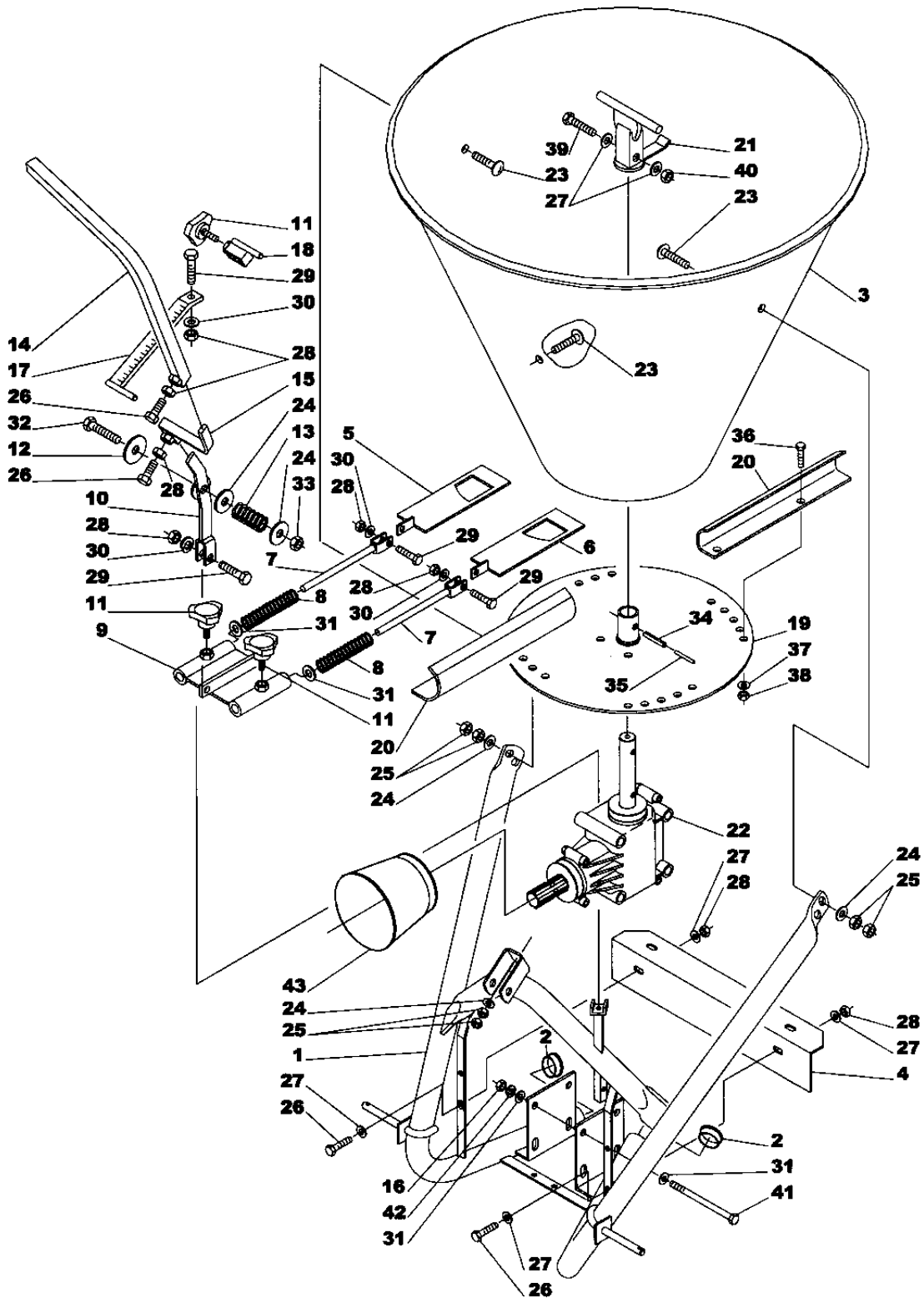


N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	501-653B	Deflettore per regolazione	Deflector shield	Défecteur pour le réglage	Umlenblech zur Einstellung	1
2	0214680	Attacco deflettore sinistro	Left deflector connection	Attelage déflecteur gauche	Linke Umlenblechankupplung	1
3	0114680	Attacco deflettore destro	Right deflector connection	Attelage déflecteur droit	Rechte Umlenblechankupplung	1
4	501-631B	Volantino D.6x16	Adjustment knob D.6x16	Vis de fixation D.6x16	Stellschraube D.6x16	2

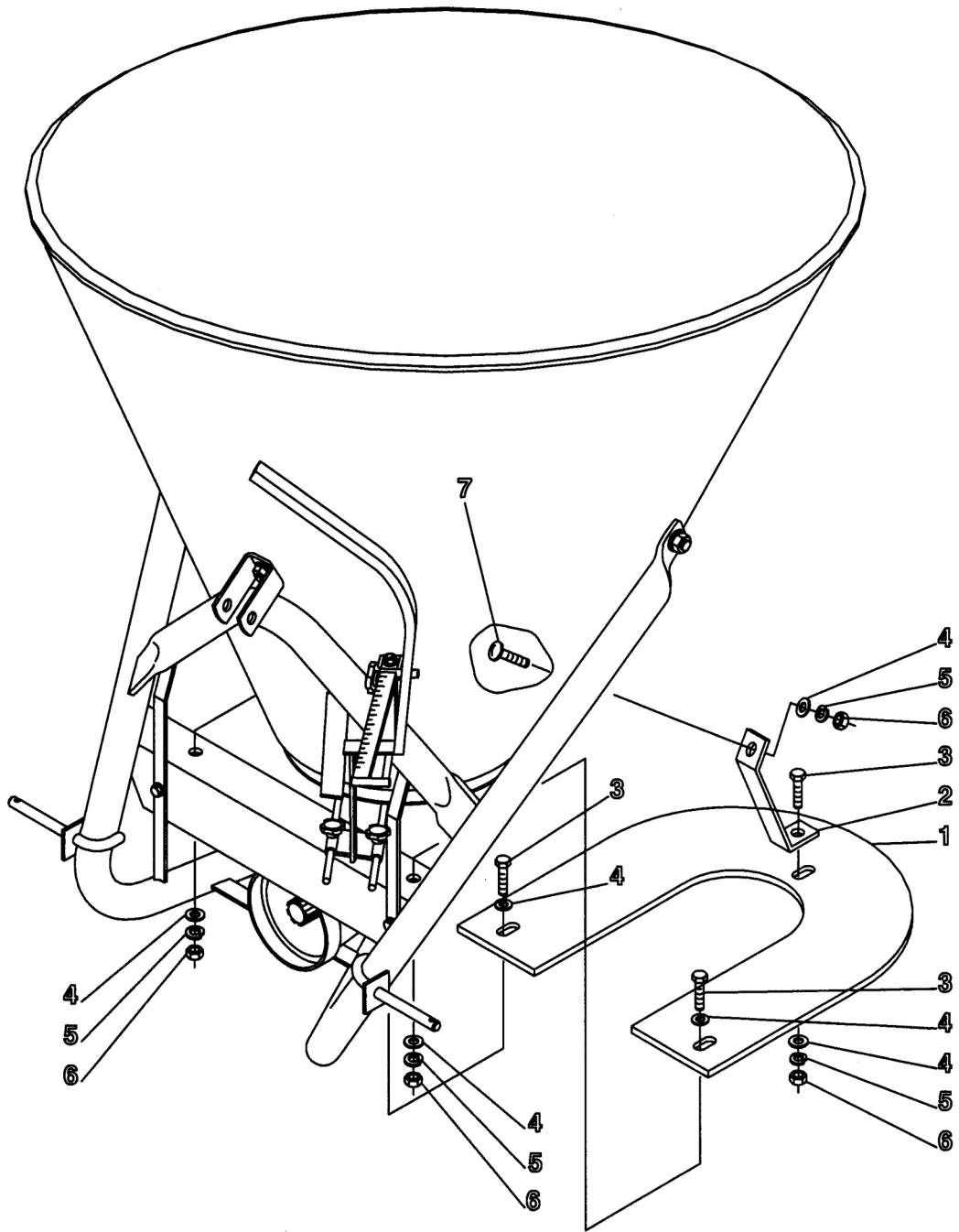


N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	502-011B	Telaio v.300-500	Frame v.300-500	Châssis v.300-500	Rahmen v.300-500	1
2	502-020B	Tappo in gomma D.60	Rubber cap D.60	Bouchon D.60	Deckel D.60	2
3	502-014B	Tramoggia v.300	Hopper v.300	Trémie v.300	Trichter v.300	1
	502-015B	Tramoggia v.500	Hopper v.500	Trémie v.500	Trichter v.500	1
4	502-013B	Protezione	Protection	Protection	Schutz	1
5	502-009B	Portina destra	Right shutter	Plaque de réglage droite	Rechte Tür	1
6	502-003B	Portina sinistra	Left shutter	Plaque de réglage gauche	Linke Tür	1
7	502-004B	Tirante	Tie rod	Tirant complet	Komplette Spindel	2
8	502-024B	Molla tirante	Tension spring	Ressort	Zugfeder	2
9	502-025B	Piastra attacco tiranti	Tie attachment plate	Plaque	Zugstangenankupplungsplatte	1
10	502-002B	Supporto leva	Lever bracket	Support levier	DC-Hebelauflage	1
11	501-589B	Volantino D.8x15	Hand wheel D.8x15	Vis fixation couvercle D.8x15	Stellrad D.8x15	3
12	501-585B	Rondella nylon D.12x48x3	Nylon washer D.12x48x3	Rondelle en nylon D.12x48x3	Scheibe D.12x48x3	1
13	501-586B	Molla	Spring	Ressort	Feder	1
14	0014380	Leva	Lever	Levier	Hebel	1
15	0014384	Attacco Leva	Hitch Lever	Attache Levier	Ankupplung Hebel	1
16	0090150	Dado D.10	Nut D.10	Ecrou D.10	Mutter D.10	4
17	0014396	Indice graduato	Scaled rod	Index gradué	Gradanzeiger	1
18	502-008B	Fermo leva	Lever stop	Arrêt pour levier	Hebelfeststeller	1
19	501-599B	Disco spanditore	Spreader disc	Disque de distribution	Streuscheibe	1
20	501-598B	Aletta spanditrice	Spreader wing	Dispositif de distribution	Getriebedeckel	4
21	501-597B	Agitatore fisso	Stationary stirrer	Agitateur fixe	Feststehender Rührer	1
22	502-026B	Scatola ingranaggi	Gearbox	Boîtier	Gehäusegruppe	1
23	0051073	Vite TT D.12x30	Bolt TT D.12x30	Vis TT D.12x30	Schraube TT D.12x30	3
24	0091435	Rondella piana D.14x28	Flat washer D.14x28	Rondelle plate D.14x28	Flache Scheibe D.14x28	5
25	0001106	Dado D.12	Nut D.12	Ecrou D.12	Mutter D.12	6

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N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
26	0015012	Vite TE D.8x20	Bolt D.8x20	Vis TE D.8x20	Schraube D.8x20	4
27	0015230	Rondella piana D.8x17	Flat washer D.8x17	Rondelle plate D.8x17	Flache Scheibe D.8x17	8
28	0046545	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	8
29	0091446	Vite TE D.8x25	Bolt TE D.8x25	Vis TE D.8x25	Schraube TE D.8x25	5
30	0003144	Rondella grower D.8	Spring washer D.8	Rondelle à ressort D.8	Scheibe D.8	4
31	0002034	Rondella piana D.10x21	Flat washer D.10x21	Rondelle plate D.10x21	Flache Scheibe D.10x21	6
32	0007128	Vite TE D.12x80	Bolt TE D.12x80	Vis TE D.12x80	Schraube TE D.12x80	1
33	0013345	Dado autobloccante D.12	Locking nut D.12	Ecrou autobloquant D.12	Mutter D.12	1
34	0029247	Spina elastica D.8x40	Roll pin D.8x40	Goupille élastique D.8x40	Spannstift D.8x40	1
35	501-596B	Spina elastica D.5x40	Roll pin D.5x40	Goupille élastique D.5x40	Spannstift D.5x40	1
36	0036319	Vite TE D.6x14	Bolt TE D.6x14	Vis TE D.6x14	Schraube TE D.6x14	8
37	0046536	Rondella grower D.6	Spring washer D.6	Rondelle à ressort D.6	Scheibe D.6	8
38	501-603B	Dado D.6	Nut D.6	Ecrou D.6	Mutter D.6	8
39	0014427	Vite TE D.8x45	Bolt TE D.8x45	Vis TE D.8x45	Schraube TE D.8x45	1
40	0091384	Dado autobloccante D.8	Locking nut D.8	Ecrou autobloquant D.8	Mutter D.8	1
41	0015273	Vite TE D.10x110	Bolt TE D.10x110	Vis TE D.10x110	Schraube TE D.10x110	4
42	0001280	Rondella grower D.10	Spring washer D.10	Rondelle élastique D.10	Scheibe D.10	4
43	0014466	Protezione cardano	Shaft protection	Protection arbre	Kardangelenschutz	1



N.	COD.	DESCRIZIONE	DESCRIPTION	DESCRIPTION	BESCHREIBUNG	N.
1	0014337	Protezione	Protection	Protection	Schutz	1
2	0014338	Piatto di attacco	Attachment plate	Plaque d'attache	Anschlußplatte	1
3	0046454	Vite TE D.8x16	Bolt TE D.8x16	Vis TE D.8x16	Schraube TE D.8x16	3
4	0015230	Rondella piana D.8x17	Flat washer D.8x17	Rondelle plate D.8x17	Flache Scheibe D.8x17	6
5	0003144	Rondella grower D.8	Spring washer D.8	Rondelle à ressort D.8	Scheibe D.8	4
6	0046545	Dado D.8	Nut D.8	Ecrou D.8	Mutter D.8	4
7	0084289	Vite TT D.8x20	Bolt TT D.8x20	Vis TT D.8x20	Schraube TT D.8x20	1

