

Operator's Manual

Carefully read these instructions
before starting and using your shredder!

Garden shredder GSE/GSB/GSZ 242

- Set-up & installation
- Use
- Maintenance
- Accessories



MADE IN GERMANY

maschinen

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CE – Statement of Compliance

In accordance with the EC Machine Directive No. 42/2006 and EMV (Low Voltage) Directive 108/2004

We hereby declare that the equipment described in this manual responds in full to the actual version brought on the market. We, the manufacturer further declare that this equipment was duly designed and manufactured in accordance with the actual European Safety and Health Standards settled by the relevant EEC directives as well as the latest electromagnetic standards issued by the European Council of 3.5.89 and later enforced by all member states. This statement of compliance does not apply to customer modifications of the equipment without manufacturer's written approval. The manufacturer shall not be responsible for such modified equipment and machines.

Machine type:	Garden shredder
Model:	GSE 242, GSB 242, GSZ 242
Production number:	See model label
Applicable European Standards:	EC Machine Directive 42/2006 EC Low Voltage Directive (93/68 EWG) 95/2006 EC-EMV (ElectroMagnetic Compatibility) Directive 108/2004
Other Standards:	To assure full compliance with law requirements, due consideration was equally taken for the following harmonized rules: EN 292, EN 294, EN 60204-1 EN 50081-2/07.93; EN 50082-2/03.95 EN55014-1:2006; EN 55014-2:1997+A1; DIN EN 61000-3-2:2006; DIN EN 61000-3-3
Applicable national rules and technical specifications:	International Standards draft "manual, portable garden machines" - TC 144/WG 6 Draft no. 4/94
Person responsible of the technical documents:	René Pareis (Director)

Nordhausen, 21.12.2016

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Date


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René Pareis, Director

Official customer language: English

(Customer copy)

List of content

	Page
1. Information	4
2. Safety signs and decals	5
3. General safety rules	7
3.1 Mandatory application field	7
4. About your garden shredder	8
4.1 Electric operated versions	8
4.2 Gasoline operated versions	8
4.3 PTO versions.....	8
4.4 Optional tools	8
5. Operation	9
5.1 Downward side discharge	9
5.2 Upper ejection pipe	9
5.3 General operating tips	9
5.4 Additional instructions for PTO models	10
5.5 Additional instructions for gasoline models GSB 242.....	10
6. Stretching the V-belt.....	11
7. Repairs and maintenance	12
7.1 Replacing the hammers	12
8. Safety tips	12
8.1 Disposal precautions.....	12
9. Transportation	13
10. Technical data	14
10.1 Noise emissions	14
10.2 Electric wiring diagram	14
11. Other areas of possible risk	15
12. Warranty.....	15
13. Spare parts list	16

1. Introduction

Dear customer, thank you very much for your trust and preference in choosing our equipment and joining the number of our best customers in the world. We are confident that our equipment will be up to all your expectations and assure you a long lasting quality and performance.

1.1 Delivery and transport claims

Upon delivery of the machine please check for visual machine damages such as damaged packing or scratched buckled parts. If so, make a remark on all copies of the delivery bill before signing for acceptance. Also have the truck driver sign all copies of the delivery bill.

Also have the truck driver sign all copies of the delivery bill. Should your shipper or the truck driver refuse to accept your claim, fully reject delivery and make sure to inform us (the manufacturer) immediately. No claims shall be taken into account by the shipper or by the insurance company, if a reservation note is not made on the delivery bill.

All transport damages must be notified within latest 2 days from delivery. Therefore delivery must be collected and inspected within this term. Later claims shall be disregarded. In case of assumed but not visually clear transport damages make sure to mark the following sentence on the delivery bill: „Reserved delivery due to assumed transportation damages“. Insurance and shipping companies act with extreme caution in case of transport damages and sometimes refuse to accept responsibility.

Please make sure to provide clear and exhaustive evidence (photos) of the claimed damages. Thank you in advance for your help and attention to this matter.

2. Safety signs and decals



1. Safety decal "Wear ear plugs and goggles"

Loud noise can cause impairment or loss of hearing, wear a suitable protective device such as ear plugs or goggles.



2. Safety decal "WARNING! Always wear safety gloves"

Wearing safety gloves is advisable and particularly for continuous operation of the machine.



3. Safety decal "WARNING! Always wear safety shoes"

Wearing safety shoes is advisable and particularly for continuous operation of the machine.



4. Warning label „Read before use"

Never operate the machine without reading or understanding the operator's manual.



5. Warning label „Read before use"

Never operate the machine without reading or understanding the operator's manual.



6. Operation safety label "Do not reach inside hopper"

Do not reach inside the hopper or the discharge chute with your hands. **VERY DANGEROUS!**



7. Operation safety label

Before setting-up, servicing, maintaining and cleaning the machine, disengage all power and stop the engine.



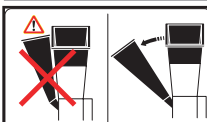
8. Operation safety label

Read, understand, and follow all instructions in this manual and on the splitter before starting!



9. Warning label "ATTENTION! Direction arrow!"

This arrow shows the revolution sense of the motor. PLEASE CHECK motor rotation at first start.



10. Operation safety label

Effectively assemble and firmly secure the infeed hopper and the discharge chute on the machine before setup. Make sure that both the infeed hopper and the discharge chute are duly set in working position before first use.



11. Product identification label

12. Identification label „BGU-Maschinen“ Logo

Achtung!
5 Meter
Gefahrenbereich

13. Warning label

KEEP BYSTANDERS AWAY "5 meter dangerous area!,"

Keilriemen
↔
Entspannen Spannen

14. V-belt maintenance label

Set v-belt tension "slacken off - stretch"

Vorsicht!
Heiße Teile

15. Machine safety label „CAUTION burning parts“ - GSB 242

Max. 540 U/min

16. Warning label (GSZ 242 only) „540 RPM“

This label shows the maximum admissible number of PTO shaft revolutions.

3. General safety rules



Strictly perform installation, set-up, maintenance, cleaning and transportation with the motor switched off and the tool/moving parts of the machine firmly secured against accidental operation.

NEVER leave the machine unattended with the running motor.

Before leaving the operator's station for any reason, stop the machine motor or the tractor engine, disconnect power (or PTO drive), make sure to remove the ignition key of the tractor and secure the machine against accidental operation.

Never allow anyone to stand in the dangerous area of the machine while in operation.

REMEMBER: the operator is responsible for safety of all nearby thirds on site. Never direct the discharge of material towards bystanders.

Due and proper illumination of the working site must be provided at all times.

To ensure stability during operation make sure to choose a flat, dry floor free from any tall grass, brush or other interferences.

Always wear suitable hearing (ear plugs or muffs) while operating the machine.

Operators must wear steel toe safety shoes, tear-resistant gloves, safety glasses and snug-fitting work cloths.

Damaged or buckled blades (very likely to break during operation) should not be used.

Always wear work gloves to protect your hands while replacing worn blades/hammers.

Strictly ask a skilled licensed electrician for any intervention on the electric system.

Operate the shredder in dry conditions. Using an electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system could result in damage to the on/off motor switch or to the electric motor itself.

Do not try to defeat or override any safety features. Never operate the machine without its protection safeties. Strictly use original spare parts of the manufacturer.

3.1 Mandatory application field

Strictly use this equipment for shredding pruning material and reducing tree branches, small logs and bark, bush, stalks, and garden waste to fine particle size. All other applications are forbidden and considered as "misuse". Make sure that no foreign matter (nails, screws, stones or alike) in or on wooden material gets trapped in the machine.

This machine is not suitable for chipping stones, metals and glass, plastic ropes/lines and other similar workshop material. Grass and vineyard waste should be stored for at least one week before shredding.

4. About your garden shredder

Our garden shredders are designed for mulching and production of small size compost out of various waste and debris. THEY SHOULD NOT BE USED FOR PRODUCTION OF WOOD CHIPS.

Waste material fed through the upper square hopper is handled by a special rotor with 34 steel hammers performing grinding of the material so that quicker decay will occur during mulching.

All BGU shredders are equipped with a very practical, adjustable ejection pipe saving users with laborious compost piling or shovelling into a tank.

All models are available in the following 3 versions depending on type of power:

4.1 Electric version "GSE 242"

The GSE model 242 is powered by means of an electric motor. A 32A protection is required on domestic power supply (5 poles, CEE socket) of the GSE model 242.

The shredder is fit with a standard special socket-switch combination integrated with overload and under voltage protection.

When you first run your shredder, check rotation side upon connection of your power cable. The motor should rotate in the direction shown by the arrow-label on the motor casing. Should the motor turn in the opposite way, provide immediate adjustment by switching the phases inside the power cable by means of a small screwdriver.

The ideal extension should have a 1,5mm² section and should not be longer than 50m. With longer extensions there could be a risk of voltage drops. In that case make sure to use the next section size up (2,5mm²).

4.2 Gasoline engine version "GSB 242"

BGU shredder 242 is equipped with a 13 PS (9,6kW) gasoline Honda engine. Before installation make sure to read instructions of the engine manufacturer carefully through. (available on each gasoline shredder)

4.3 PTO versions "GSZ 242"

BGU shredders GSZ 242 are powered with a cardan shaft from the tractor PTO. The number of admissible revolutions of the PTO shaft should not exceed max. 540 U/min. Quicker revolution may lead to shredder damages or earlier wear. If you wish to run your shredder on front PTO shaft, ask your dealer for help.

4.4 Optional tools

BGU shredders may be equipped with a further accessory for grinding polystyrene: a specially perforated grain screen with 6, 8 or 10mm (2.3", 3.1 or 3.9") holes located between the upper exhaust pipe and the main shredder body. To assemble the screen, release screws on the upper ejection pipe, locate the screen on the opening and reassemble the pipe in place making sure that all screws are tight back in place. It is also possible to assemble on the ejection pipe a special mount for fixation of transpiring collection sacks. Polystyrene is reduced down to a very fine grain size and may be then used in flower nurseries (for aeration of the earth around flowers) or as a common damming agent. This accessory makes it possible to use your shredder for an easy and economical disposal of polystyrene which can be then well used for other applications.

5. Operation

Become familiar with the shredder by reading the owner's manual before operation.

Set your shredder on an even, safe stable and non-slip foundation.

Do not allow any bystander in the dangerous area of the machine. Avoid directing the discharge chute to any nearby area accessible by staff or other persons. Anyone who operates the shredder must receive proper instructions on its safe operation and must read the owner's manual.

REMEMBER: the operator is responsible for safety of all nearby thirds on site. Never direct the discharge of material towards bystanders. Strictly provide access to the nearby area to authorized, trained persons who are familiar with the machine and its use.

Use the upper infeed hopper to shred branches (no hard wood) up to 3 cm (1.8"). Larger material should be fed through the lateral infeed chute.

All BGU garden shredders are equipped with a lateral crushing rotor with infeed chute.

The combination of a lateral crushing rotor and an upper hopper allow continuous handling of thick branches up to respectively 12 cm and 10 cm Ø best mixed with garden and chicken waste at the same time.

5.1 Downward side discharge

The downward side discharge is equipped with a number of removable square rods. To activate downward side discharge simply remove the upper rod and let the discharge chute flap down. Before activating the lower side discharge, the special shutter plate (supplied separately with each shredder) must be duly assembled underneath the upper ejection pipe. To assemble the shutter plate first release the fixation screws, remove the small close elbow and replace it with the shutter plate so to fully close the upper ejection pipe.

By removing and inserting the square rods one by one you can change the mulching size of the material that can be then shredded down to a bigger or smaller particle size at wish. The average particle size of the shredded material is obtained by removing every other square rod. For next size up material additional square rods may be removed at wish.

5.2 Upper ejection pipe

If you are to discharge through the upper ejection pipe of your shredder, make sure to remove the shutter plate and clear the way through the pipe. So first remove the shutter plate and replace it with the small close elbow. Then flap the side chute up and insert the upper square rod to secure it in place.

The position of the upper ejection pipe can be adjusted to direct the material discharge at wish. To do so first release (without removing them) all 4 fixation screws between the transition piece and the upper ejection pipe. Then turn the ejection pipe to the desired direction and tighten the screws again.

5.3 General operating tips



Make sure that your debris are not too wet as this may lead to possible choking of the ejection pipe.

Do not forget to check regularly on the ejection side in order to promptly clear possible choking or if required – switch the shredder off.

To clear hopper choking release the deflection flap below the infeed hopper and exercise hand pressure in the direction of the upper hopper.



Make sure to switch the motor off and wait till the rotor has come to a complete stop before trying to clear eventual pipe plugging!

5.4 Additional instructions for PTO models (GSZ 242)

BGU PTO-model GSZ 242 is specially suitable and recommended for users who are processing the shred material directly on site.

Installation of this model is performed by attaching the three-point hitch available on the shredder with the tractor one by means of the special safety pins. A PTO must be mounted between tractor and shredder to provide for power take off.

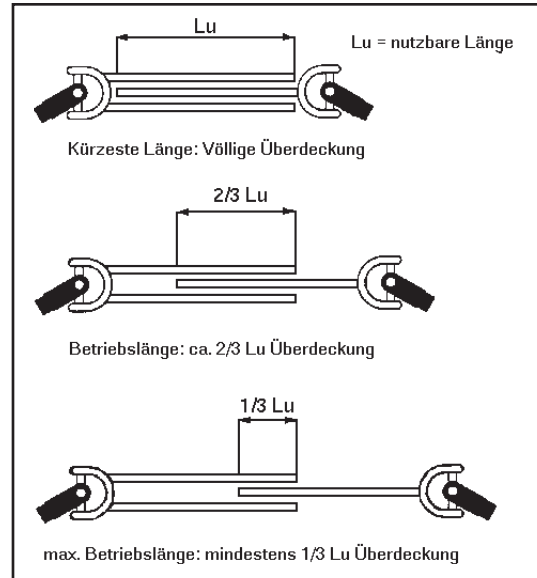
When performing attachment of three point hitch make sure to comply with channels overlapping instructions!

For increased safety make sure that a minimum wrapping of 1/3 of the total useful channel length is achieved.

Strictly use a driveline of an approved type. The drive shaft is known as the implement input driveline (IID). The entire IID shaft is a wrapping point hazard if it is completely unshielded.

Always connect and secure the driveline in compliance with shaft manufacturer instructions.

Manufacturer installed guards and master-shield must be replaced when removed for maintenance. These guards are designed to protect the operator and equipment. Never use a PTO driveline without safety shield or with a damaged guard and make sure that the shield is of the correct size and length for the drive shaft!



Wrapping of the driveshaft channels



Before uncoupling the processor, make sure to stop the tractor engine in order to avoid damaging the tractor power drive.

The PTO-version GSZ242 is a ground-driven 3-point hitch implement. Lower the machine to the "field" position when you are ready to use it.

5.5 Additional instructions for gasoline models GSB 242

BGU PTO-model GSB 242 is specially suitable and recommended for users who are processing the shred material directly on site and do not own a tractor.

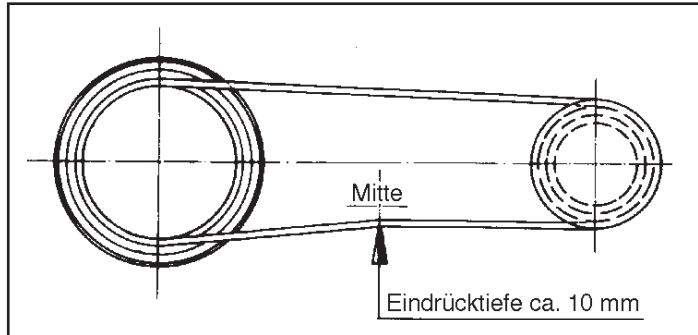
Before starting the gasoline engine set the belt tensioner crank on "slacken off".

To start the rotor release the belt tensioner crank and slowly shift it to the right on the "Stretch-Position" until the maximum number of rotor revolutions is reached.

At the end of your work day make sure to set the belt tensioner crank back on "slacken off".

6. Stretching of the v-belt

Perform ordinary tension check-up of the vbelt located under the lateral protection casing. To remove the casing release all fixation screws and then access the belt and check whether duly stretched. If not, adjust belt tension or entirely replace the belt if required. An excessively slacken off belt will cause slipping and earlier belt wear.



To adjust vbelt tension on GSE models 242 release all fixation screws on the motor, push the motor ahead and tighten screws again.

On GSB models GSB242 it is also possible to adjust the vbelt tension by ways of the special crank lever available on the lateral protection casing.

Alternatively you can adjust the vbelt tension by using the adjustment screw located on the angular gearbox bracket.

7. Repairs and maintenance

At work end make sure to check presence of eventual shred rests in the machine and clean them.
When operating PTO shredders GSZ 242 make sure that the PTO arrangement is duly shielded before starting.

Before performing any maintenance/repair work on the machine, make sure that the machine is fully disconnected (unplug the machine or switch the tractor off).

Should your electric shredder fail to start when first switching the engine on, check up the switch fuse. If fuse and switch are OK but shredder keeps failing to start, so consult your electrician for complete check up and repair of the electric system

Do not self grind the lateral cutting blade. For this operation help of a skilled mechanic is required.

7.1 Rotor hammers replacement

The steel hammer on the rotor can be used twice.

Slightly rounded hammer profile will immediately lead to a poor shredding quality. For this reason hammers must be regularly grounded.

To regrind perform hammers removal as below:

1. Lift the lateral cover (Service-Cover) on top of the driving pulley after releasing of 2 hex nuts,
2. Remove the upper cover on the ejection opening,
3. Manually turn the drum till the hammer shaft becomes visible through the opening,
4. Release the countersunk head screw on the hammer shaft and pull the screw fully out,
5. Remove the hammer shaft from one side,
6. Pull hammers and spacers off the shaft and fit them back having care to invert their side around.
Take good care of the spacers, nuts and screws while dismounting the hammers.
IMPORTANT: assemble the hammers and bushings back on the chipper in the order as they were taken out
7. After inverting the hammer side around, secure the hammer shaft using the same countersunk head screws,
8. Keep turning the rotor to the next hammer and repeat the same procedure as before for all hammers,
9. When all hammers side has been inverted, reassemble the upper cover and secure the two nuts,
10. Secure the upper cover, the upper ejection pipe and the ejection chute



Make sure all screws are duly secured and tightened.

ATTENTION: when both hammer sides are worn out REPLACE THE HAMMER completely. DO NOT REUSE DULLED HAMMERS.

When pulling the hopper off for unwrapping or rotor maintenance reasons make sure that power is fully disconnected from the shredder.

DO NOT LET THE SHREDDER RUN WITHOUT HOPPER ON.

For repair/maintenance of the gasoline engine follow separate instructions given by the engine manufacturer and enclosed to these instructions.

8. Safety tips



Maintenance, installation, repair and cleaning works as well as shredder transportation may be strictly performed when the unit is switched off and the rotor is still.

Make sure to comply at all times with relevant instructions for use, installation, maintenance and repair. Failure to comply with the manufacturer's instructions may lead to severe danger and damages both for the operator and surrounding properties.

The shredder may be only used, maintained or repaired by skilled operators who have previously gained familiar with the machine and relevant instructions.

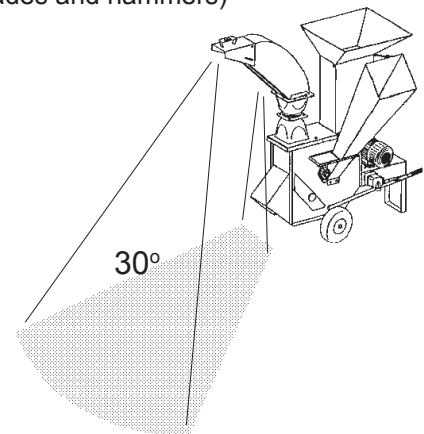
Also make sure to comply with all applicable national safety standards other technical health and road regulations as required by the country of use.

Do not let young people below 18 operate any shredder or chipper and make sure that the working area is always clean and well illuminated in order to assure safest operation.

- When working always wear protection gloves, glasses and over-the-head hearing protectors
- Do not ever leave the shredder unattended!
- Comply with applicable electrical connections rules
- Before installation, make sure that all sockets and connections are duly insulated and provide for replacement of eventual damaged cables and sockets
- Immediately replace damaged lines, wires and plugs
- Never handle the shred material in the machine with bare hands: always use a suitable leaves tamper!
- When starting an electric model make sure to check the engine rotation is correct and unplug power before performing repair or maintenance works on the machine
- Do not shred with wore blades on the machine
- Remember that machine users are responsible for thirds safety and health at all times
- When leaving work for some time make sure to switch off the machine (unplug electric power, pull off the cardan shaft or switch the motor off)
- On GSZ model 242 make sure to provide due shaft shielding
- Do not feed in stones, glass, metal pieces, plastic cords or sheets or other equivalent material
- Install and use the shredder only in safe and due location
- Never reach inside the hopper or any ejection chute while the shredder is working
- Strictly use mechanical tools (i.e. wood stocks) to turn and release jammed or skewed branched/sticks inside the hopper or discharge chute. Never reach with your hands inside the hopper or discharge chute when the machine is running.
- Never attempt to remove a jammed piece of wood or material before disconnecting/unplugging the machine from the power and before the cutting tools (blades and hammers) have come to a complete stop.



CAREFUL! Dangerous area !
Standing in this area is very dangerous and forbidden! –
WARNING!
Standing in this area is forbidden!



8.1 Disposal precautions

Electric parts and components are polluting and dangerous for the environment, therefore they should be separately disposed of. In case of fire do not extinguish with water, use preferably chemical agents (powders).

9. Transportation

When on the highway, make sure that the shredder does not cover any of the tractor illumination/signal lights (back drive lights, stops or turn indicators). If so provide for an additional electric arrangement when transporting on public roads. The same applies for all other machines infringing the tractor light beam by respectively 1 meter rear and 40cm laterally (in which latter case a clearance light is also required in front).

10. Technical data

		GSE 242	GSZ 242	GSB 242
Shredding rotor diameter	[mm]	440	440	440
Rotor width	[mm]	240	240	240
Number of rotor rev.	[RPM]	2400	2400	2400
Number of hammers	[pieces]	34	34	34
Motor power P1	[kW]	9	-	-
Motor power P2	[kW]	7,5	-	-
Honda gasoline engine	[kW]	-	-	9,6
PTO shredder power	[kW]	-	12	-
Shredder length w/ handle	[mm]	1650	1900	1900
Shredder width	[mm]	1700	1170	1700
Shredder height	[mm]	1610	1980	1610
Shredder weight	[kg]	260	175	275
Max. PTO shaft rev.	[RPM]	-	540	-

10.1 Noise emissions

Noise emissions were measured in accordance with the European directives for the measurement of noise emissions on the workplace. The measurement was performed by external authorized certification bodies in compliance to the applicable Standards based on applicable rules for agricultural and forestry equipment. The detected noise levels were:

Measurement on the machine front edge at 1600 mm height and 1000mm away from the deflector door.

Measured values:	Idle	94	dB(A)
	Max load	104	dB(A)

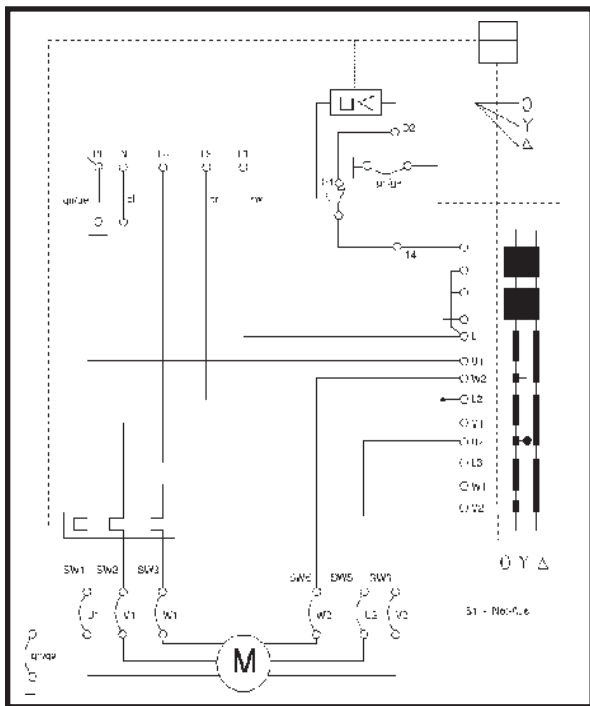
The test was carried out while shredding hardwood (alder Ø 80mm lateral infeed and peeled alder through the infeed hopper).

When working with BGU shredder, use of ears protectors is MANDATORY.

10.2 Electric wiring diagram



Works on the shredder electric system should be strictly performed by skilled electricians!



Wiring diagram GSE 242

11. Other areas of possible risk

1. Mechanical dangers

All moving parts (for instance: rotor, hammer, vbelt) are duly protected by fixed guards or covers which can be only removed with use of special tools in order to avoid any accidental injury.

WARNING: possible severe injuries or damages may occur if you run the machine without special fixed guards on. The same applies to the use of the machine without safety protections (for instance hopper)

2. Electrical dangers

All shredder parts working under voltage are duly proofed and insulated by means of special cover and fixed protections which can be only removed with use of special tools.

WARNING: should you use special tools to remove electric protections and covers, possible severe injuries due to electric shocks may occur.

3. Burning

All engine and hydraulic parts susceptible of high temperature are already covered and isolated by the manufacturer.

WARNING: do not try to bypass such protections. This may cause severe burns and injuries.

12. Warranty

All shredders are covered with 6 months warranty. Customers should promptly notify eventual material or production claims on their detection. While asking for warranty service, customer should show copy of their purchase invoice or receipt. The warranty does not cover for faults due to natural wear, temperature or weather agents as well as misuse faulty installation or improper lubrication. No warranty will be given on parts damaged by improper handling. The manufacturer is further not responsible for warranty service on machines used for other applications as mentioned in this manual, or modified by the customer or other thirds, or overloaded.

No warranty applies to consumable parts (for instance: steel hammers and other fittings) and to adjustment/calibration works.

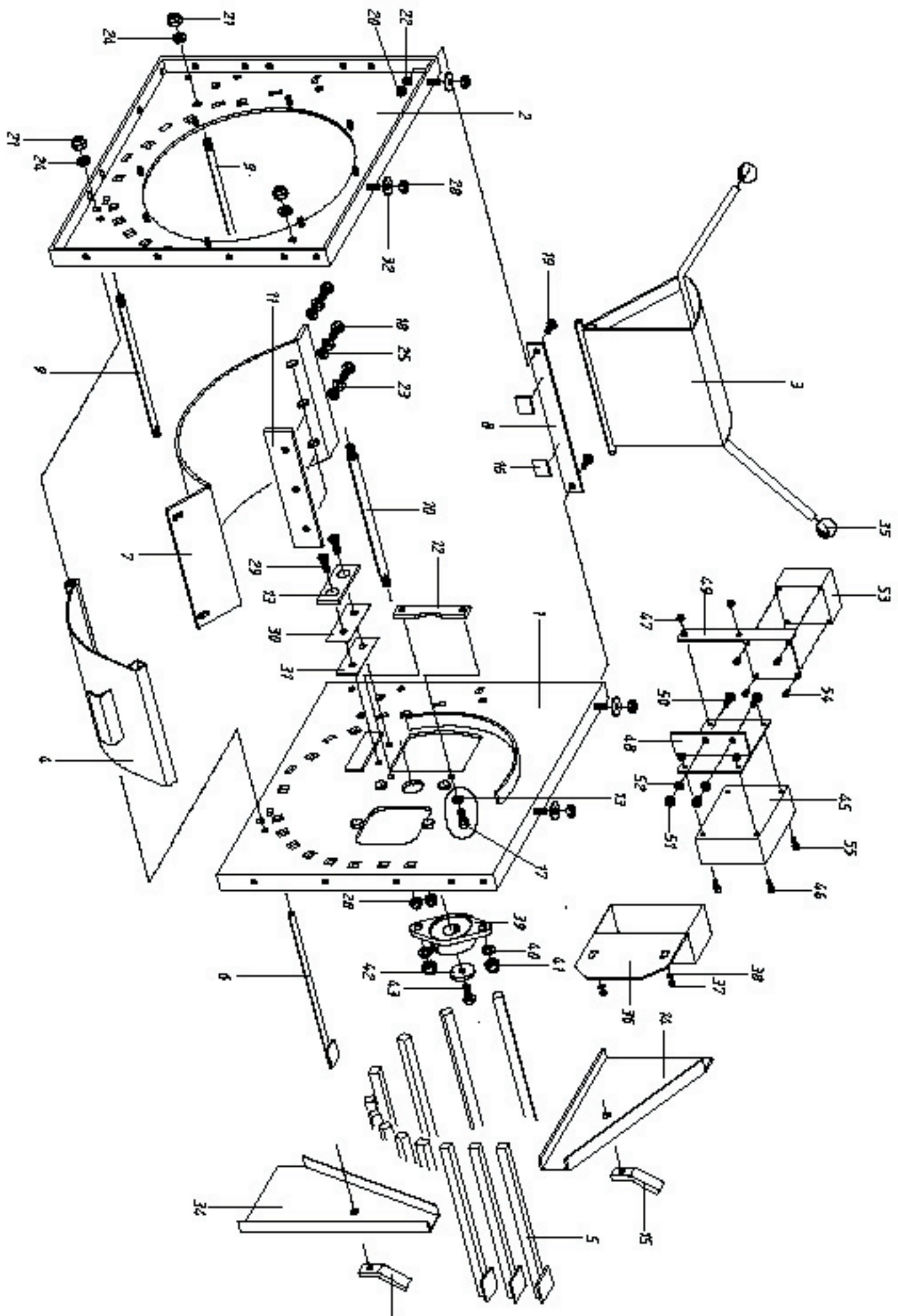
Please call our service office for any warranty claim or service requirement.

Shredder Frame GSE/GSB/GSZ 242

Pos.	Description	Nr.	DIN	Size
Main frame				
GSE/GSB/GSZ 242				
1	Side plate, left	12275		
2	Side plate, right	12084		
3	Flap plate	12276		GSE 242
3	Flap plate	14229		GSB 242
3	Flap plate	14231		GSZ 242
4	Ejection steel baffle	12277		
5	Hammer stop	12278		
6	Stay-rod for lower chute	12279		
7	Lower feedthrough plate	12280		
8	Flap plate stop	12281		
9	Tie rod	12282		
10	Spacer rod	12283		
11	Counter hammers	12284		
12	Counter hammer, vertical	12094		
13	Counter hammer, horizontal	12286		
14	Hammer stops casing	12096		
15	Sealing cap	12097		
16	Foam rubber	12098		
17	Socket head screw	52857	DIN 912	M 10x16
18	Hex screw	52622	DIN 933	M 10x18
19	Hex screw	51446	DIN 933	M 8x25
20	Self-locking hex screw	51607	DIN 985	M 8
21	Self-locking hex screw	51609	DIN 985	M 12
22	Lockwasher	51706	DIN 127	B 8
23	Lockwasher	51707	DIN 127	B 10
24	Lockwasher	51708	DIN 127	B 12
25	Washer	51649	DIN 125	10,5
28	Self-locking hex screw	51608	DIN 985	M 10
29	Socket head screw w. hex recess.	51512	DIN 7991	M 10x30
30	Spacer plate 1	12099		
31	Spacer plate 2	12100		
32	Shim	51698	DIN 9021	10,5
33	Spacer shim	51636		12x24x1
34	Hammer stops casing	12101		
35	Ball knob	50995	DIN 319	D=40 M12

Pos.	Description	Nr.	DIN	Size
Electric version GSE 242				
45	Star/Delta switch	50781		
46	Socket head screw	51340	DIN 912	M 6x16
47	Self-locking hex screw	51606	DIN 985	M 6
48	Bracket for electric switch	12352		
49	Emergency stop plate	12358		
50	Hex screw	51444	DIN 933	M 8x20
51	Self-locking hex screw	51607	DIN 985	M 8
52	Lockwasher	51706	DIN 127	B 8
53	Emergency Box	50858	018572	

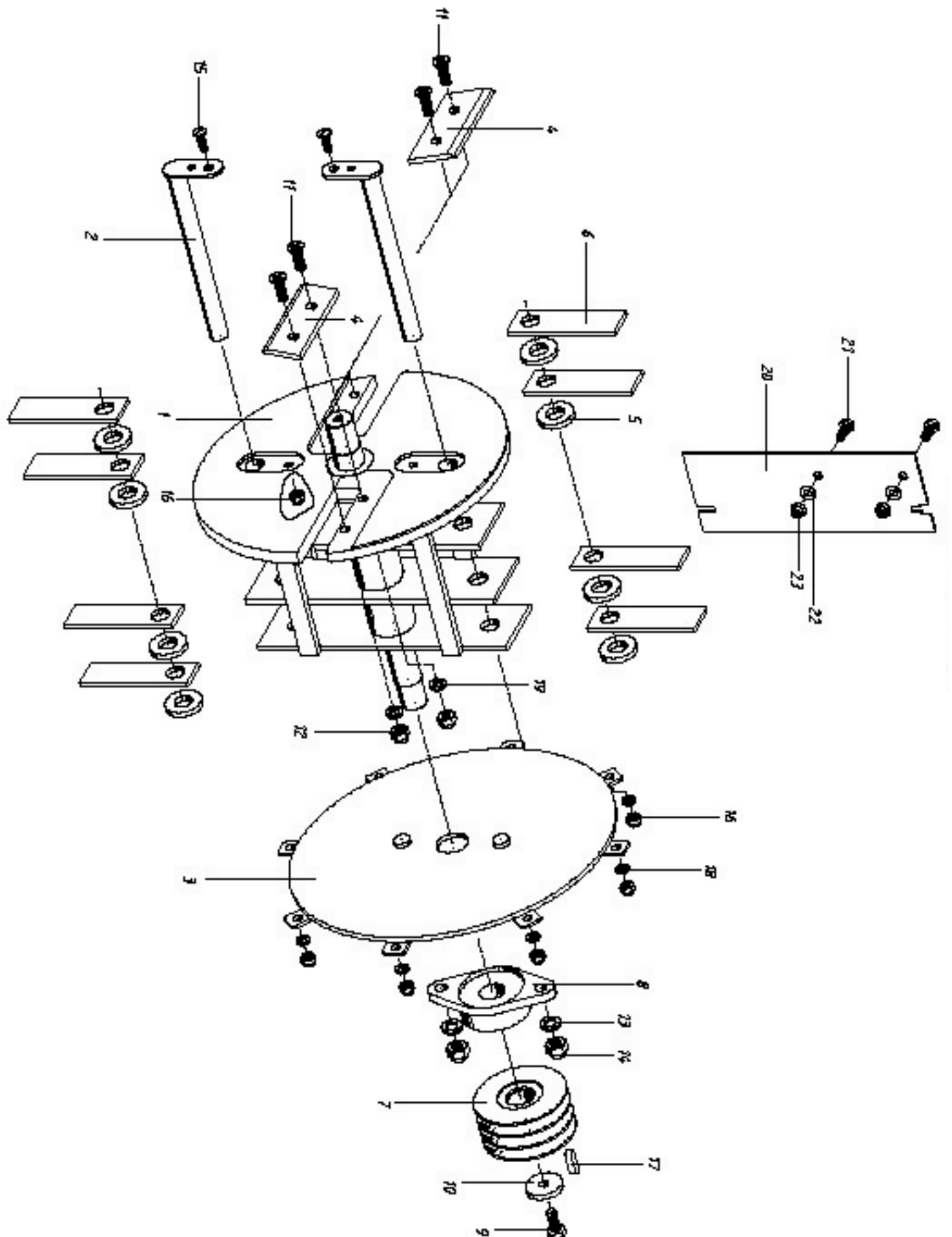
Shredder Frame GSE/GSB/GSZ 242



Rotor, weldment GSE/GSB/GSZ 242

Pos.	Description	Nr.	DIN	Size
Rotor, weldment				
GSE/GSB/GSZ 242				
1	Rotor	12303		
2	Hammer shaft	12304		
3	Mounting cover	12418		
4	Side blades	12305		
5	Hammer spacer shim	12130		
6	Hammer	12131		
7	Pulley	12306		GSE 242
7	Small vbelt pulley	12426		GSB 242
7	Belt pulley	12306		GSZ 242
8	Flange bearing (machined)	12078		
9	Hex screw	51461	DIN 933	M 10x20
10	Washer	12133		
11	Socket head screw with hex recess	51512	DIN 7991	M 10x30
12	Self-locking hex nut	51608	DIN 985	M 10
13	Lockwasher	51708	DIN 127	B 12
14	Self-locking hex nut	51609	DIN 985	M 12
15	Slotted socket head cap screw 51533	DIN 963	AM 8x25	
16	Self-locking hex nut	51607	DIN 985	M 8
17	Feather key	51721	DIN 6885	A 8x7x28
18	Lockwasher	51706	DIN 127	B 8
19	Lockwasher	51707	DIN 127	B 10
20	Sealing plate	12145		GSE 242
20	Sealing plate	12419		GSB/GSZ
21	Hex screw	51444	DIN 933	M 8x20
22	Washer	51648	DIN 125	8,4

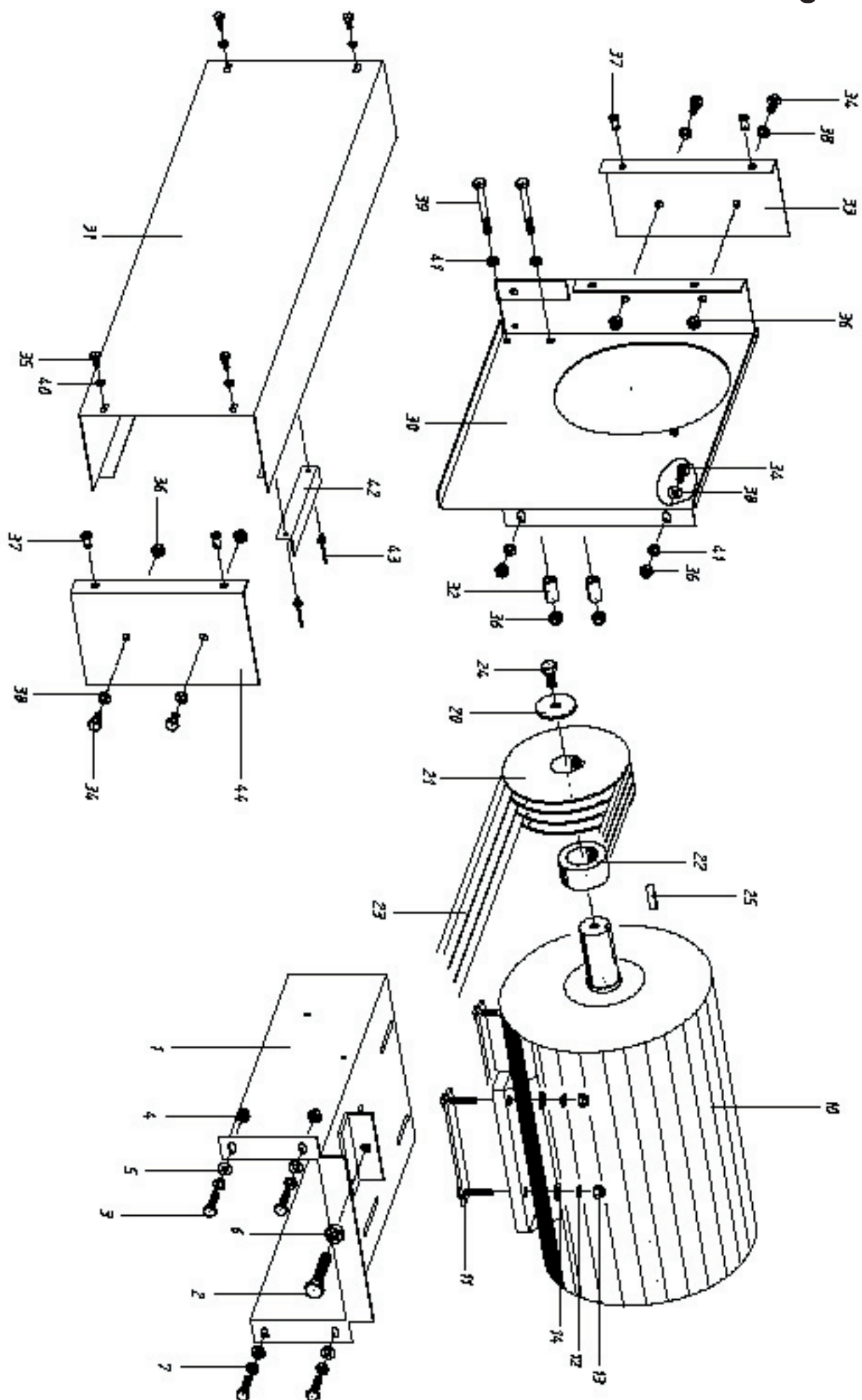
Rotor, weldment GSE/GSB/GSZ 242



Motor bracket / Electric Power Drive / belt casing

Pos.	Description	Nr.	DIN	Size
Motor bracket, weldment				
GSE 242				
1	Motor bracket	12260		GSE 242
2	Pressure screw	12149		
3	Hex screw	51446	DIN 933	M 8x25
4	Self-locking hex nut	51607	DIN 985	M 8
5	Washer	51648	DIN 125	8,4
6	Hex nut	51595	DIN 934	M 12
7	Lockwasher	51706	DIN 127	B 8
Electric power drive				
GSE 242				
10	Motor	50740		
11	Motor mount	12177		
12	Lockwasher	51706	DIN 127	B 8
13	Self-locking hex nut	51607	DIN 985	M 8
14	Washer	51648	DIN 125	8,4
20	Washer	12133		
21	Complete belt sheave	12268		
22	Spacer bushing	12269		
23	V-belt	51133	DIN 2215	13x1525 li
24	Hex screw	51461	DIN 933	M 10x20
25	Feather key	51727	DIN 6885	A 10x8x30
Belt casing, weldment				
GSE 242				
30	Motor casing	12184		
31	Cover for power drive	12370		
32	Spacer sleeve	12371		
33	Front plate	12372		
34	Hex screw	51444	DIN 933	M 8x20
35	Hex screw	51429	DIN 933	M 6x16
36	Self-locking hex nut	51607	DIN 985	M 8
37	Galvanized blind rivet nut	51777		M6 L=16

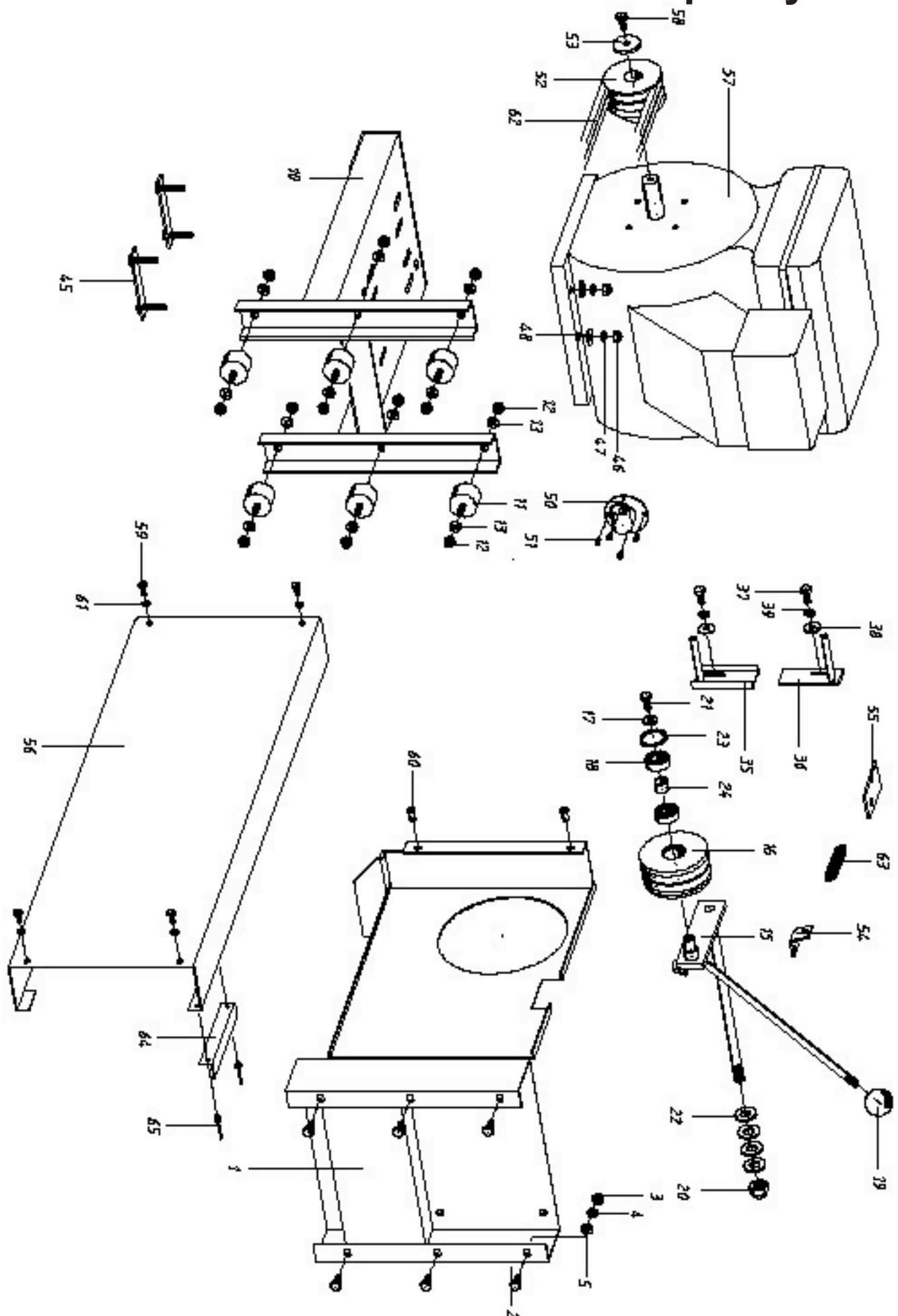
Motor bracket / Electric Power Drive / belt casing



Pedestal / Motor bracket / Idler pulley GSB

Pos.	Description	Nr.	DIN	Size	Pos.	Description	Nr.	DIN	Size
Pedestal GSB 242					GSB 242				
1	Pedestal for GSB 162	18508			50	Ejection flow baffle	14623		
1	Pedestal for GSB 242	12421			51	Self-tapping screw	52581	DIN 7500	4x6
2	Hex screw	51444	DIN 933	M 8x20	52	Motor belt pulley	12225	GSB162	
3	Self-locking hex nut	51607	DIN 985	M 8	52	Motor belt pulley	12425	GSB 242	
4	Lockwasher	51706	DIN 127	B 8	53	Washer	12077		
5	Washer	51648	DIN 125	8,4	54	Spring lever	12227		
Motor bracket GSB 242					55	Tension lever	12228		
10	Motor bracket GSB 162	18507			56	Side cover	12229		
10	Motor bracket GSB 242	12422			57	Honda gasoline engine	50756		GX 270
11	Rubber metal buffer	51049		D=40 H=30	57	Honda gasoline engine	50758		GX 390
12	Self-locking hex nut	51607	DIN 985	M 8	58	Hex screw	51448	DIN 933	M 8x30
13	Washer	51648	DIN 125	8,4	59	Hex screw	51429	DIN 933	M 6x16
Idler pulley GSB 242					60	Galvanized blind rivet	51777		M6 L=16
15	Idler pulley crank	12440			61	Lockwasher	51705	DIN 127	B 6
16	Small vbelt sheave	12441			62	V-belt	51128		SPA 1857 Lw
17	Pulley	12246			63	Tension spring	51893	DIN 2097	2x13x158 if 64,5
18	Grooved ball bearing	50689	DIN 625/1	6202 2Z	64	Square steel for side cover	12427	GSB 242	
19	ball knob	50994	DIN 319	D=40 M10	65	Universal blind rivet	51847		d=4,8 l=11
20	Self-locking hex nut	51610	DIN 985	M 14					
21	Hex screw	51443	DIN 933	M 8x16					
22	Washer	51651	DIN 125	15					
23	Circlip for holes	51678	DIN 472	35					
24	Spacer bushing	12442							
V-belt guide GSB 242									
35	Feedthrough channel	12445							
36	Short feedthrough plate	12446							
37	Hex screw	51444	DIN 933	M 8x20					
38	Washer	51697	DIN 9021	8,4					
39	Lockwasher	51706	DIN 127	B 8					
Motor fixation mount GSB 242									
45	Motor fixation mount	18506							
45	Motor fixation mount	12428							
46	Self-locking hex nut	51607	DIN 985	M 8					
47	Lockwasher	51706	DIN 127	B 8					
48	Washer	51697	DIN 9021	8,4					

Pedestal / Motor bracket / Idler pulley GSB

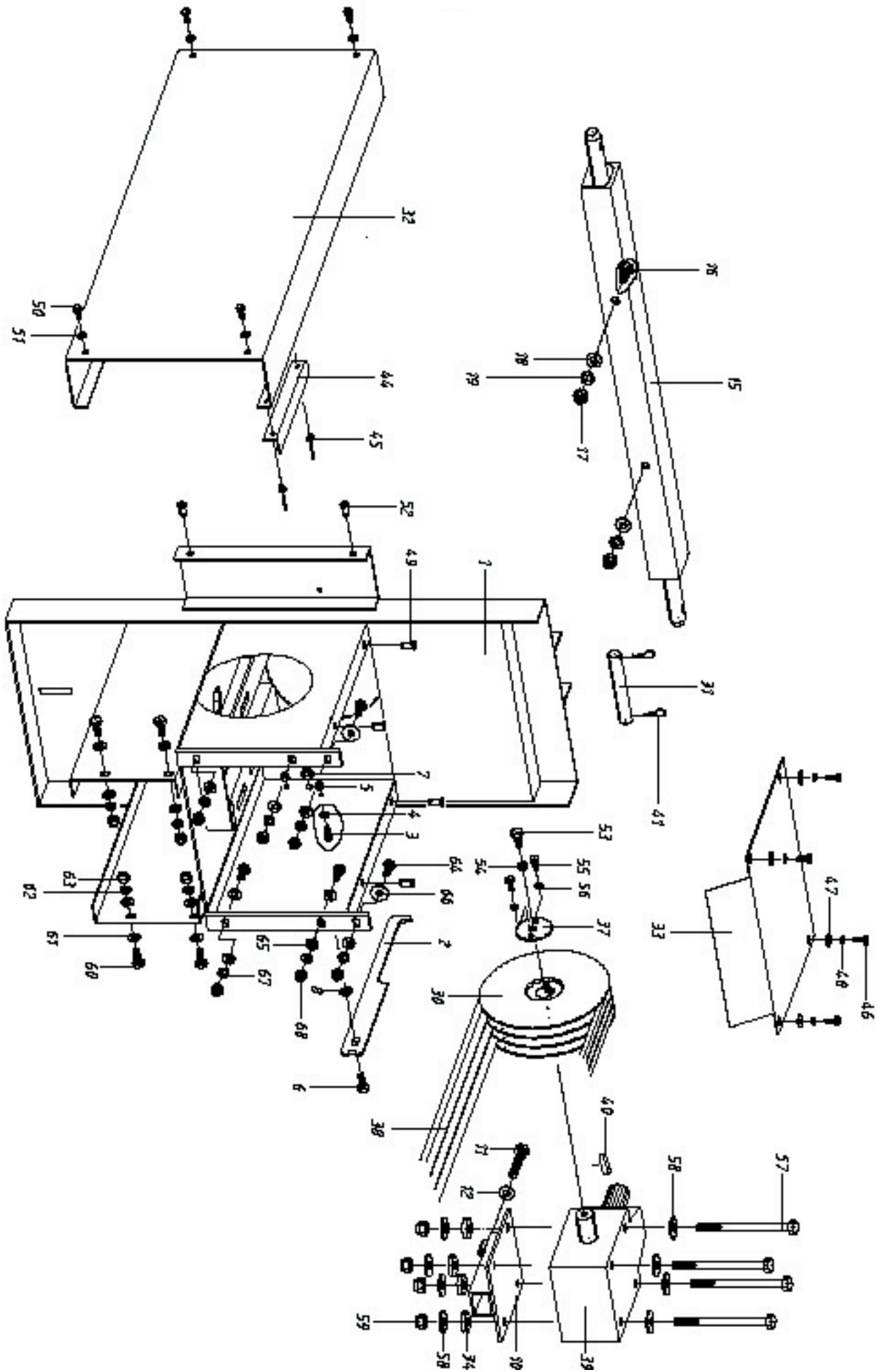


Frame / Angular Gearbox / Suspension bracket

Pos.	Description	Nr.	DIN	Size
Frame, weldment				
GSZ 242				
1	Frame	12380		
2	PTO driveline bracket	12417		
3	Socket head screw	51339	DIN 912	M 6x14
4	Washer	51647	DIN 125	6,4
5	Self-locking hex nut	51606	DIN 985	M 6
6	Hex screw	51444	DIN 933	M 8x20
7	Self-locking hex nut	51607	DIN 985	M 8
8	Washer	51648	DIN 125	8,4
Angular gearbox bracket, weldment				
GSZ 242				
10	Angular gearbox bracket	12395		
11	Clamping bolt	12396		
12	Scheibe	51649	DIN 125	10,5
Suspension, weldment				
GSZ 242				
15	Suspension bracket	12382		
16	Hex screw	51462	DIN 933	M 10x25
17	Self-locking hex nut	51608	DIN 985	M 10
18	Washer	51649	DIN 125	10,5
19	Lockwasher	51706	DIN 127	B 8
30	Complete belt sheave Dm 17912385			
31	Bolt P3P	12386		
32	Side cover	12387		
33	Angular gearbox protection	12388		
34	Washer	12389		
37	Stop washer	12390		
38	V-belt	51131	DIN 2215	13x1350 Li
39	Angular gearbox input-Y	50570		i=1:2,78
40	Feather key	51723	DIN 6885	A 8x7x40
41	Cotter pin	51204	DIN 11024	4 mm galv.
44	Square for side cover	12391		
45	Universal blind rivet	51847		d=4,8 l=11
46	Hex screw	51429	DIN 933	M 6x16
47	Washer	51647	DIN 125	6,4
48	Lockwasher	51705	DIN 127	B 6
49	Galvanized blind rivet	51777		M6 L=16
50	Hex screw	51429	DIN 933	M 6x16
51	Washer	51696	DIN 9021	6,4
52	Galvanized blind rivet	51777		M6 L=16
53	Hex screw	51448	DIN 933	M 8x30

Pos.	Description	Nr.	DIN	Size
54	Lockwasher	51706	DIN 127	B 8
55	Hex screw	51429	DIN 933	M 6x16
56	Lockwasher	51705	DIN 127	B 6
57	Cylinder head screw	51409	DIN 931	M 10x140
58	Washer	51698	DIN 9021	10,5
59	Hex nut	51594	DIN 934	M 10
60	Hex screw	51444	DIN 933	M 8x20
61	Washer	51648	DIN 125	8,4
62	Lockwasher	51706	DIN 127	B 8
63	Self-locking hex nut	51607	DIN 985	M 8
64	Hex screw	51446	DIN 933	M 8x25
65	Washer	51648	DIN 125	8,4
66	Washer	51697	DIN 9021	8,4
67	Lockwasher	51706	DIN 127	B 8
68	Self-locking hex nut	51607	DIN 985	M 8

Frame / Angular Gearbox / Suspension bracket



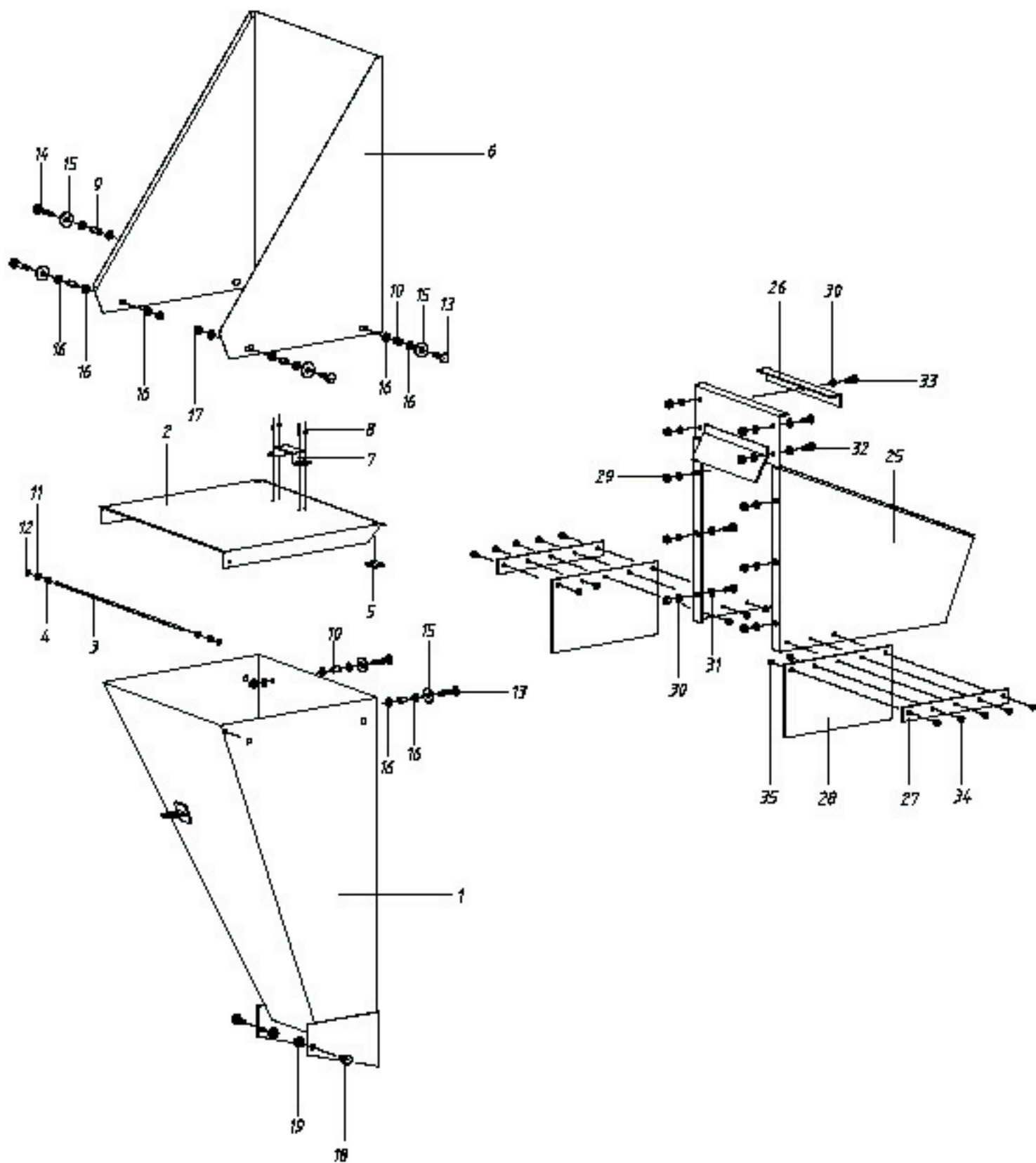
Infeed hopper / Upper ejection pipe / Upper shutter plate (all types)

Pos.	Description	Nr.	DIN	Size
Infeed hopper, weldment				
GSE/GSB/GSZ 242				
1	Infeed hopper	14239		
2	Shaft	12341		
3	Infeed flap	12348		
4	Spacer plate	12171		
5	Washer	51649	DIN 125	10,5
6	Spring washer	51231		10/18,4x1
7	Skimmer	12343		
8	Shutter plate	12161		
9	Cotter pin	51204	DIN 11024	4 mm galv.
10	Hex screw	51444	DIN 933	M 8x20
11	Hex screw	51450	DIN 933	M 8x35
12	Self-locking hex nut	51607	DIN 985	M 8
13	Washer	51648	DIN 125	8,4
14	Round head screw	51297	DIN 603	M 8x16
15	Washer	51649	DIN 125	10,5
16	Lockwasher	51706	DIN 127	B 8
17	Chain	14240		
18	Key ring	51928		32 mm
16	Lockwasher	51706	DIN 127	B 8
17	Chain	14240		
18	Key ring	51928	32 mm	
Upper ejection pipe				
GSE/GSB/GSZ 242				
25	Upper ejection pipe	12188		
26	Ejection flow baffle	12189		
27	Washer	12077		
28	Hex screw	51444	DIN 933	M 8x20
29	Hex screw	51446	DIN 933	M 8x25
30	Self-locking hex nut	51607	DIN 985	M 8
31	Washer	51648	DIN 125	8,4
32	Washer	51697	DIN 9021	8,4
33	Shutter plate	12270		GSE/B/Z 242
Upper cap				
GSE/GSB/GSZ 242				
35	Upper cap	12264		
36	Washer	51649	DIN 125	10,5
37	Hex nut	51594	DIN 934	M 10

Side hopper / lower discharge chute (all types)

Pos.	Description	Nr.	DIN	Size
Side hopper, weldment				
GSE/GSB/GSZ 242				
1	Side hopper	12361		
2	Cover	12362		
3	Bearing rod	12363		
4	Spacer bushing	12200		
5	Moos rubber	12166		
6	Side hopper extension	12364		
7	Handle grip	50874		115x32mm
8	Standard blind rivet	51841	DIN 7337	B 3x10
9	Sleeve	12365		
10	Short sleeve	12202		
11	Washer	51647	DIN 125	6,4
12	Spring washer	51229		6/15,3x1
13	Round head screw	51301	DIN 603	M 8x35
14	Round head screw	51302	DIN 603	M 8x45
15	Washer	51698	DIN 9021	10,5
16	Washer	51648	DIN 125	8,4
17	Self-locking hex screw	51607	DIN 985	M 8
18	Hex nut	51594	DIN 934	M 10
19	Hex screw	51462	DIN 933	M 10x25
Lower discharge chute				
GSE/GSB/GSZ 242				
25	Lower discharge chute	12373		
26	Locking square handle	12374		
27	Flap	12213		
28	Rubber pad	12214		
29	Self-locking hex nut	51607	DIN 985	M 8
30	Lockwasher	51706	DIN 127	B 8
31	Washer	51648	DIN 125	8,4
32	Hex screw	51446	DIN 933	M 8x25
33	Hex screw	51444	DIN 933	M 8x20
34	Hex screw	51431	DIN 933	M 6x20
35	Self-locking hex nut	51606	DIN 985	M 6

Side hopper / lower discharge chute (all types)



Front / Rear wheel axle / Tow-handle

Pos.	Description	Nr.	DIN	Size
Front wheel axles				
GSE/GSB 242				
1	Front axle	12315		
2	Floating axle, right	12316		
3	Floating axle, left	12317		
4	Handlebar mount	12318		
5	Handlebar	12319		
6	Control arm	12320		
7	Fixation plate	12321		
8	Hex screw	51468	DIN 933	M 10x55
9	Hex screw	51455	DIN 933	M 8x70
10	Self-locking hex nut	51607	DIN 985	M 8
11	Self-locking hex nut	51608	DIN 985	M 10
12	Washer	51652	DIN 125	17
13	Washer	51654	DIN 125	21
14	Washer	51648	DIN 125	8,4
15	Rond plunger cap	51043		d=27 L=30
16	Hex screw	51443	DIN 933	M 8x16
17	Hex screw	51397	DIN 931	M 8x40
18	Washer	51697	DIN 9021	8,4
19	Washer	51698	DIN 9021	10,5
20	Balloon tires	52568		300x100x20
21	Spring washer	51233		16/28,2x2
22	Washer	51648	DIN 125	8,4
23	Spring washer	51234		20/36,6x3
Rear axle				
GSE/GSB/GSZ 242				
30	Axle plate	14273		
31	Braking square	14770		
32	Balloon tires	52568		300x100x20
33	Hex screw	51446	DIN 933	M 8x25
34	Self-locking hex nut	51607	DIN 985	M 8
35	Washer	51648	DIN 125	8,4
36	Washer	51700	DIN 9021	21
37	Washer	51654	DIN 125	21
38	Lockwasher	51706	DIN 127	B 8
39	Spring washer	51234		20/36,6x3
40	Hex screw	51446	DIN 933	M 8x25
41	Self-locking hex nut	51607	DIN 985	M 8
42	Washer	51648	DIN 125	8,4

This exploded perspective view shows the assembly of a mechanical device. The main components include:

- Top Section:** A circular component (38) with a central pin (37) and a flange (36). It is connected to a long, narrow rectangular plate (33) via a pin (35). The plate (33) has several small holes (34, 35, 36, 37, 38, 39, 40, 41, 42) and a central slot (43).
- Bottom Section:** A circular component (20) with a central pin (23) and a flange (22). It is connected to a long, narrow rectangular plate (2) via a pin (21). The plate (2) has several small holes (24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42) and a central slot (43).
- Intermediate Components:** A central rectangular plate (3) with a central slot (4) and a central pin (5). It is connected to a long, narrow rectangular plate (6) via a pin (7). The plate (6) has several small holes (8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42) and a central slot (43).
- Other Components:** A long, narrow rectangular plate (50) with a central slot (51) and a central pin (52). It is connected to a long, narrow rectangular plate (53) via a pin (54). The plate (53) has several small holes (55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) and a central slot (101).



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