



# balimat 3300

Instruction Manual (EN)



(Translation of the Original Version)







#### **CONTENTS**

This operating manual contains instructions for using the sweeper.

Carefully keep the operating manual so that you can refer to it later.

Our products are being continuously improved. Design changes after going to print may therefore not be considered. If you have any questions, please contact our Service department (for contact details, see page 18).

Carefully study the operating manual and the general safety instructions before you unpack the machine any further or undertake first start up.

The operating manual is to be read attentively and followed by any person that operates the sweeper.

#### **PROPER USE**

Only use the sweeper according to the specifications in this operating manual.

The sweeper is only intended for sweeping hard standing areas (e.g.: car parks, pavements, warehouses). The sweeping environment must not be wet.

The sweeper must only be operated by reliable, instructed personnel.

Prevent it from being used by children, young people and other unauthorised persons, e.g. by removing the key after use.

Any other usage beyond this is deemed to be improper use (see "Safety Instructions", page 13). The manufacturer is not liable for any damage resulting from this.

The user is solely responsible for the risk.

Proper use also includes following the operating manual, the safety instructions and keeping to the servicing and maintenance specifications.

Only operate in expressly assigned routes and places.

Observe the maximum climbing ability specified in the technical data and maximum possible slope inclination for operating across slopes. Due to an abrupt change of direction, particularly on slopes, the sweeper may tip. Adapt your operating manner and speed to the conditions.

Follow the instructions on suitable ground (asphalt, screed, industrial floors, concrete, paving stones etc.)

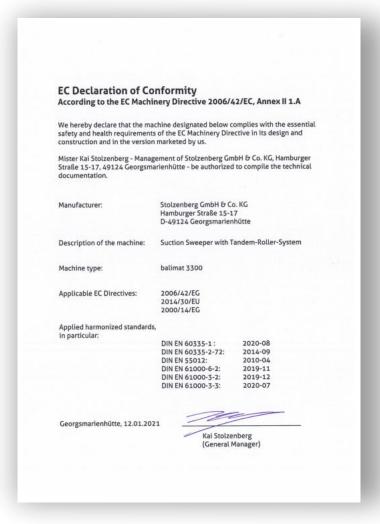
#### **EXPLANATION OF SYMBOLS**

⚠ DANGER! .....indicates a possibly dangerous situation that can cause death or serious injuries.

A CAUTION! .....indicates a possibly dangerous situation that can cause minor injuries.

i INSTRUCTION .....indicates important information.

#### **EC DECLARATION OF CONFORMITY**



#### **RATING PLATE**

The rating plate is attached on the top of the frame below the front panel.

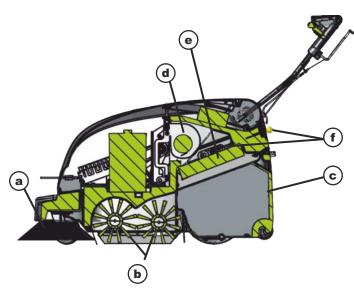


#### **CONSTRUCTION, FUNCTION, TECHNICAL DATA**

The TwinSweep balimat 3300 is a battery-operated, hand-driven pedestrian-controlled vacuum sweeper fitted with the tandem roller system (TRS).

The TRS allows large sweeping materials to be swept up without difficulty. The sweeper has a powerful vacuum function.

#### **FUNCTION**



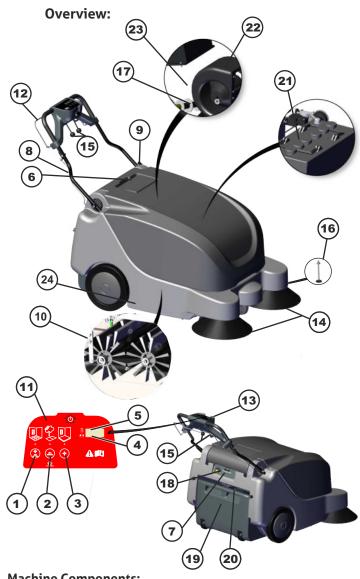
In the tandem roller system (TRS), sweeping materials are first conveyed by means of the side brush (a) from the corners and edges of the sweeping area into the centre of the machine and therefore towards the two counter-rotating roller brush (b).

From this, the sweeping material is taken up and conveyed into the dirt-hopper (c) situated at the back.

The dust stirred up by the sweeping process is vacuumed up by a vacuuming system (fan) (d), filtered by flat-pleat filter (e) and thus separated from the clean air.

Mechanical filter cleaning (f) removes the dust caked onto the flat-pleat filter and allows this to drop into the dirt-hopper.

# **OPERATING AND FUNKTIONAL COMPONENTS**



#### **Machine Components:**

- Vacuuming Syst., Side Brush, Roller Brush Start Button 1.
- Side Brush, Roller Brush Start Button 2.
- 3. Vacuuming System, Roller Brush Start Button
- **Battery Discharge Indicator** 4.
- Charge Indikator / Hour Meter 5.
- 6. **Battery Charger Cord Storage Compartment**
- 7. **Battery Charger Outlet**
- **Transport Bar** 8.
- Adjustable Control Handle Lever 9.
- 10. **Roller Brushes**
- Control Panel
- Transport lever
- Key Switch (Main Switch) 13.
- Side Brush 14.
- Side Brush Adjusting Lever 15.
- Internal Access Knob
- 17. Filter Cleaning (Filter Shaker)
- Shaker Rod
- Dirt Hopper,
- 20. Dirt Hopper Handle
- 21. Battery
- Vacuuming System (Fan)
- Flat-Pleat Filter
- Anti-static Chain 24.

#### **TECHNICAL DATA**

#### **Technical Data**

Model	balimat 3300
Length	1085 mm / 43 in
Width	799 mm / 31 in
Height	658 mm / 26 in
Weight	137 kg / 300 lb
Sweeping Path Width	900 mm / 35 in
Main Brush Width	500 mm / 20 in
Side Brush Diameter	354 mm / 14 in
Hopper Capacity	60 L / 15.9 Gal
Battery Capacity	12 V, 105 Ah (C5), 120Ah (C20)
Total Power Consumption	12 VDC, 590 W, 34.3 A
Battery Charger	100-240VAC 10A
Productivity Rate (Net)	3150 m²/hr / 23620 ft²/hr
Slope Maximum	2%
Machine Vibration at Hand-Arm *	<2.5m/s <sup>2</sup>
Machine Vibration Uncertainty K *	0.8 m/s <sup>2</sup>
Sound Pressure Level LpA *	62 dBA
Sound Uncertainty KpA *	3 dBA
Sound Power Level Lwa + Uncertainly Kwa	81 dB(A)
Protection Grade	IPX3
Operation Temperature	min15°C, max. 40°C

\*Values determined as per EN 60335-2-72

# **SAVETY**

#### **SAVETY INSTRUCTIONS**

As well as the operating manual and the binding regulations for accident prevention applicable in the country of usage and at the place where it is deployed, recognised rules for safety and expert working, and environmental protection, are also to be followed.

#### SAVETY INSTRUCTIONS FOR OPERATION

- The machine is to be inspected before usage for its perfect condition and operational safety. If it is not in perfect condition, it must not be used.
- In particular, have any errors that may affect safety rectified immediately.
- Operating the machine in buildings at risk of explosion is prohibited.
- Sweeping up of flammable, toxic or explosive materials and combustible gases or undiluted acids and solvents, burning or smouldering objects is prohibited.
- The device is not suitable for accepting fluids, ropes, twines, wires or similar items.
- Only use the machine with the dirt-hopper inserted to prevent injuries due to parts being projected.
- Do not make any alterations or additions to the machine without the approval of the manufacturer.
- Persons (including children) who, due to their
  physical, sensory or mental capacities or their inexperience or
  lack of knowledge, are not capable of using the machine
  safely must not use this machine without the supervision or
  instruction of a responsible person. Children must be
  supervised to ensure that they do not play with the machine.
- Caution: Loose items of clothing may be drawn into rotating parts and cause serious or fatal injuries.
- Transporting loads with the sweeper is not permitted.
- Observe the maximum climbing ability specified in the technical data and maximum possible slope inclination for operating across slopes. The equipment may tip, particularly on slopes. Adapt your operating manner and speed to the conditions.
- The machine is not permitted for use on roads.
- Suitable, non-slip footwear is to be worn to avoid accidents.

#### SAFETY INSTRUCTIONS ON BATTERIES

- The operating instructions of the battery manufacturer for their product and the specifications of the legislator on handling batteries are to be followed.
- Charge flat batteries directly after usage and only keep in well-ventilated rooms.
- Keep away from naked flames and electrical sparks in the charging area, as a highly-explosive gas mixture can be produced when charging batteries.
- Always keep batteries clean and dry to avoid leakage currents. Never short circuit the battery terminals.
- To avoid damage to health, smoking, eating and drinking in the area of the battery charging station is to be avoided
- The battery must only be charged with the front panel open and secured by the cover holder.
- Ensure safe and environmentally-friendly disposal of operating and auxiliary materials, as well as replacement parts, particularly batteries!

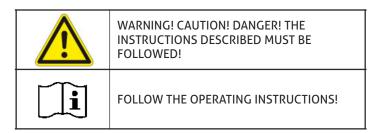
#### SAFETY INSTRUCTIONS FOR CARE AND MAINTENANCE

- Before cleaning and maintaining the equipment, replacing parts or changing to a different function, the equipment is to be switched off and the ignition key is to be pulled out.
- Spare parts must correspond to the requirements laid down by the manufacturer. This is always guaranteed for original spare parts.
- Accessories and spare parts must only be installed by an authorised customer service department.
- For work on the electrical system, the battery is to be disconnected.
- The equipment must not be cleaned with a hosepipe or high-pressure water jet (risk of shortcircuits or other damage).
- Repairs must only be made by the permitted customer service centres or by experts in this field familiar with all the relevant safety regulations.
- Follow the safety review according to the locally-applicable regulations for mobile industrial equipment.
- Always wear suitable gloves when working on the equipment.

#### **SYMBOLS IN THE OPERATING MANUAL**

<u>^</u>	WARNING! CAUTION! DANGER! THE INSTRUCTIONS DESCRIBED MUST BE FOLLOWED
3	WEAR BREATHING PROTECTION!
	WEAR PROTECTIVE GOGGLES!
	WEAR GLOVES!

#### **SYMBOLS ON THE SWEEPER**



#### **SAFETY EQUIPMENT**

- Safety equipment is to be inspected for functioning before starting work.
- Only allow the sweeper to be switched on if the following conditions are met:
  - a) The start key is in the ON position.
  - b)The equipment panel is closed

sweeper is interrupted when:

- a) The start key is switched to the OFF position
- b) The equipment panel is open

The safety equipment attached to the machine must not be bypassed or put out of operation.

# SHUTDOWN / RECYCLING



After the useful life of the machine is over, it must be disposed of expertly. However, individual parts may be thoroughly reused.

For the disposal of all equipment parts, the disposal conditions specific for the location are applicable.

INSTRUCTION Please ask your supplier about disposal of the equipment.

#### **WASTE DISPOSAL / RECYCLING**



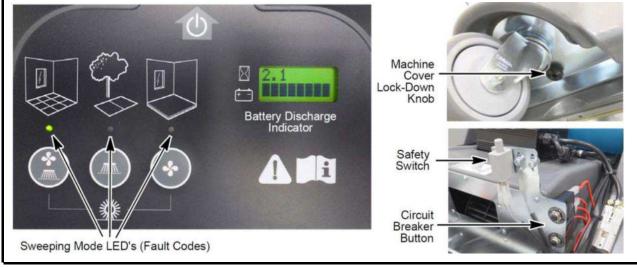
Recycling packaging materials. Do not dispose of packaging materials in normal waste but forward for reprocessing.

For the disposal of all packaging materials, the disposal conditions specific for the location are applicable.

# **CONTROL PANEL LED CODE GUIDE**

LED CODE	REASON / FAULT	SOLUTION		
One sweeping mode LED is solid	Normal operating condition	No action required		
One sweeping mode LED is flashing fast	Motor overload has shut down machine due to obstruction.	Disconnect battery cable and check main brush, side brush and fan. Remove obstruction. Reset circuit breaker button.		
One sweeping mode LED is flashing slowly and battery discharge indicator is flashing	Low battery level.	Recharge battery.		
All sweeping mode LED's are flashing fast	Machine cover is open. The safety switch has shut down machine.	Close machine cover.		
	Machine is in charging mode. Battery charger is plugged into electrical outlet.	No action required or unplug battery charger.		
	Defective battery.	Replace battery.		
	Machine cover lock-down knob is loose.	Check lock-down knob to ensure knob is tight and machine cover is secure.		
	Defective, misaligned or loose machine cover safety switch.	Check, adjust or replace switch.		
	Defective motor(s) or loose electrical connection to motor.	Disconnect battery cable and check all motors for proper operation. Reset circuit breaker button.		
	Loose or damaged electrical connection.	Disconnect battery cable and check electrical harness for loose or damaged wire connections.		
	Main brush and side brush not properly adjusted.	Readjust main and/or brush height. Reset circuit breaker button.		
	Motor overload, excessive belt tension.	Check belt tension for proper adjustment, replace belt if worn. Reset circuit breaker button.		
Control Donol	Worn or damaged main brushes.	Replace main brushes.		

# **Control Panel**





# **TROUBLESHOOTING**

	Help for faults							
Fault	Possible cause	Remedy						
Device does not start	Battery state ≤20%	► Charge battery						
	Battery cable not correctly connected or loose	► Check cabling of the batteries and connect correctly						
	Safety switch equipment panel not operated	► Close equipment panel correctly.						
	Overload or fault with the main relay	► Check and replace main relay						
	Cause unclear	► Notify your dealer or customer services						
Drive motor running, but device is not operating	Bowden cable of the traction drive has extended or is not functioning	► Check and adjust Bowden cable of the drive						
	Lack of power transmission of the drive belt	► Check and adjust drive belt of the drive						
	Cause unclear	► Notify your dealer or customer services						
Device stops on a slope when	Slope >2%	► Travel on a route with smaller slope						
operating	Bowden cable has extended and the power transmission of the drive belt is no longer sufficient	► Check and adjust Bowden cable of the drive						
	Lack of power transmission of the drive belt	► Check the drive belt of the drive						
	Permitted total weight of the machine exceeded by full dirt-hopper.	►Empty dirt-hopper.						
	Main relay or relay for the drive has been overloaded and is/are faulty	►Check relay for the drive						
	Cause unclear	► Notify your dealer or customer services						
Roller brushes are not running	Straps, large packaging residues etc. have been swept up	► Turn key switch to "0" (switch off sweeper). Check roller brushes						
· ·		for jammed or picked-up objects such as, for example, straps,						
		cables etc., remove them and check the drums for damage and						
		free running.						
	Functional fault of the toothed belt or gear wheels (e.g. toothed belt has come off)	► Check toothed belt and gear wheels						
	Roller brush motor overloaded (check brushes for free running, as appropriate)	Check and replace relay of the roller brush motor						
	Cause unclear	Notify your dealer or customer services						
Bad sweeping in the edge region	Side brushes worn	► Check for wear, readjust as required or replace the side brushes						
	Side brushes have not lowered	►Lower the side brushes						
	Functioning of the side sealing rubber restricted by wear, a fault or similar.	▶ Replace side sealing rubbers as appropriate						
	Cause unclear	► Notify your dealer or customer services						
Sweeper does not sweep correctly	Roller brushes or sweeping tunnel blocked by sweeping material	► Check sweeping tunnel for contamination or blockages and remove them						
	Roller brushes or side brushes worn or not set correctly	► Check roller brushes and side brushes for wear, readjust or						
	Sealing rubber damaged by foreign bodies or running over	replace asrequired  Check front, side and rear sealing rubber for damage and						
	obstacles without a ramp	correct seating and replace as necessary						
	Roller Brushes are not installed according to their direction of rotation	▶ Remove roller brushes and fit according to the direction of rotat						
	Cause unclear	▶Notify your dealer or customer services						
Device raises dust	Dust filter no longer cleaned	► Check, clean or replace dust filter						
	Sealing rubber faulty, so that the vacuuming system cannot	► Check front, side and rear sealing rubber for damage and						
	work properly	correct seating						
	Dirt-hopper is full	►Empty dirt-hopper.						
	Sealing section fastened wrongly or faulty	► Check sealing section on the filter cover and replace as						
	Sweeping tunnel blocked by bulky sweeping material so that no sweeping material can be transported into the dirt-hopper any longer	▶ Remove contaminations or blockages in the sweeping tunnel						
	Cause unclear	► Notify your dealer or customer services						
EL (: 16 l)	Overdend an overse of dental and the	I Nieff						
Electrical fault	Overload or wear of electrical components or cause unclear	Notify your dealer or customer services						

See CONTACT DATA, page 10

# **MAINTENANCE WORK / MAINTENANCE TABLE**

i Instruction: The following maintenance work must be carried out by instructed and authorised specialist staff at the set intervals.



**CAUTION!** In the event that damage to the machine is established, it must not be used until the damage has been remedied by specialist staff.

- **⚠** RISK!
- → Risk of Injury The motor(s) need(s) to overrun for several seconds after being shut off.
- → In this time, you must keep clear of the drive area.
- **⚠** CAUTION!
- Allow the equipment to cool down sufficiently before all maintenance and repair work
- Unplug the charger from the socket.
- Disconnect the plus terminal from the battery.

# TIPPING THE SWEEPER, SEITE 18

Activity			Interval	
	Daily	Weekly	Every 50 hours	Chapter
Check machine for damage	•			
and functional faults and remedy as appropriate.				
Check the battery charge; charge batteries as appropriate.	•			(13), 16,17
Empty the refuse container	•			20
Check sweeping roller & sweeping roller housing for damage, for foreign				
bodies and for wear; remove any foreign bodies/	•			14,15 (18),19
clean or replace the sweeping roller				(10),19
Check side brushes for foreign bodies, straps etc.;	•			21
remove/clean as appropriate.				
Check side brush setting;	•			(12),22
readjust or replace side brushes as appropriate				(12),22
Check the condition of the dust filter; clean as appropriate	•			(18),23
Check the charge of the batteries before each usage	•			13,16, 17
Undertake all daily maintenance work		•		
Check the sealing rubber in the sweeping roller area for				
wear and damage; replace as appropriate				
Check dust filter for damage; replace as appropriate		•		(18),23
Functional test of the entire machine		•		
Check all toothed belts for tension, wear and				
operation; replace as appropriate		•		
Check the Bowden cables and all moving parts for				
their smooth running; replace as appropriate		•		
Check the Bowden cables for extension of the pull cable		•		
Check safety components (end switch filter cover)		•		
Conduct all daily and weekly maintenance work			•	
Check battery condition; replace as appropriate			•	13,16, 17
Check smooth running of the wheels (replace any bearings)			•	
Check all bearings for damage			•	
Check all screws and fastenings			•	
Check all covers and steel parts for firm seating			•	
Check the operation of the charger			•	

# SHUTDOWN, DISMANTLING, DISPOSAL

#### LONG-TERM STOPPAGE OF THE SWEEPER

#### INSTRUCTION!

If it is stopped for a long period, the batteries must charge at intervals of approximately 2 months so they are not damaged by a deep discharge.

- Set down the sweeper onto a level, dry and protected surface.
- Put ignition key into the "OFF" position and pull out.
- · Secure sweeper against rolling away.
- Raise sweeping roller. To do this, adjust the level to the lowest position and stop.
- · Raise the side brushes.
- · Clean the dust filter.
- Empty the refuse container.
- · Clean the sweeper inside and out.
- Disconnect the battery.

#### SHUTDOWN / RECYCLING



After the useful life of the machine is over, it must be disposed of expertly. However, individual parts may be thoroughly reused.

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INSTRUCTION Please ask your supplier about disposal of the equipment.

#### **WASTE DISPOSAL / RECYCLING**



Recycling packaging materials. Do not dispose of packaging materials in normal waste but forward for reprocessing.

For the disposal of all packaging materials, the disposal conditions specific for the location are applicable.

#### **IMPORTANT SPARE PARTS AND CONSUMABLES**

Flat filter Item No. 100223 Sweeping Roller PA 0.25V Item No. 110970 Side Brushes PA 0.6 Item No. 110526

#### **CONTACT DATA**

Manufacturer: Stolzenberg GmbH &

Co. KG Hamburger Straße

15-17 49124

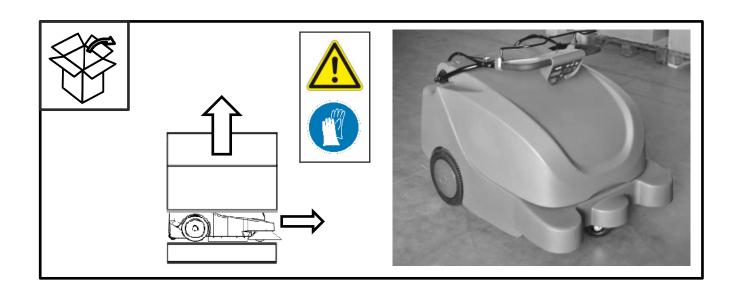
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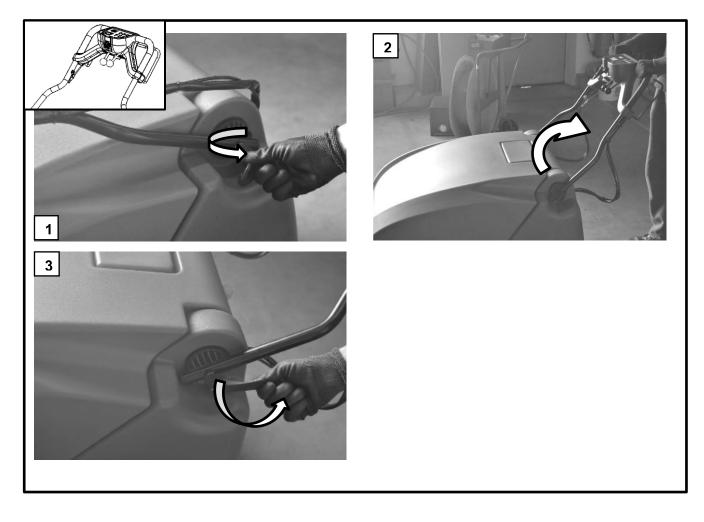
T: +49 (0) 5401 / 8353-0

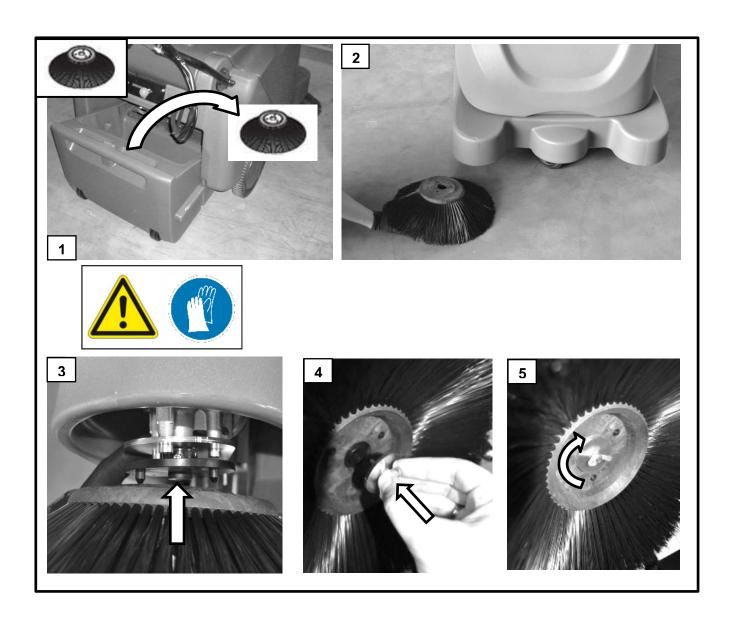
F: +49 (0) 5401 / 8353 - 11

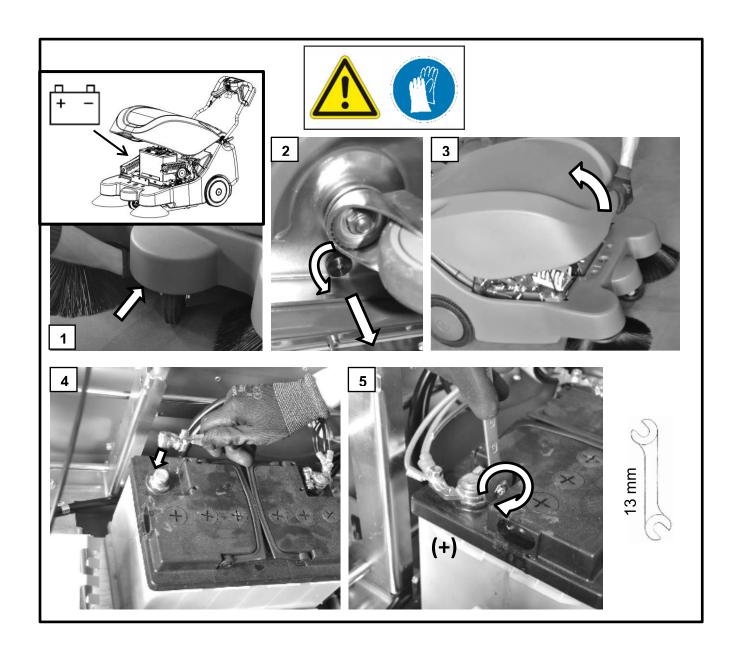
E: service@stolzenberg.de

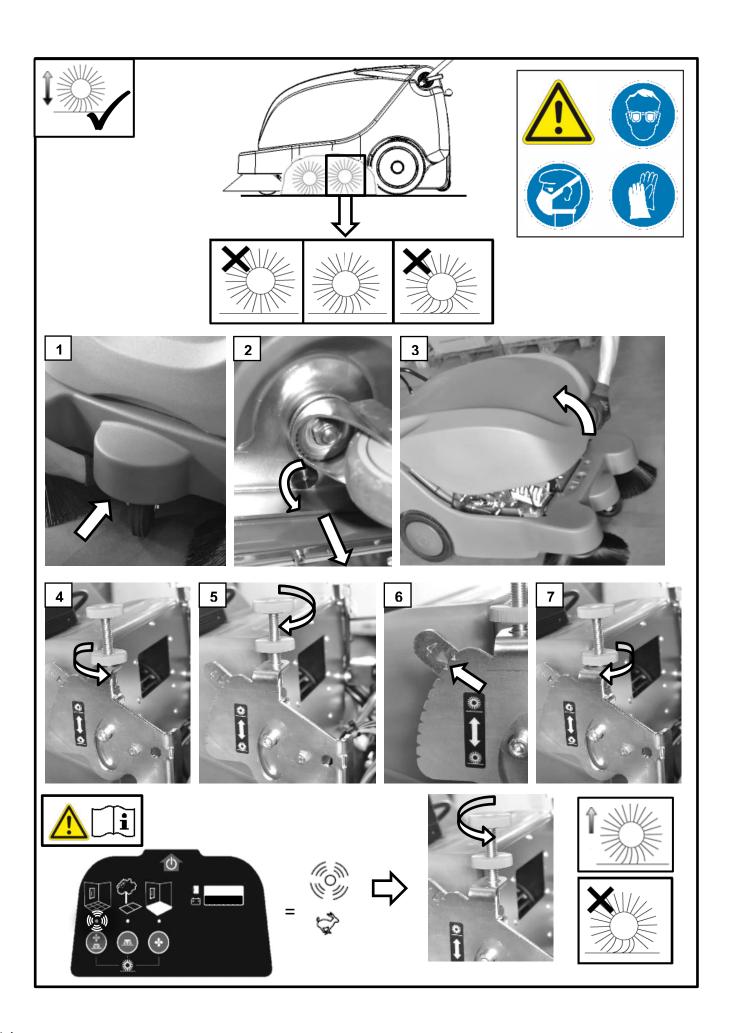
# **Dealer:**

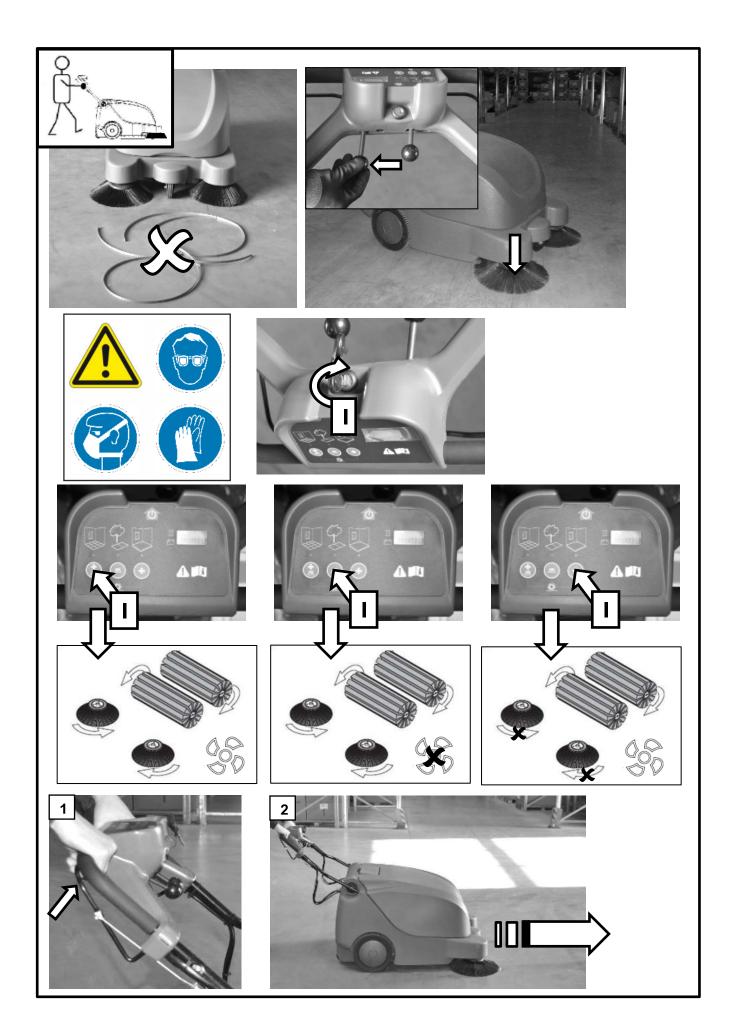


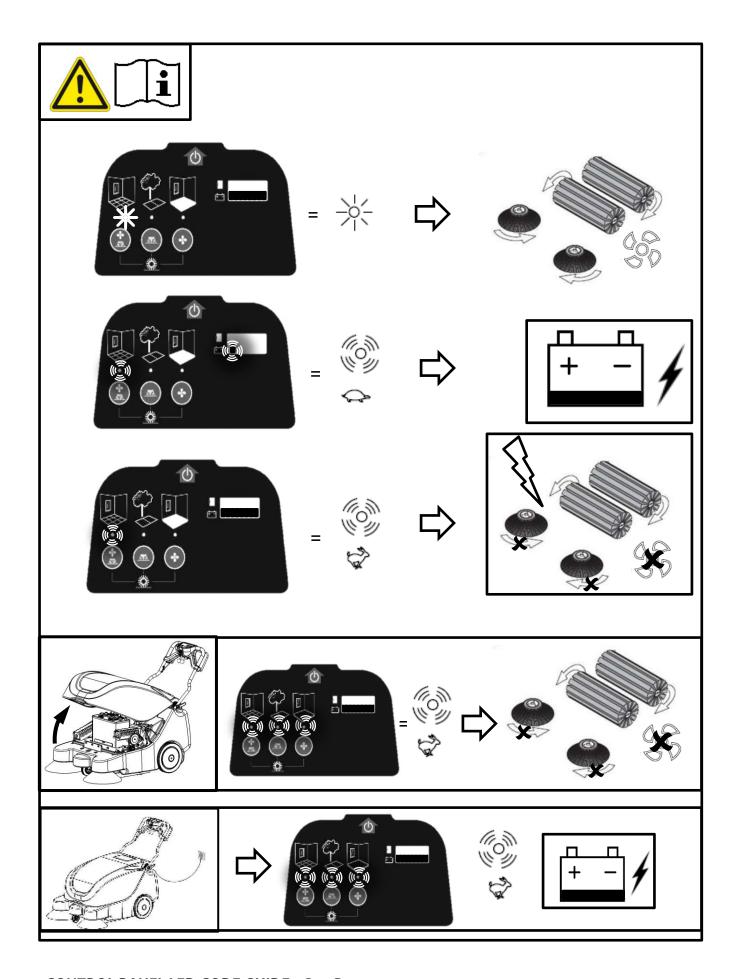












**CONTROL PANEL LED CODE GUIDE - See Page 7** 

