

TwinSweep 700E

EN Instruction Manual
(Translation of the Original Version)



1. Contents, General	....3
1.1 Contents	....3
1.2 Proper Use	....4
1.3 EC Conformity Declaration	....4
1.4 Rating Plate	....4
1.5 Explanation of Symbols	....4
2. Construction, Function, Technical Data	....5
2.1 Packing Contents	....5
2.2 Function	....5
2.3 Operating and Functional Components	....5
2.4 Technical Data	....6
3. Safety	....7
3.1 Safety Instructions	....7
3.2 Symbols in the Operating Manual	....7
3.3 Symbols on the Sweeper	....7
3.4 Safety Equipment	....8
4. Setting Up/ Before Start Up/Start Up/Transport	....8
4.1 Unpacking the Sweeper	....8
4.2 Waste Disposal / Recycling	....8
4.3 Adjusting the Transport Bar	....8
4.4 Fitting the Side Brush	....8
4.5 Opening the Front Panel	....9
4.6 Closing the Front Panel	....9
4.7 Before Start Up /Transport Weight	....9
4.8 Battery / Charger	....9
4.8.1 Fitting Battery and Connecting	....9
4.8.2 Battery Connection Diagram	....9
4.8.3 Charging the Battery / Battery Charge Indicator (LBF)	....10
4.8.4 Charger	....10
4.8.5 Removing the Battery	....10
4.9 Start Up	....11
5. Operation	....11
5.1 Starting Sweeper	....11
5.2 Driving Sweeper	....11
5.3 Sweeping Operation with Side Brush, Roller Brush and Fan	....11
5.4 Switching Off Sweeper	....12
5.5 Transporting the Machine	....12
5.6 Cleaning the Dust Filter	....12
5.7 Emptying the Dirt - Hopper	....12
6. Troubleshooting	....13
7. Care and Maintenance (Minor Repairs)	....14
7.1 General Cleaning	....14
7.2 Changing / Cleaning the Filter	....14
7.3 Inserting the Filter	....15
7.4 Tipping the Sweeper	....15
7.5 Changing the Roller Brush	....15
7.6 Setting Sweeping Roller Brush Clearance	....16
7.7 Changing the Side Brush	....16
7.8 Setting the Side Brush	....16
7.9 Changing the Front Sealing Rubber	....16
7.10 Changing the Side Sealing Rubber	....17
7.11 Setting / Replacing the Side Brush Bowden Cable	....17
7.12 Electrical System Fuse Explanation	....17
7.13 Important Spare Parts and Consumables / Contact	....17
7.14 Contact Data	....17
7.15 Maintenance Work / Maintenance Table	....18
8 Shut Down , Dismantling, Disposal	....19
9 Circuit Diagram	....20

1 CONTENTS / GENERAL

1.1 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 17).



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.

1.2 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", chapter 3). 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.)

1.3 EC DECLARATION OF CONFORMITY



EC Declaration of Conformity

According to the EC Machinery Directive 2006/42/EC, Annex II 1.A

We hereby declare that the machine designated below complies with the essential safety and health requirements of the EC Machinery Directive in its design and construction and in the version marketed by us.

Mister Kai Stolzenberg - Management of Stolzenberg GmbH & Co. KG, Hamburger Straße 15-17, 49124 Georgsmarienhütte - be authorized to compile the technical documentation

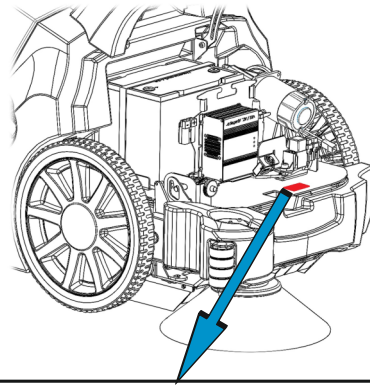
Manufacturer:	Stolzenberg GmbH & Co. KG Hamburger Straße 15-17 D-49124 Georgsmarienhütte
Description of the machine:	Suction Sweeper with Tandem-Roller-System
Machine type:	TwinSweep 700E
Applicable EC Directives:	2006/42/EG 2014/30/EU 2000/14/EG
Applied harmonized standards, in particular:	DIN EN 60335-1 : 2020-08 DIN EN 60335-2-72: 2014-09 DIN EN 55012: 2010-04 DIN EN 61000-6-2: 2019-11 DIN EN 61000-3-2: 2019-12 DIN EN 61000-3-3: 2020-07

Georgsmarienhütte, 13.03.2023


Kai Stolzenberg
(General Manager)

1.4 RATING PLATE

The rating plate is attached on the baseplate below the front cover.



TwinSweep 700E







MODEL: TS 700E PRO
SERIAL NUMBER: TS7000R2003
PROTECTION: IPX3
GVW: 107 kg

Stolzenberg GmbH & Co. KG
Hamburger Str. 15-17
49124 Georgsmarienhütte
Germany
www.stolzenberg.de



Made in Germany

1.5 EXPLANATION OF SYMBOLS

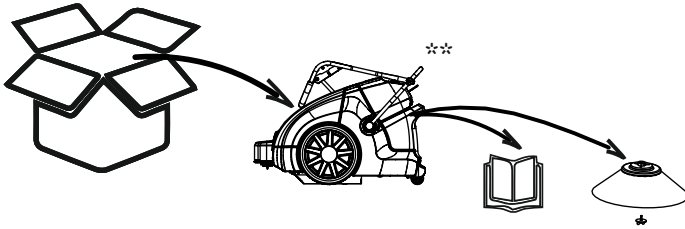
-  **DANGER!**indicates a possibly dangerous situation that can cause death or serious injuries.
-  **CAUTION!**indicates a possibly dangerous situation that can cause minor injuries.
-  **WARNING**indicates a possibly dangerous situation that may cause material damage.
-  **INSTRUCTION**indicates important information.

2 CONSTRUCTION, FUNCTION, TECHNICAL DATA

The TwinSweep 700E is a battery-operated, hand-driven pedestrian-controlled vacuum sweeper fitted with the tandem roller system (TRS).

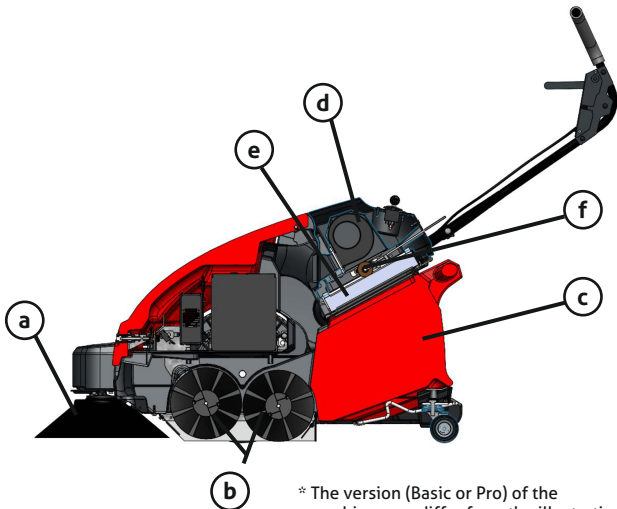
The TRS allows large sweeping materials to be swept up without difficulty. The sweeper has a powerful vacuum function.

2.1 PACKAGING CONTENTS



** The machine may differ from the illustration

2.2 FUNCTION



* The version (Basic or Pro) of the machine may differ from the illustration

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).

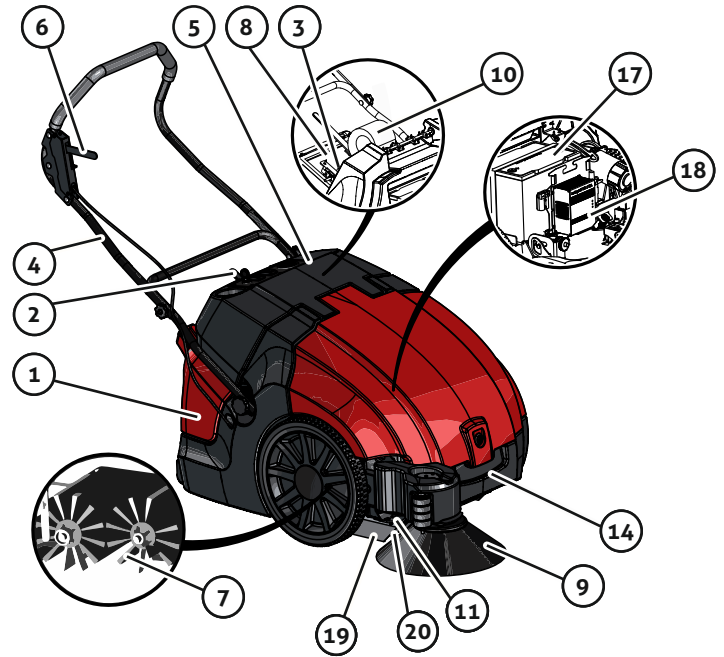
From this, the sweeping material is taken up and conveyed into the dirt-hopper (c) situated at the back.

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.

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

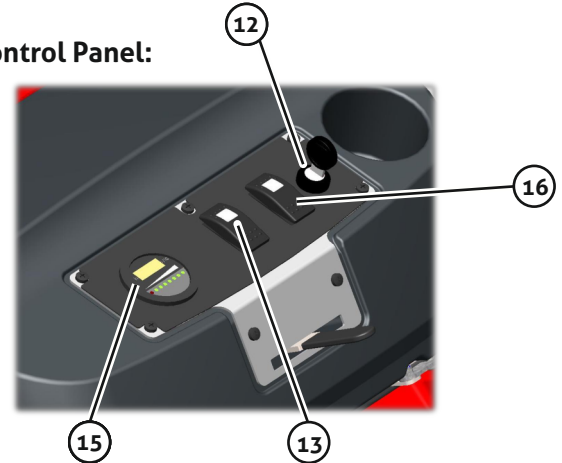
2.3 OPERATING AND FUNCTIONAL COMPONENTS

Overview:



* The version of the machine may differ from the illustration

Control Panel:



- | | |
|---------------------------|---------------------------------|
| 1 Dirt-Hopper | 11 Locking pedal |
| 2 Shaker rod | 12 Key Switch (Main Switch) |
| 3 Filter cleaning | 13 Side Brush Switch (only Pro) |
| 4 Transport Bar | 14 LED Front Light (only Pro) |
| 5 Filter cover | 15 Charge Indicator/Hours Meter |
| 6 Brush Selector | 16 Fan Switch |
| 7 Roller Brush | 17 Battery |
| 8 Flat-Pleat Filter | 18 Charger (on Board) |
| 9 Side Brush | 19 Side Sealing Rubber |
| 10 Vacuuming System (Fan) | 20 Front Sealing Rubber |

2.4 TECHNICAL DATA

Technical data			
		Basic	Pro
Machine data			
length x width x height (driving handle folded out) max	mm	1470x700x1090	
Length x width x height (without handle)	mm	1030x700x640	
Length x width x height (driving handle folded in)	mm	1030x700x740	
Weight (without batteries)	kg	57	58
Weight (with batteries)	kg	72	82
Permissible total weight	kg	97	107
Driving and sweeping speed	kph	4	
Climbing capability (max.)	%	2	
Sweeper roller length	mm	400	
Sweeper roller diameter	mm	190	
Side broom diameter	mm	354	
Theoretical sweeping capacity (at 4 kph)	m ² /h	2400	2800
Practical area performance (70%)	m ² /h	1680	1960
Sweeping width with side brushes folded out	mm	--	700
Sweeping width with side brushes folded in	mm	600	600
Working width without side brushes	mm	400	
Volume of the sweepings container	l	40	
Maximum permissible load of the sweepings container	kg	25	
IPX protection class	--	IP X3	
Battery			
Typ	--	12V 50Ah (C20) AGM	12V 75Ah (C20)
Capacity	Ah	50	75
Weight	kg	15,2	24,2
Thero. Charging time with discharged battery (80%)	h	5	6
Running time up to	h	3	4
Charger			
Output voltage	V	12	
Charge current	A	10	
Power frequency	Hz	50/60	
Filter- und vacuum-system			
Filter area	m ²	ca. 1	
Filter class	--	M	
Working conditions			
Operating temperature	°C	-15 to +40	
Values according to EN 60335-2-72			
Sound pressure level L _{PAP}	dB(A)	54	
Uncertainty K	dB	2	
Sound pressure level L _{WA} + Uncertainty K	dB	69	
Vibration	m/s ²	<2,5	

3 SAFETY

3.1 SAFETY INSTRUKTIONEN

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.

Safety 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 ranges 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.
- Very fine dust (e.g. cement dust) leads to clogging of the filter system, do not sweep dust that is too fine!
- 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.
- 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 information for the battery

- The operating instructions of the battery manufacturer for their product and the specifications of the legislator on handling the battery are to be followed.
- Charge the flat battery 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 the battery.
- Always keep the battery 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 the battery!

- 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 the battery!



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 short-circuits 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.

3.2 SYMBOLS IN THE OPERATING MANUAL

	WARNING! CAUTION! DANGER! THE INSTRUCTIONS DESCRIBED MUST BE FOLLOWED
	WEAR BREATHING PROTECTION!
	WEAR PROTECTIVE GOGGLES!
	WEAR GLOVES!
	UNPLUG FROM THE MAINS!

3.3 SYMBOLS ON THE SWEEPER

	WARNING! CAUTION! DANGER! THE INSTRUCTIONS DESCRIBED MUST BE FOLLOWED!
	FOLLOW THE OPERATING INSTRUCTIONS!

3.4 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 " I " - position.
 - b) The filter box is closed
 - c) The dirt-hopper is closed. The power supply to the sweeper is interrupted when:
 - a) The start key is switched to the " 0 " -position
 - b) The filter box is open
 - c) The dirt-hopper is open

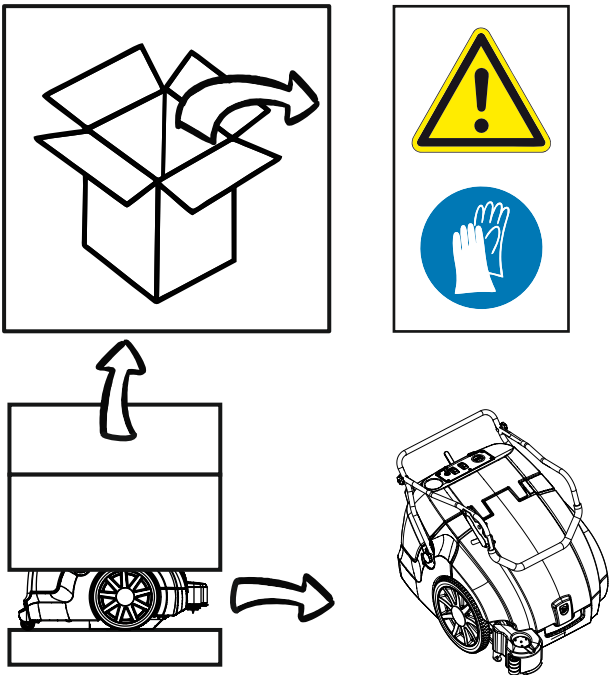
The safety equipment attached to the machine must not be bypassed or put out of operation.

4 SETTING UP / BEFORE START UP / OPERATING / TRANSPORT


4.1 UNPACKING THE SWEEPER

- i** **Instruction** Look out for damage in transit and if there is any, indicate this to your specialist dealer without delay.
- Remove the box.
- Remove wooden blocks for securing the wheels.
- Stop the transport bar in the desired position using the star knobs.

See also: PACKING CONTENTS → Chapter 2.1



4.2 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.

See also: Putting Out of Operation / Recycling → Chapter 8

4.3 ADJUSTING THE TRANSPORT BAR

- Undo the star grips of the raster fastening on the frame (Fig.1) to fold out lower transport bar. Retighten star grips.
- Undo star grips on the upper transport bar (Fig. 2) to set out the upper transport bar
- Adjust the transport bar with the star grips for the operator (Fig. 1 + Fig 3)
- Important! Tighten all star knobs!

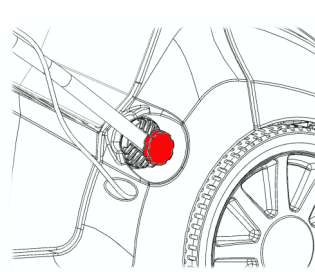


Fig. 1:

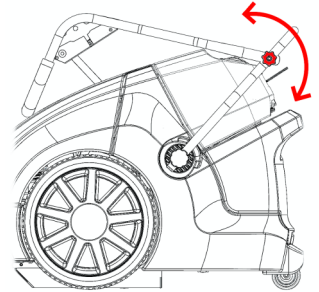


Fig. 2:

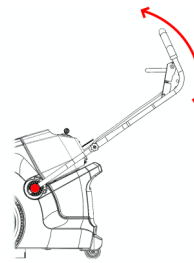


Fig. 3:

4.4 FITTING THE SIDE BRUSHES

Put the side brushes onto the take up of the driver (Fig. 1) and screw tight with the wing bolts (includes: washer, serrated lock, O-ring and wing bolt (Fig 1 + Fig. 2).

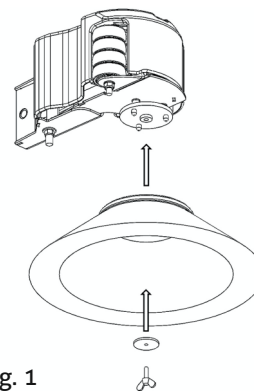


Fig. 1

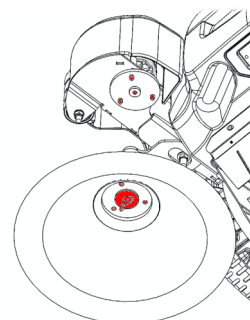
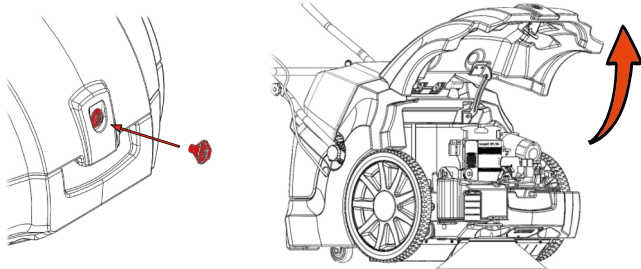


Fig. 2

4.5 OPENING THE FRONT PANEL

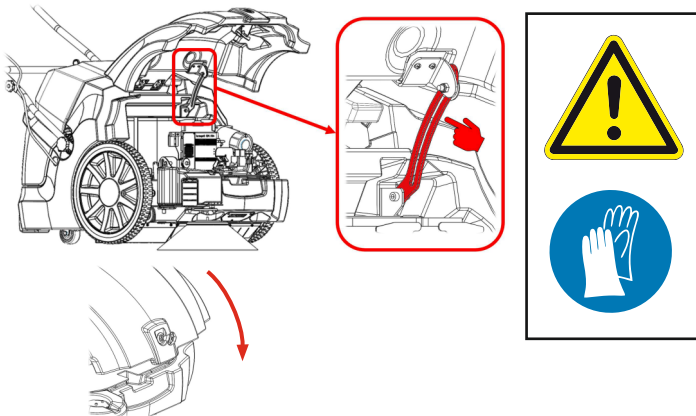
The front panel is unlocked with a panel key (rotate clockwise). Remove the key and open the front panel and pull to its highest position, the panel will engage automatically.



4.6 CLOSING THE FRONT PANEL

Raise the front panel slightly to close it and push the backplate (holds the front panel) back slightly and close. The front panel engages automatically.

There is a risk of crushing. When closing remove all body parts from the danger area.



4.7 BEFORE START UP/ TRANSPORT WEIGHT

	WARNING! CAUTION! DANGER! THE DESCRIBED INSTRUCTIONS MUST BE FOLLOWED!
	FOLLOW THE OPERATING MANUAL OF THE SWEEPER!

⚠ DANGER!

Risk of injury and/or damage! Take care of the weight of the equipment when charging!

TRANSPORTWEIGHT		
VERSION	BASIC	PRO
WEIGHT empty	57	58
WEIGHT with Battery	72	82

⚠ CAUTION! Only operate with the front panel and refuse container closed.

⚠ CAUTION! Charge the battery fully!

Make sure you are satisfied that the machine has been supplied undamaged and complete.

See also UNPACKING THE SWEEPER → Chapter 4.1

• If you have any complaints, contact your specialist dealer or our Service department.

• Read the SAFETY INSTRUCTIONS → Chapter 3.1

• Read the operating manual of the charger provided. Take note of the warning instructions for the battery!

• Connect the terminal (red cable) to the plus pole of the battery.

• Push the side brushes on the driver and screw tightly.

• Close the front panel and the refuse container

• Stop the transport bar using the star handle into the desired position.

4.8 BATTERY / CHARGER

Safety Instructions for the Battery

You must note the following warning instructions for handling the battery:

	WARNING! CAUTION! DANGER! THE INSTRUCTIONS DESCRIBED MUST BE FOLLOWED!
	FOLLOW THE INSTRUCTIONS ON THE BATTERY, IN THE USER INSTRUCTIONS FOR THE BATTERY AND THE OPERATING INSTRUCTIONS.

To do this, you must read the General Safety Instructions, particularly the Battery Warning Instructions Chapter 3!

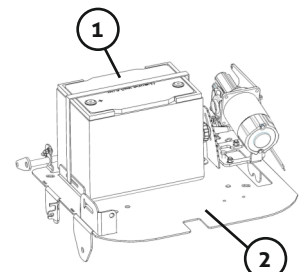
Recommended Battery

Please use original spare parts and contact your dealer.

4.8.1 FITTING THE BATTERY AND CONNECTING

		WARNING! - WEAR GLOVES WHEN WORKING IN THE AREA OF THE BATTERY TO AVOID INJURIES
--	--	--

- Open front panel
- Undo the charger holder (star handle) and fold upwards.
- Place the battery onto mounting plate.
- Secure battery with the holding strap
- The terminal (red cable) is to be attached to the plus pole (+) of the battery.
- Terminal (black wire) to the minus pole (-)



* The battery may differ from the illustration

i INSTRUCTION Attach the battery according to the specification

See → Fig. 1_2_CONNECTING BATTERY CHAPTER 4.8.3

i INSTRUCTION Charge the battery before putting the equipment into operation! (Ch. 4.8.3 +4.8.4)

i INSTRUCTION Charge the battery fully!

4.8.2 BATTERY CONNECTION DIAGRAM

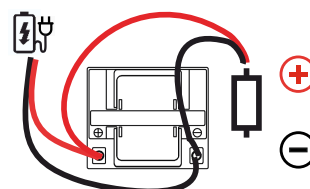


Abb. 1: Battery

4.8.3 CHARGING BATTERY

⚠ DANGER → Risk of injury, the charger must only be put into operation if the mains cable is not damaged. A damaged mains cable is to be replaced without delay by the manufacturer, Customer Services or a qualified person.

⚠ DANGER → Danger of electric shock. Follow mains and use the correct fuse. Only use charger in dry rooms with sufficient (i.e. open front panel) ventilation. Observe charging times.

⚠ DANGER → Risk of injury! Follow the safety instructions when handling battery. Follow usage instructions of the charger manufacturer.

Battery charge indicator

i INSTRUCTION The equipment is fitted as standard with maintenance-free battery.



Operational	lit yellow
Charge battery	lit red
Protection against deep discharge	flashes (equipment shuts down)

4.8.4 CHARGER

i INSTRUCTION Read the operating manual of the charger manufacturer.

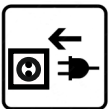
i INSTRUCTION Battery must only be charged at room temperature.

Charging on-board charger

- Open the front panel
- Plug the mains plug of the charger into the socket.

i INSTRUCTION The charger is electronically controlled and stops charging automatically. All functions of the sweeper are automatically interrupted during charging.

- If the battery is charged, the yellow light of the charger is lit.
- The battery is fully charged if the light of the charger is lit green.



Fault	lit or flashing red
Charge battery	lit yellow
No battery (connected)	flashing yellow
Fully charged	lit green

After charging

- Disconnect the charger's mains cable.
- Unwind the mains cable from the charger cable bracket.
- Close the front panel.

4.8.5 REMOVING BATTERY

- Open front panel. (See Chapter 4.5)
- Disconnect any charging plug
- Disconnect terminal from minus pole (-)
- Disconnect terminal from plus pole (+)
- Undo the charger holder (star handle) and dismantle.
- Undo holding strap.
- Remove battery.
- Dispose of used battery according to the applicable provisions (see Ch. 4.2 Recycling).

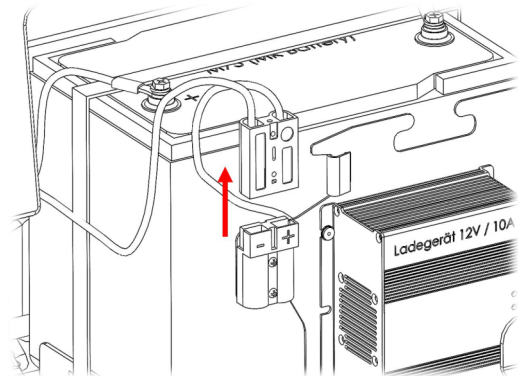


Fig. 1

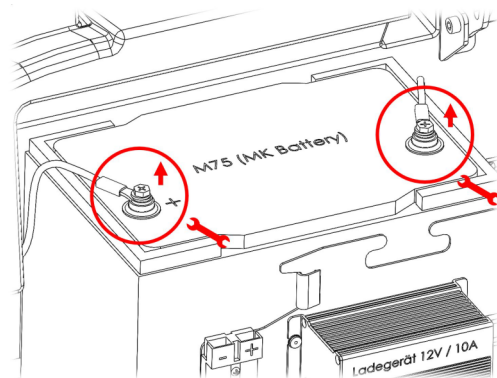


Fig. 2

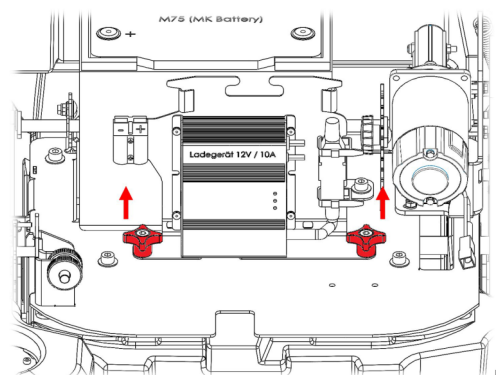


Fig. 3

4.9 START UP

General Instructions

- ⚠ **DANGER! Risk of injury! Switch off equipment before removing the dirt-hopper.**
- ⚠ **CAUTION! Only operate with the front panel and dirt-hopper closed.**
- i INSTRUCTION**
MUST BE FOLLOWED! → BEFORE START UP , chapter 4.7
- Make sure you are satisfied that the machine has been supplied undamaged and complete.
See → BOX CONTENTS, chapter 2.1
See → UNPACKING, chapter 4.1
- If you have any complaints, contact your specialist dealer.

5 OPERATION (USAGE AND OPERATION)

MUST BE FOLLOWED!

You must only carry out the work described in this chapter if you have completely read and understood the operating manual, particularly Chapter 1-4.

- i INSTRUCTION** Safety equipment is to be inspected for functioning before starting work

See also → Safety, chapter 3

⚠ **DANGER!** If the equipment is used for extended circulatory disorders in your hands due to vibrations may be caused. A generally - applicable usage time cannot be specified, as this depends on several influencing factors: These include a firm grip, low ambient temperature and personal disposition. It is recommended that you take regular breaks, and put the driving bar in an optimum position.

- i INSTRUCTION**
Please adjust driving speed to the conditions (different ground surface, type and amount of sweeping material), to obtain a good sweeping result.

- i INSTRUCTION**
When in operation, the dust filter must be cleaned at regular intervals and as required.

- i INSTRUCTION**
When in operation, the dirt-hopper must be emptied at regular intervals and as required.

See also → CLEANING DUST FILTER , CHAPTER 5.8
See also → EMPYING DIRT-HOPPER, CHAPTER 4.8.2

5.1 STARTING SWEEPER

- Put the key into the key switch and turn it clockwise to the "I" - position. The drive motor starts.

5.2 DRIVING SWEEPER

Running Over Obstacles

- Obstacles must always be run over with a ramp to protect the machine.(Ground clearance 30mm)

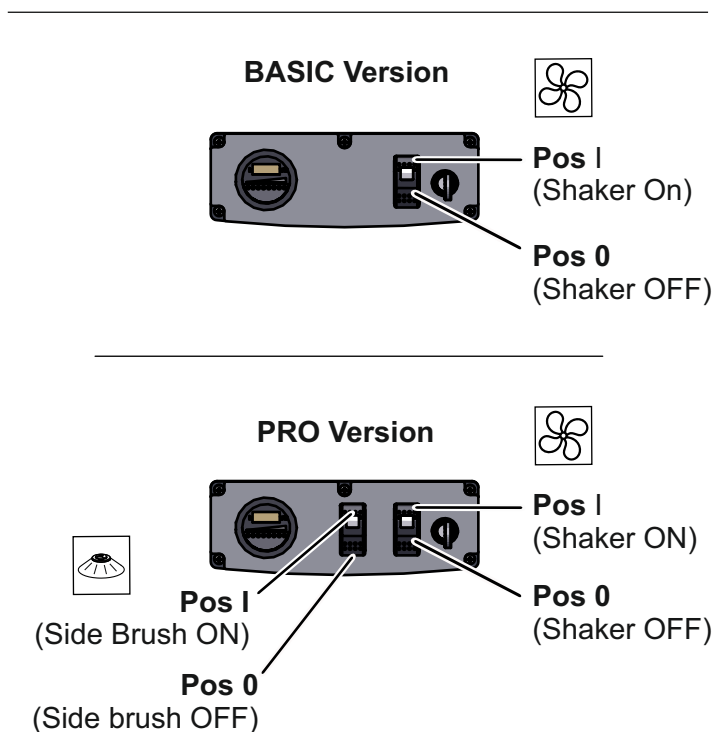
5.3 SWEEPING OPERATION - WITH SIDE BRUSH, ROLLER BRUSH AND FAN

- ⚠ **CAUTION!**
Sweeping material that is too large or non uniform may be disposed of via the raised filter lid directly into the refuse container.
- ⚠ **CAUTION!**
Do not sweep up any straps, wires or similar as this may cause damage to the sweeping mechanism.

- i INSTRUCTION**
The fan must absolutely be switched on.

As required:

- Lower the side brushes accordingly (operate pedal)
- Side brush switch in **Pos. I (ON), Pos.0 (OFF)**
- only Pro Version -
- Shaker in **Pos. I (ON), Pos.0 (OFF)**
- Operate selector
(side brush swivel out to the side)



5.4 SWITCHING OFF SWEEPER

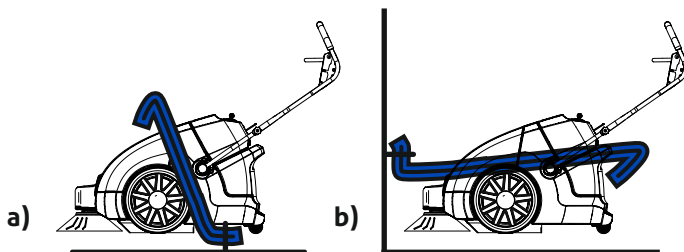
- Set down the machine on a level, dry and protected ground surface.
- Switch off the roller brush, side brush and vacuuming system.
- Put the key into the "0" position (anticlockwise) and pull out.
- Fold in the side brush.
- Raise up the side brush with the pedal.
- **When setting down, the machine has to be secured against inadvertent movement.**

5.5 TRANSPORTING THE MACHINE

⚠ DANGER! Risk of crushing! Observe the weight of the machine!

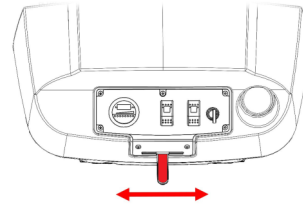
i INSTRUCTION! Do not kink any Bowden cables!

- Switch off sweeper and pull out the ignition key.
- Fold the side brushes upwards
- Fasten the wheels of the machine with chocks.
- Fasten the machine with tensioning belts or ropes.
- While transporting in vehicles or trailers, the machine has to be secured, according to the relevant applicable guidelines, against sliding and tipping.
- **Two fastening areas for belts:**
 - a) Machine vertically fastened (fastened to the floor as illustrated)
 - b) Machine horizontally fastened (fastened to the wall as illustrated)



5.6 CLEANING THE DUST FILTER

⚠ CAUTION! Risk of crushing when closing the filter box.

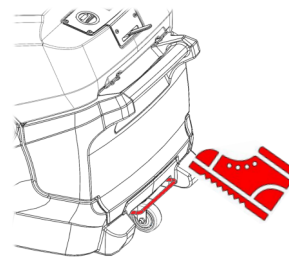


i INSTRUCTION! Ensure that the dirt-hopper has been correctly inserted

- When using the mechanical shaker, operate the shaking rod on several times (5-10 times) -alternately to the left and right-

i INSTRUCTION! It is recommended waiting 5-10 seconds until the fine dust has settled before emptying the dirt hopper.

5.7 EMPTYING THE DIRT-HOPPER

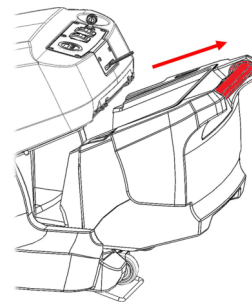


⚠ DANGER! Risk of injury! Switch off equipment before removing the dirt - hopper.

i Instruction The maximum permitted load (sweeping material) of the dirt-hopper is 25 kg.

i Instruction The refuse container must be emptied at regular intervals to enable perfect sweeping.

- Clean the dust filter.
- Operate the locking pedal.
- Remove the dirt-hopper from the sweeper using the handle on the top.



- Empty the dirt-hopper thoroughly after finishing sweeping work.
- Empty the dirt-hopper into a suitable container.
- Push the dirt-hopper back into the machine.

6 TROUBLESHOOTING

Help for faults		
Fault	Possible cause	Remedy
Device does not start	Battery state $\leq 20\%$	► Charge the battery
	Battery cable not correctly connected or loose	► Check cabling of the battery and connect correctly
	Safety switch in the filter cover not operated	► Close filter cover and insert dirt-hopper correctly.
	Overload or fault with the main relay	► Check and replace main relay
	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 brush worn	► Check for wear, readjust as required or replace the side brushes
	Side brush 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
Swivelling the brushes in and out not working	Bowden cable has extended or is not functioning	► Check and adjust Bowden cable of the side brushes
	Leg spring in the side brush not working (side brush does not swivel out)	► Check leg springs in the side brushes for damage and correct seating and replace as necessary
	Side brush jammed by dirt	Clean side brush suspension
	Cause unclear	► Notify your dealer or customer services
Sweeper does not sweep correctly	Roller brush or sweeping tunnel blocked by sweeping material	► Check sweeping tunnel for contamination or blockages and remove them
	Roller brush or side brush worn or not set correctly	► Check roller brushes and side brushes for wear, readjust or replace as required
	Sealing rubber damaged by foreign bodies or running over obstacles without a ramp	► Check front, side and rear sealing rubber for damage and correct seating and replace as necessary
	Roller Brush are not installed according to their direction of rotation	► Remove the roller brush and fit according to the direction of rotation
	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 work properly	► Check front, side and rear sealing rubber for damage and 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
Electrical fault	Overload or wear of electrical components or cause unclear	► Notify your dealer or customer services

See → Contact Data, chapter 7.14

7 CARE AND MAINTENANCE (NO REPAIR)

Regular maintenance of the sweeper is useful for the serviceability of the machine, its components and the sweeping result. As a result of the following described and regularly undertaken maintenance work, the lifetime of the machine can be extended.

⚠ DANGER! There is a risk when cleaning. During cleaning, always wear a dust protection mask, as well as protective goggles and gloves.

i INSTRUCTION! Repair work is only to be carried out by permitted customer service centres or specialists for these machines, familiar with all the safety-relevant regulations.

i INSTRUCTION! For any care or maintenance:
Set down the machine on a level surface.
Secure the machine from rolling away.
Always switch off the machine and pull out the ignition key.

i INSTRUCTION! For work on the electrical system, disconnect the battery.

7.1 GENERAL CLEANING

⚠ CAUTION! There is a risk of damage to the machine. The sweeper must not be cleaned with a hosepipe or high-pressure water jet. There is a risk of damage to the machine or the electrics.



7.2 CHANGING / CLEANING FILTER

⚠ CAUTION! Before starting to change or clean the dust filter, clean off the dust filter and empty the refuse container. Wear dust protection mask and protective goggles when working on the filter system. Follow the safety instructions for handling fine dust!

i INSTRUCTION Clean the dust filter before changing

i INSTRUCTION Empty the refuse container before changing

See → SWITCHING OFF SWEEPER, chapter 5.4

See → CLEANING DUST FILTER, chapter 5.6

See → EMPTYING REFUSE CONTAINER, chapter 5.7

Start mechanical or electrical filter cleaning.

- Switch off the sweeper, pull out the ignition key.
- Raise the filter cover until this engages in the backplate.(Fig.1)
- Hold the filter holder firmly and undo the filter lock on the left and right. (Fig.2)
- Slowly release the filter holder inc. filter until this is held.(Fig.3)
- Take the filter out of the machine. (Fig.4)
- Clean or replace as required.
- As required, **carefully** blow out with compressed air from the „clean „ side.
- Insert filter again.

See → INSERTING FILTER chapter 7.3

i INSTRUCTION!The filter may be damaged by blowing from from too small a distance from the filter material with too much pressure.

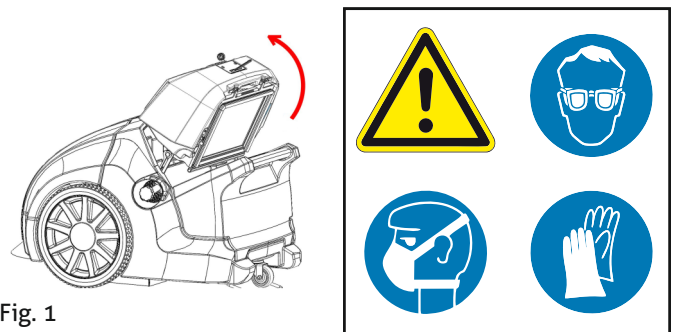


Fig. 1

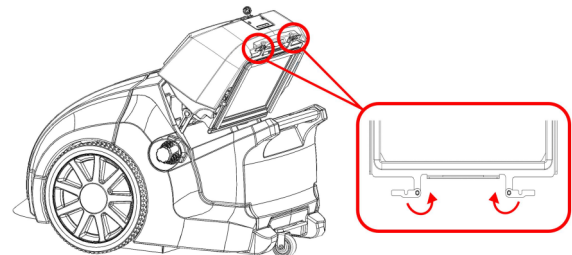


Fig. 2

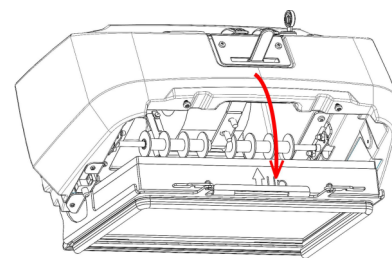


Fig. 3

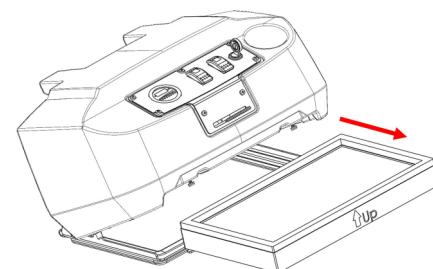


Fig. 4

7.3 INSERTING THE FILTER

- Insert filter in the installation direction (see symbol on the filter) into the filter holder. (Fig.1)
- Lock the filter on the left and right.(Fig.2)
- Remove hand from the risk area to avoid crushing.
- Close the filter cover.(Fig.3)

⚠ DANGER! → **RISK OF CRUSHING** when closing the filter box.



Fig. 1

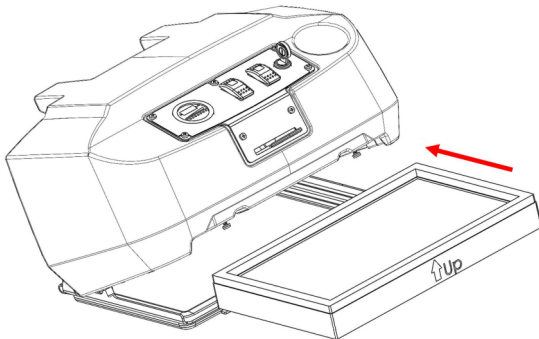


Fig. 2

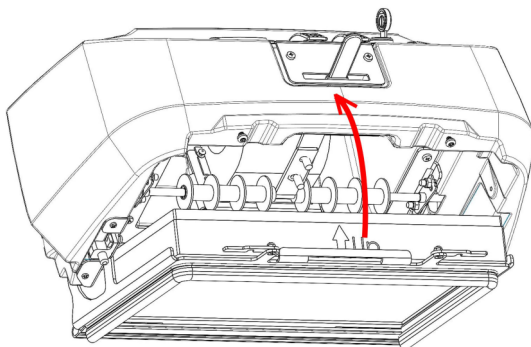


Fig. 3

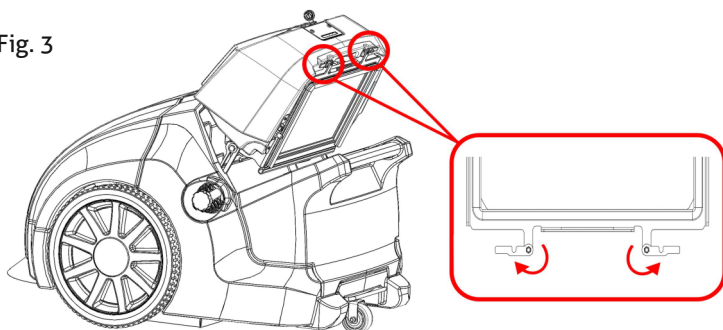
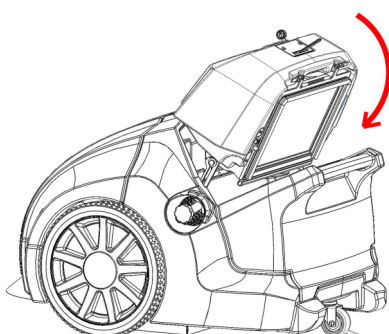
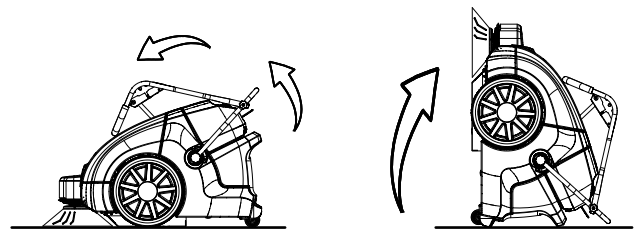
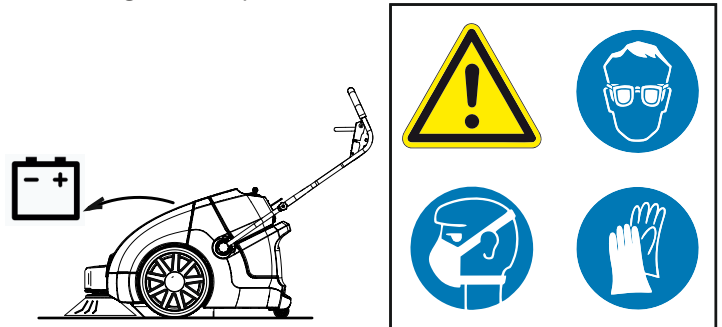


Fig. 3



7.4 TIPPING THE SWEEPER

- ⚠ CAUTION!** Risk of injury!
- i INSTRUCTION!** Clean the dust filter before changing
- i INSTRUCTION!** Empty the refuse container before changing
- Put ignition key into the "OFF" position and pull out.
- Open front panel.
- Disconnect battery and remove.
- Close front panel.
- Put the drive bar into the highest position and fold in drive bar.
- Tip the machine rearwards with the help of a second person (first put steering roller in position - parallel to the direction of running) and set up.



= > 15 kg / 33 lbs

7.5 CHANGING THE SWEEPING ROLLER

- The front drum is not subject to any wear and must not be replaced, except where it is damaged.
- The sweeping roller must be replaced when the the sweeping result is visibly worse due to wear of the brush, and readjustment of the sweeping roller is no longer possible.
- The sweeping roller consists of two segments connected by six screws. Unscrew the screws using a suitable tool and remove the segments individually.
- Insert the new segments into the sweeping roller and fasten with six screws.
- The direction of movement of the sweeping roller Fig. 2 must be followed.

⚠ CAUTION! There is a risk of damage to the sweeping roller the brushes become jammed during fitting.

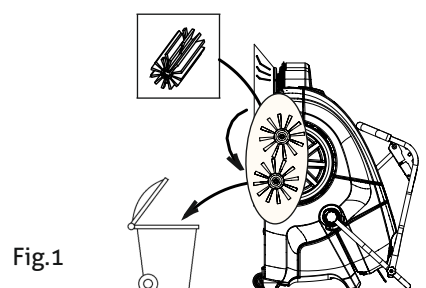


Fig.1

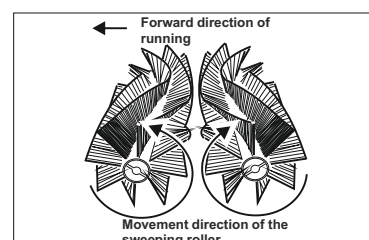
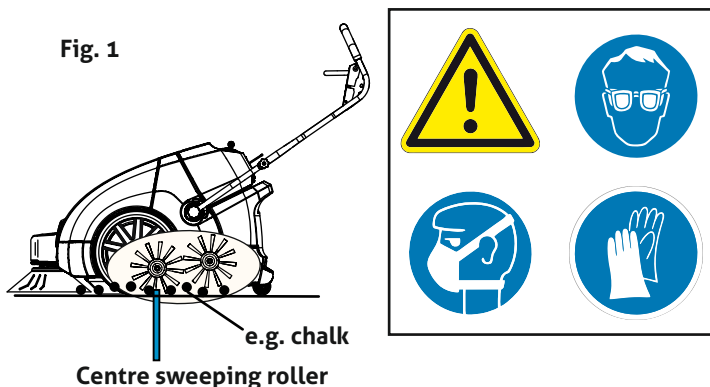


Fig.2

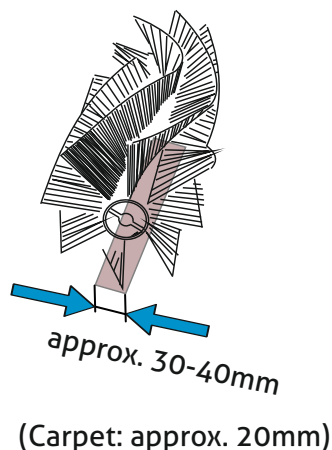
7.6 SETTING SWEEPING ROLLER CLEARANCE

- Switch off the sweeper.
- Raise up the side brush.
- Operate with the sweeper on level and smooth ground that is recognisably covered with dust, sand or chalk. (Fig. 1)



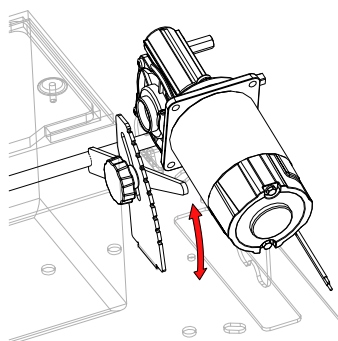
- Set the sweeping drum adjustment to the centre position of the whole setting area.
- Switch on the machine and allow the sweeping roller to rotate for approximately 15 seconds. Turn off the machine.
- Drive the sweeper away from the impression of the sweeping roller (= sweeping clearance).
- The sweeping clearance must be clearly visible on the ground. The shape of the sweeping clearance forms a uniform rectangle. (see Fig.2)

Fig. 2



- Raising the sweeper adjustment lever upwards enlarges the sweeping area (lowering reduces).
- As appropriate, repeat the process until the desired sweeping clearance is reached. (Fig.3)

Fig. 3



7.7 CHANGING THE SWEEPING BRUSH

The side brushes are subjected to wear. On abrasive surfaces, wear to the brushes is faster than on smooth floors.

It is necessary to change the sweeping brushes if these are worn or damaged.

Changing due to wear is necessary if the sweeping result of the side brushes is visibly worsened and it is no longer possible to readjust.

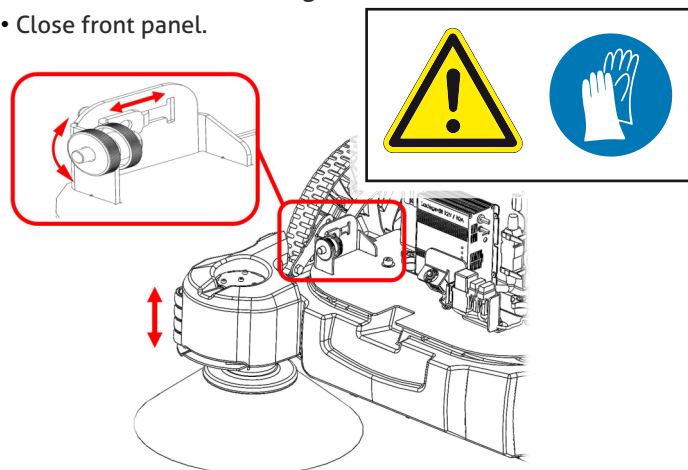
- Put ignition key into the "0" position and pull out.
- Raise the side brushes (transport position)
- Remove the side brushes (undo wing bolt).
- Change the side brushes.
- Put the side brushes on the take-up of the driver and fasten

See also → FITTING THE SIDE BRUSH , chapter 4.4 Fig. 1-2

7.8 SETTING THE SIDEBRUSH

It is necessary to adjust the side brush if the wear of the brushes visibly makes the sweeping result of the side brushes worse.

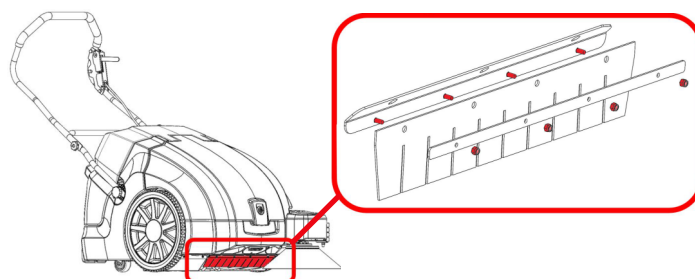
- Set down the sweeper onto a level, dry and protected surface.
- Raise the side brushes (transport position)
- Open front panel
- Undo the knurled nuts at the front left and/or right of the side brush adjustment.
- Turn adjustment forwards to lower the side brushes further
- Fasten both knurled nuts again.
- Close front panel.



7.9 CHANGING THE FRONT SEALING RUBBER

The front sealing rubber must be replaced if there are tears it is worn, to guarantee a good sweeping result.

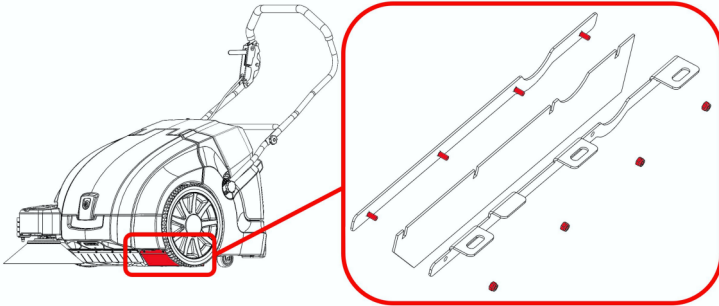
- Put ignition key into the "0" position and pull out.
- Raise the side brushes (transport position)
- Undo all four nuts of the sealing rubber and remove
- Replace front sealing rubber.
- Refit the front seal.



7.10 SETTING / REPLACING SIDE SEALING RUBBER

The basic setting of the side sealing rubber is 1mm.

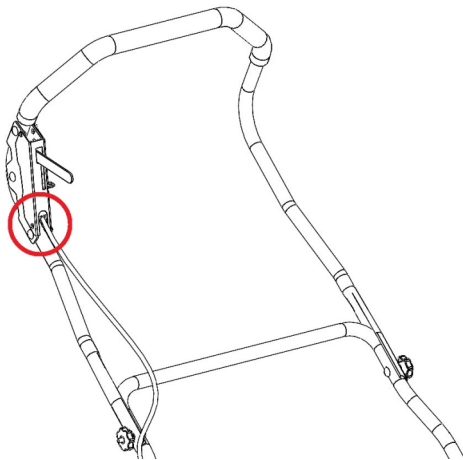
- Put ignition key into the "0" position and pull out.
- Tip the machine as required.
- To set the height, undo the fastenings (four nuts), readjust or replace the side sealing rubber, align and fasten.



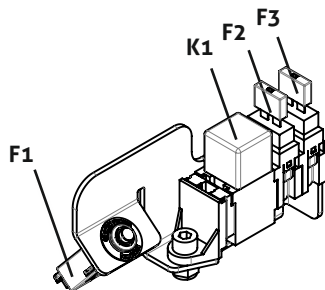
7.11 SETTING SIDE BRUSH BOWDEN CABLE /CANGING

Readjusting the Bowden cable is required if the side brush no longer folds in completely. Folding out is done with springs

- Put ignition key into the "0" position and pull out.
- Undo the lock nut under the drive bar cover plate.
- Setting/readjusting the Bowden cable.
- Screw the lock nut tightly



7.12 ELECTRICAL SYSTEM FUSE EXPLANATION



F1 = Thermal switch
Sweeping drum 20A

F2 = Side brushe 10A

F3 = Shaker/fan 10A

K1 = Main relay 12V/ 70A

7.13 IMPORTANT SPARE PARTS AND CONSUMABLES

Filter	Artikel-Nr. 101576
Sweeping Roller PP 0,25 V	Artikel-Nr. 101545
Side Brush PA 0,6	Artikel-Nr. 110526

7.14 CONTACT DATA

Manufacturer:

Stolzenberg GmbH & Co. KG
Hamburger Straße 15-17
49124 Georgsmarienhütte

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

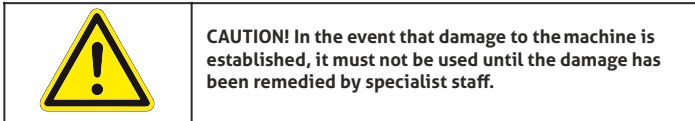
F: +49 (0) 5401 / 8353-11

E: service@stolzenberg.de

Dealer:

7.15 MAINTENANCE WORK / MAINTENANCE TABLE

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



- ⚠ **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.

You must read → TIPPING THE ROAD SWEEPER, chapter 7.4

Activity	Interval			
	Daily	Weekly	Every 50 hours	Chapter
Check machine for damage and functional faults and remedy as appropriate.	●			
Check the battery charge; charge battery as appropriate.	●			4.8.3/ 4.8.4
Empty the refuse container	●			5.8
Check sweeping roller & sweeping roller housing for damage, for foreign bodies and for wear; remove any foreign bodies/ clean or replace the sweeping roller	●			7.5
Check side brushes for foreign bodies, straps etc.; remove/clean as appropriate.	●			
Check side brush setting; readjust or replace side brushes as appropriate	●			7.7/ 7.8
Check the condition of the dust filter; clean as appropriate	●			5.7
Check the charge of the battery before each usage	●			4.8.3
Check the sealing rubber in the sweeping roller area for wear and damage; replace as appropriate		●		7.9/ 7.10
Check dust filter for damage; replace as appropriate		●		5.7
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		●		7.11
Check the Bowden cables for extension of the pull cable		●		7.11
Check safety components (end switch filter cover)		●		
Check battery condition; replace as appropriate			●	4.8.3
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			●	

8

SHUTDOWN, DISMANTLING, DISPOSAL

LONG-TERM STOPPAGE OF THE SWEEPER

i INSTRUCTION!

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

- Set down the sweeper onto a level, dry and protected surface.
- Put ignition key into the " 0 " 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



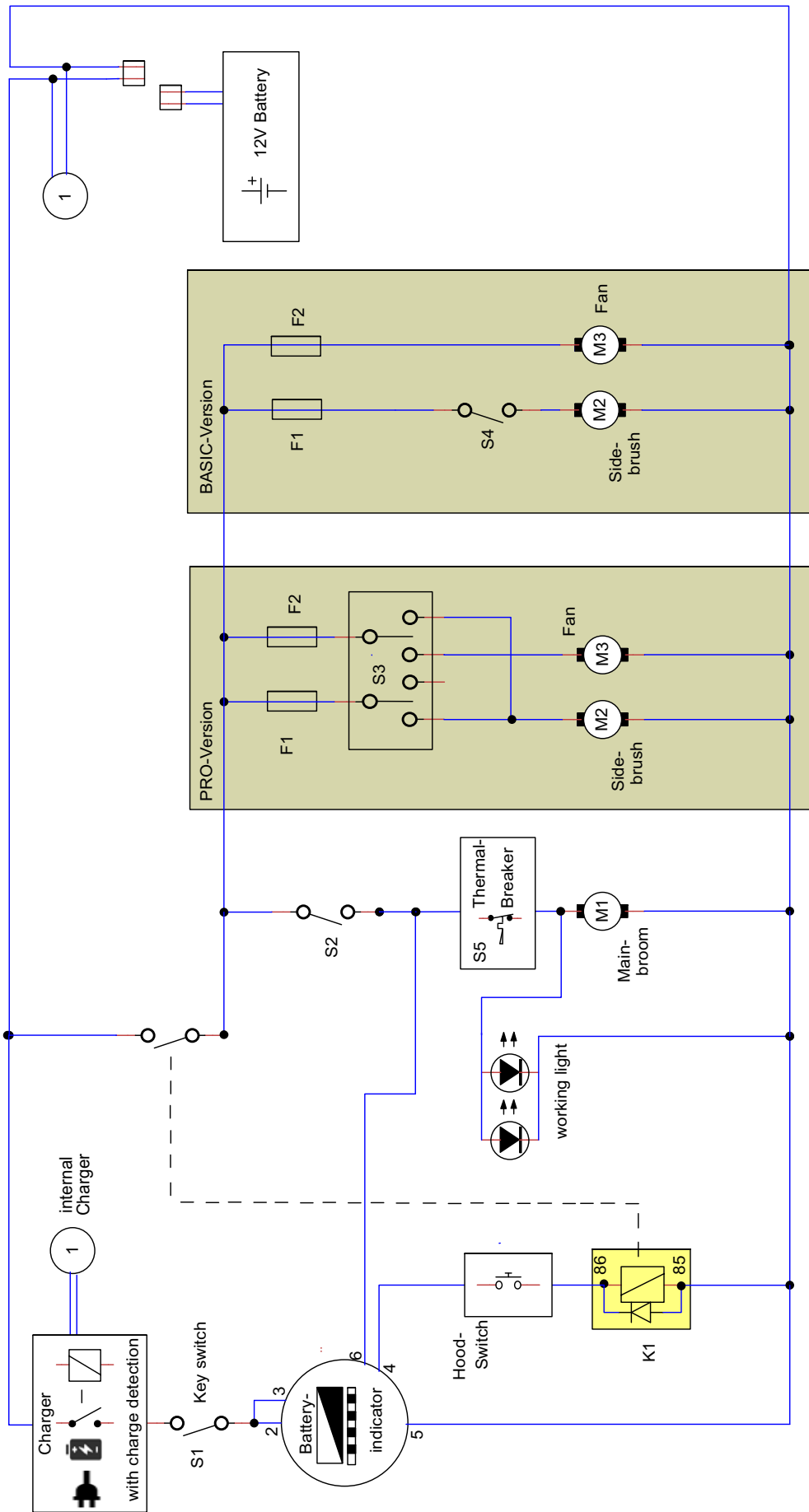
After the useful life of the machine is over, it must be disposed of expertly. However, individual parts may be thoroughly reused.

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.

See also → WASTE DISPOSAL / ENVIRONMENTAL PROTECTION, chapter 4.2

9 CIRCUIT DIAGRAM



Option A (internal charger):
 - directly connected to battery.
 - charger trip all functions if charging (interlock)

Option B (external charger):
 - charger get connected to battery manually

S1 = Key switch
 S2 = Main broom ON/OFF
 S3 = Switch sidebrush+fan or sidebrush only
 S4 = sidebrush ON/OFF
 S5 = Thermal Switch (15A)
 K1 = Relay with freewheeling diode

M1 = Main broom
 M2 = Sidebrush
 M3 = Fan
 F1 = Fuse Sidebrush 10A
 F2 = Fuse Fan 10A

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