



Service • Support • Success

Operating Manual

PM200



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Please note: The following safety instructions must be followed as shown in this operating manual. Failure to do so may result in hazard to health or possible death.

Prep/Master® Warranty

Substrate Technology guarantees that its machines and products are without manufacturing defects. The warranty period on machines is one (1) year from the date of sale and the variable speed drive carries a two (2) year warranty from the date of sale. Substrate Technology will replace any part that is defective at its own cost within the warranty period. This warranty does not cover wear items or instances of abuse or neglect.

1.0 Technical Data

- 1.1 Rating
- 1.2 Unit Specifications
- 1.3 Operative Range and Correct Usage
- 1.4 Stand-by Power Supply (Generator)
- 1.5 Advice for Operators of Grinding Machines
- 1.6 Machine Type Designation

1.1 Rating

Machine:	Prep/Master® Grinder
Machine-Type:	PM200
Manufacturer:	Substrate Technology 1384 Bungalow Rd. Morris IL 60450 USA +1.815.941.4800 www.substratetechnology.com

1.2 Unit Specifications

Dimensions:

Length	40 in.	101.6 cm
Width	21 in.	53 cm
Height	35.5-39 in.	90-99 cm
Weight	120 lbs	55 Kg

Connected loads of the electrical system:

Power	5 HP 3.7kW
Electrical Connection	220V / Single Phase 16Amp

1.3 Operative Range and Correct Usage



The grinder PM200 is designed to operate on flat horizontal surfaces. The machine cannot be used for other purposes. The manufacturer will not be liable for damages resulting from such incorrect usage. In case of wrong usage, the user assumes all risks.

1.4 Stand-by Power Supply (Generator)



If the grinder PM200 is operated using a generator, the generator must be operated in accordance with the local electrical code. This applies especially to the protective grounding of such unit in order to ensure that all safety devices are functioning and to be able to eliminate possible damage to electrical components.

1.5 Advice for Operators of Grinding Machines



During the operation of the grinder PM200, depending on the type of surface, it may be possible to exceed the acceptable noise level of 85 dB(A). This depends on the different locations and the local circumstances. When the noise level is 85 dB(A) or more, the machine operator and the persons working near the machine must wear hearing protection equipment.

1.6 Machine Type Designation

Machine Type:	Prep/Master® PM200
Working Width:	8 in / 20 cm
Drive:	Manual
Grinding Capacity:	Variable
Dust Hose Connection:	2 in / 50 mm
Recommended Dust Collector	Dust Collector 2003P

2.0 Safety Instructions

- 2.1 Explanation of Warnings and Symbols
- 2.2 Organizational Measures
- 2.3 Personnel Selection and Qualification
- 2.4 Safety Precautions Applicable to Different Operating Conditions
- 2.5 Repair Work, Maintenance Activities, and Default Repair on the Job Site
- 2.6 Definition of the Safety-off Position
- 2.7 Dangerous Aspects of the Machine
- 2.8 Electrical Engineering Regulations
- 2.9 Special Instructions



The following safety instructions must be followed as shown here. Failure to do so may result in hazard to health or possible death.

2.1 Explanation of Warnings and Symbols

The following symbols are used in the operating instructions to highlight areas of particular importance:



Operational Safety

This symbol will be shown in these Operating Instructions next to all safety precautions that are to be taken in order to ensure prevention of injury. Follow these instructions and take special care in these circumstances. In addition to these instructions, the general safety precautions and the local accident prevention guidelines are also to be followed. Please check, whether there are special regulations for the particular job site.



Safety Goggles/ Ear Protection

Information, instructions, and restrictions with regards to possible risks to persons or extensive material damages.



Electrical Warning

Warning against dangerous voltages.

2.2 Organizational Measures



The Operating Instructions are to be kept near the location where the machine is located and must be reachable all the time!

In addition to the Operating Instructions general and legal regulations regarding accident prevention and environmental protection must be with and indicated every time!

Such duties may for example relate to the handling of hazardous substances or to the provision and wearing of personal protection equipment as well as compliance with local traffic regulations.

The Operating Instructions must be supplemented by instructions including the duty to supervise and report relating to particular local working practices, for example work organization, work procedures, and personnel allocation.

Personnel entrusted with working with the machine must have read the Operating Instructions before starting the work; in particular the chapter about Safety Instructions. These have to be read before starting any work with the machine. This particularly applies to incidental activities such as setting up the machine, carrying out maintenance work, or training staff to work with the machine.

From time to time the working practices of the staff are to be checked regarding awareness of safety and hazards.

Personnel must tie back long hair and not wear loose clothing or jewelry and rings. There is a risk of injury through getting stuck or being drawn into moving machinery.



Use personal protection equipment if necessary or required by regulations! Take notice of all safety and hazard notices on the machine.

All safety and hazard notices on the machine must be kept complete and legible.

If safety-critical changes occur to the machine or its performance, the machine must be shut down immediately! The cause of the fault has to be established immediately and has to be repaired before starting the work again.



Changes, add-ons, or conversions of the machine which might have an influence to the safety of the machine must not be undertaken without the permission of the manufacturer.

This applies in particular to the fitting and adjustment of safety devices and to welding on major and load bearing parts.

Spare parts must always comply with the technical requirements and the specifications of the manufacturer. This is always guaranteed with original spare parts of the manufacturer.

Inspection intervals and intervals for recurring checks specified in these Operating Instructions must be complied with. At the same time it is necessary to meet the legal requirements.

To perform maintenance work correctly it is important to be equipped with proper tools for the task in question.

The location and the operation of fire extinguishers must be made known on each building site!

Take note of the facilities for fire reporting and fighting fires!

2.3 Personnel Selection and Qualification

Fundamental duties:

Only reliable personnel are allowed to work on the machine

Only trained personnel can be used to operate the machine. Note the statutory minimum age! Specify clearly the responsibilities of personnel for operation, setting up, servicing and maintenance work!

Make sure that only authorized personnel operate or work on the machine.

Select clearly the machine operator. Define his/her responsibilities also with regard to traffic safety regulations and empower him/her to decline instructions from third parties which are not complying with the safety requirements.

Personnel being trained or made acquainted with the equipment may only be deployed under constant supervision of an experienced person.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.

2.4 Safety Precautions Applicable to Different Operating Conditions

Avoid any method of working that impairs safety!

All precautions have to be taken, that the machine will only be used in a safe and functional status.



Only operate the machine when all safety devices and related safety equipment, e.g. detachable safety devices, emergency stops, and suction devices are present and operational!

The machine has to be checked visually at least once a day for any damage and defects.

In the event of operational malfunctions the machine must be shut down immediately and secured. The fault must be rectified before starting the machine again!



Secure the work area around the machine in public areas providing a safety distance of at least 10 feet around the machine.

Fault must be rectified immediately!

Start up and switch off operations and control devices have to be handled in accordance with the Operating Instructions.



All persons in the proximity of the machine must wear safety glasses with lateral protection as well as safety shoes. Ear protection may be required. The operator is obliged to wear close fitting protective clothing.

Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine and the valid local guidelines..

Before starting the machine make sure that nobody can be endangered when the machines starts running.



Do not switch off or remove the exhaust and ventilation devices when the machine is running!

2.5 Repair Work, Maintenance Activities, and Default Repair on the Job Site



Before starting any servicing work on the machine, put the machine in the Safety off position as described in chapter 2.5 in order to prevent the machine from being switched on accidentally.

Please follow any special safety instructions in the various chapters on servicing the machine. (See chapter 7.)

Adjustments, servicing, and inspection work and inspection intervals specified in these Operating Instructions as well as any information on the replacement on parts and systems of the machine must be undertaken and / or complied with.

These activities can only be undertaken by qualified personnel.

Before starting any maintenance or repair work the operator of the machine has to be informed about it.

During all work related to the use, the re-erection or the adjustment of the machine and of the safety devices as well as inspection, maintenance and repair, the start up and shut off procedures have to be done in accordance with the Operating Instructions.

For the machine to be shut off completely for repair or maintenance work the plug has to be disconnected in order to prevent the machine from being switched on accidentally.

The dust bin of a connected dust collector has to be emptied before transportation. Please handle in accordance with the regulation how to dispose the dust and make sure that you meet the local regulations.

Do not use any aggressive cleaning materials!

Use lint-free cleaning cloths.

Always tighten any screw connection that is undone during servicing and maintenance work.

If safety devices need to be dismantled during setting up, servicing and repair work, these safety devices must be reinstalled and inspected immediately after completion of the servicing and repair work.

Make sure that process materials and replacement parts are disposed of safely and in an environmentally-friendly manner!



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.

Make sure that electrical components used for replacement purpose comply with the original parts and are correctly adjusted if necessary.

2.6 Definition of the Safety-off Position

Definition:

The safety off position is the position of the machine when it cannot generate any hazard.

Putting the machine in the safety-off position means:

- Switch off the grinder.
- Switch off the dust collector.
- Wait for standstill of all drives.
- Pull out main plugs.
- Secure the machine against unintended start up.

2.7 Dangerous Aspects of the Machine

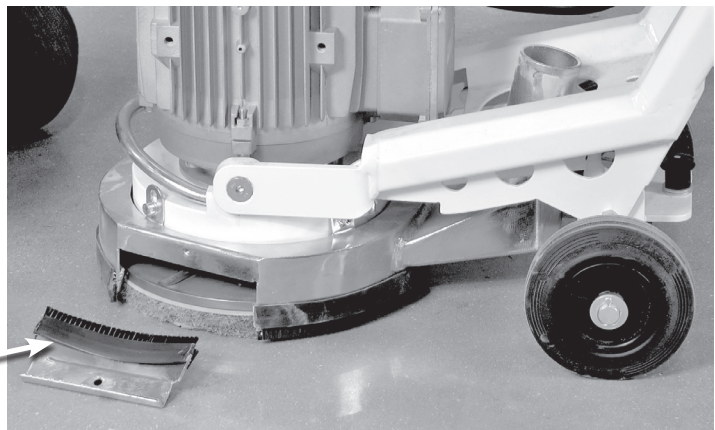


Every machine, if it is not used according to the regulations, may be hazardous for operating, setting-up and service personnel. The operating authority is responsible for compliance with the safety regulations during operation and maintenance of safety devices supplied with the machine as well as the provision of appropriate additional safety devices.

The PM200 is designed with removable RH and LH side guards. This allows the operator to work along walls when these guards are taken off.

Use the Guard Removal Tool (located on back of machine) to remove either guard.

- Left-Hand Guard (shown removed)



Only if necessary or exclusively, work along wall surfaces with Side Guard taken off; however, remount the Side Guard immediately after completion of the project.



The electrical parts of the machine must be inspected regularly. Please note in particular, the specified recurring inspections according BGV A3 or local regulations. Defects such as loose connections or scorched cables must be rectified immediately. Call a skilled electrician or the IMPACTS customer service.

2.8 Electrical Engineering Regulations



Never start machine in the tilted position. The machine must only be started when all guards and dust collection parts are attached and machine is standing flat on work surface.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.



Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine and the valid VDE guidelines. In case there is any question ask the manufacturer or a skilled electrician.

If work on electrified parts is necessary, a second person must be deployed who can pull out the plug in an emergency. The working area must be sealed with a red and white safety chain and a danger sign. Use tools that are insulated against voltages.

Only start work, once you are familiar with the electrical engineering regulations that apply to your area.

Only use voltage testers that comply with the regulations when troubleshooting. From time to time check voltage tester to ensure that they are operationally efficient.

2.9 Special Instruction

Use only proper and default free tools for your work. Damaged tools have to be repaired immediately or to be replaced.

Use during your work for your own safety the required safety equipment and safety clothes (e.g. safety glasses, safety shoes, safety gloves).

Please instruct your operators and the repair personnel about the following points:

- Cleaning and repair work are only allowed if the machine is shut off (safety off position).
- During work on the machine, be certain that the machine cannot be started.
- Opening or removing safety devices while the machine is running are not allowed.
- Replace all safety covers and devices after cleaning, repair, and maintenance work.
- Do not touch moving parts and do not walk into the working path of the machine.
- Before restarting machine, make sure all personnel are a safe distance away from the work area after initial start up.

3.0 General Information

- 3.1 Operative Range
- 3.2 Scope of Supply
- 3.3 Machine Diagram & Part Numbers
- 3.4 Operating Features
- 3.5 Electric Motor
- 3.6 Cutting Area
- 3.7 Coupler & Tool Plate
- 3.8 Variable Speed Drive
- 3.9 Tooling for the PM200
- 3.10 Tool Change
- 3.11 Care & Maintenance

3.1 Operative Range

The STI Prep/Master® PM200 is a grinding machine with a single, mono-rotational head that is used for preparation and polishing of horizontal surfaces. Grinding the surface according to STI specifications thoroughly removes surface contaminants, coats of paint, sealants, and thin coatings.

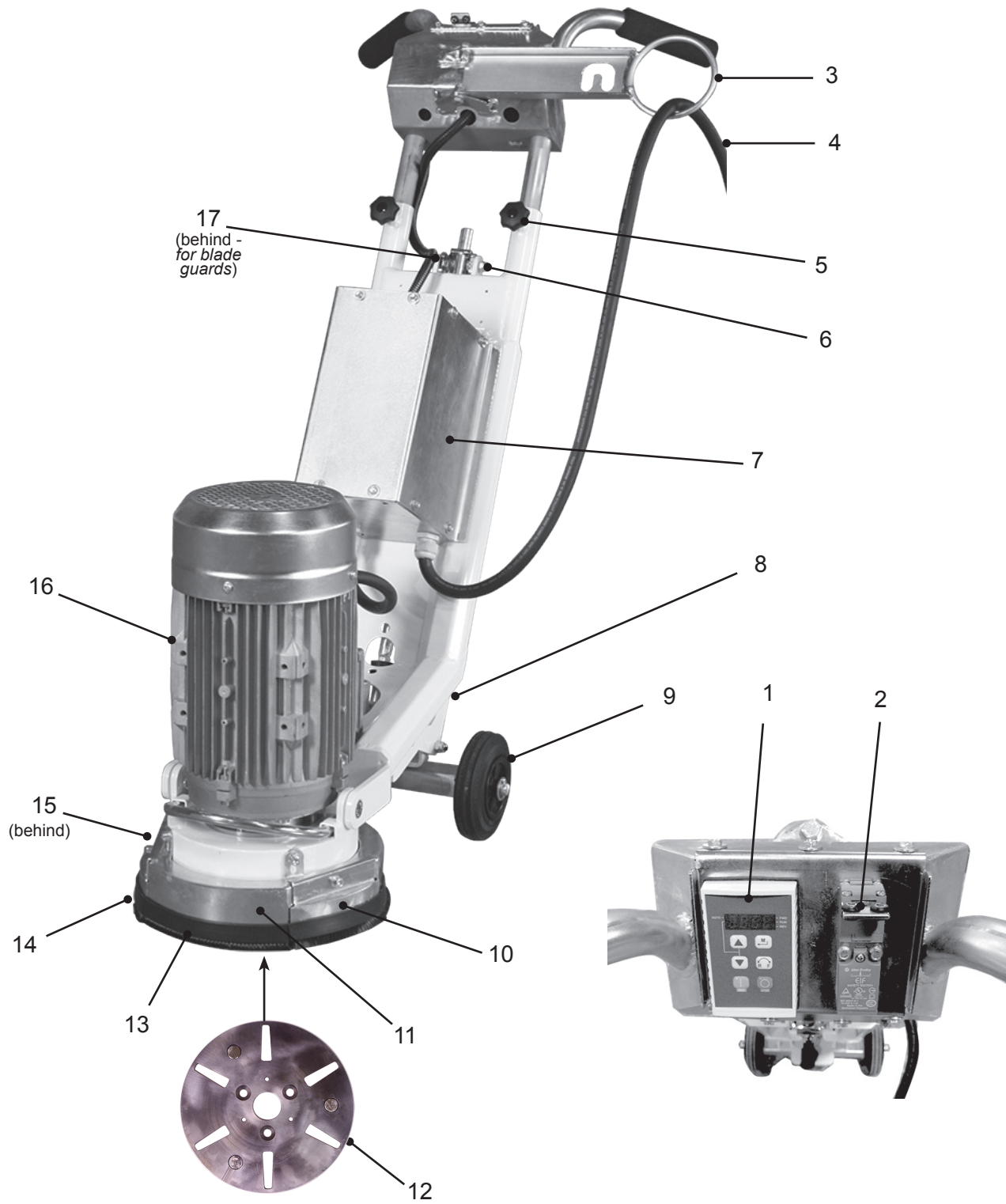
A suitable filter unit must be connected to the machine in order to thoroughly collect the dust being produced by the grinding process. The proper dust collection system ensures dust-free operation of the machine and clean air at the workspace. STI recommends the IMPACTS DC2003P.

3.2 Scope of Supply

Provided with machine:

- Prep/Master® PM200
- Manual (1)

3.3 Machine Diagram & Part Numbers



Item #	Qty.	Part #	Description
1	1	ESVZXK1	Key Pad
2	1	411945140	Dead Man Switch
3	1	202000202	Hose & Wire Guide
4	30	14-4SEOW	14-4 Seow Wire (30 ft.)
5	2	310000007	Star Knob for Handle Adjustment
6	1	311000009	Adjusting Clamp Lever
7	1	ESV402N02TXB	5HP Vector Drive 240V
8	1	311000045	Wheel Adjustment Mini Plunger
9	2	304000057	Wheel
10	2	202000261	Flap Apron
11	1	202000259	Apron (steel)
12	1	820040914	Metal Plate w/Magnets & EG Slots
13	1	202000280	Front Brush
14	2	202000282	Side Brush
15	1	202000281	Rear Brush
16	1	601000060	Motor
17	1	316000022	Allen Wrench Driver

3.4 Operating Features

The Variable Speed Drive is carrying all controls and instruments used for supervision and control of the machine.

Key Button Controls Start/ Stop

Pushing the Key Button "Start" will switch the controls on and start the motor. Pushing the Key Button "Stop" will stop the motor running.

Arrow up and Arrow Down

While powered but without the motor running, the red Arrow Up and red Arrow Down buttons can be used to set the motor speed faster or slower than the base RPM of the motor.

Auto/Man and Prog/Run

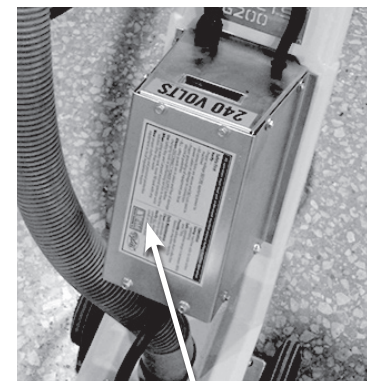
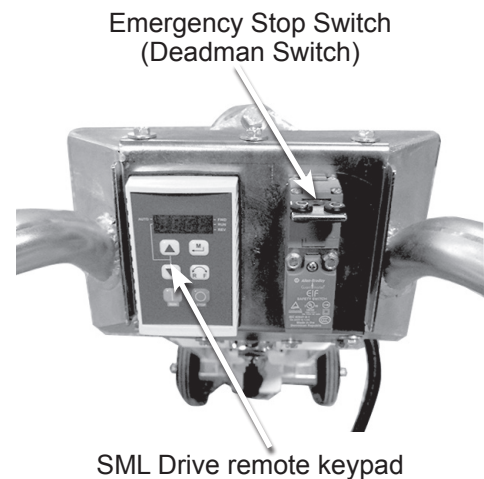
These buttons are used for drive diagnostics and programming and are not used.

Dead Man Switch

Dead Man Switch is intended to be used for the safety of the operator and protection of the machine from excess damage in the event of an emergency. Lanyard must be worn by operator for this safety device to work properly.

Manual On/Off Switch – If Equipped

The On/Off switch is used to turn off all power supplied to the grinder.



5HP 240V SM Vector Drive

3.5 Electric Motor

The power plant of the Prep/Master® grinder is the electric motor. The motor is responsible for turning the tool plate which turn the abrasive tools on the floor. The motor is controlled exclusively by the Variable Speed Drive which inputs specific power to generate a given RPM.

3.6 Cutting Area

The area inside the stainless steel shroud and directly beneath the gear deck is the cutting area. This is the area in which the tools turn to produce the grinding action. It is also the area that keeps the dust from grinding contained and subsequently evacuated through the dust collection port.

3.7 Coupler & Tool Plate

The grinder is outfitted with a coupler and tool plate. The coupler allows for the flex of the tool plate and smooth operation of machine. The tool plate holds the diamond tools.

3.8 Variable Speed Drive

The variable speed drive is responsible for monitoring incoming power as well as changing the electronic frequency to allow the motor to run at different speeds. This unit is a closed panel that is intended to be operated only with the keypad.

3.9 Tooling for the PM200

There are three types of tools for the PM200: EG metal bonds, resin dots, and MG pad dots.

Use three tools per set of metal tools, and one each of the remaining pads per set. This system is designed and matched to be used in sequence with no steps being skipped.

3.10 Tool Change

In order to change the tools, the operator must first ensure that the grinder is switched off and disconnected from the electrical source. Then push machine down by the handle in a controlled manner until the grinder is resting on the top handle.* The tools are loosened by pushing them toward center of the plate. New tools are attached by placing EG tabs in slots and pushing them toward the outside edge of the plate.

* Machine must only be tilted back on firm, level surface.

3.11 Care & Maintenance

Special attendance and regular maintenance of the machine and its parts are imperative for functioning and safety. In order to prevent unnecessary downtimes it is recommended to keep original spare and wear parts on stock.

The following maintenance should take place before and after every operation of machine:

1. Clean all surfaces with a dry, lint free cloth.
2. Inspect all electrical cables for cuts and replace damaged chords.
3. Check all electrical connections are secure and snug.
4. Verify functionality of Dead Man Switch.



All persons in the proximity of the machine in operation must wear safety glasses with lateral protection and safety shoes. The machine operator must wear close-fitting protective clothing.

4.0 Transportation

- 4.1 General Notes
- 4.2 Transportation
- 4.3 Transportation by Vehicle
- 4.4 Operation Conditions

4.1 General Notes

Before the machine used for the first time, STI authorized dealers offer a course to familiarize maintenance and operating personnel with all elements of the machine. We are not liable for damage caused by incorrect use of the machine by personnel not trained by STI.

4.2 Transportation

In order to transport the machine from a vehicle to the working area, you need to tilt the machine down and roll it on its main drive wheels.

When transporting the machine with hoisting equipment like a crane or a lift, check the total weight permitted. (See Chapter 1 — dimensions)

Please use only appropriate, allowed, and qualified hoisting equipment as well as ropes and chains. You will find the weight of the equipment in chapter 1 or on the serial plate on the machine.

Do not fix any rope or chain to the handle. The machine must be placed on a pallet or platform designed to hold the weight of the machine and the platform or pallet can then be lifted or hoisted from the appropriate points.

4.3 Transportation by Vehicle

When transporting the machine with vehicle, proceed in such a manner that damage due to the effects of use of force or incorrect loading and unloading is avoided. Use straps to tighten the machine to the cabin of the vehicle.

Use at least two straps, or tighten the machine with one strap to the cabin wall of the vehicle. Make sure, that all parts of the machine are fixed.

4.4 Operation Conditions

Check the surface to be treated for loose parts (stones, screws, etc.). The surface must be swept if necessary. Make sure that the machine can travel over all inequalities on the surface. Small inequalities like floor joints less than $\frac{1}{4}$ inch are no barriers for the machine.

The machine must be operated in accordance with instructions given in Chapter 5—Initial operation.

5.0 Starting Up the Machine

5.1 Preparing for Initial Operation

5.2 Initial operation

5.1 Preparing for Initial Operation

Before start up ensure all existing protective housings are fitted and the filter unit is connected correctly.



All persons in the proximity of the machine must wear safety glasses with lateral protection as well as safety shoes. The operator is obliged to wear close-fitting protective clothing.

Carefully handle all plugs, cables, hoses, and operating devices. Avoid any contact with live wires.

Work on the electrical system has to be done only by qualified specialists.

Check the surface to be treated; it should be free of for loose parts (stones, screws, etc.). The surface needs sweeping if necessary. Ensure that the machine can run over all inequalities on the surface. Small inequalities like floor joints aren't a barrier for the machine.

In order to avoid downtimes a regular inspection is essential. Carry out the following checks before any start-up:

- Check whether all machine parts are assembled safely and correctly.
- Check all screws and other fasteners for tight seat.
- Check the tool holders to ensure that the proper tools are in place and secure.
- Check the tightness of the hose connections and the condition of the hose to the filter.
- Make sure the dust container of the filter unit is empty. Please comply with the local waste treatment regulations considering the removed material.
- Check the electrical connections for dirt and foreign body deposits.
- Check the electrical motors for dirt and other contaminants.



Before start-up operators and other personnel must be familiar with the safety regulations given in this manual.

1. Place the grinder in the area where work is to begin.
2. Check the main power cable and the dust hose for damage. Replace or repair all damaged parts before starting the machine.
3. Connect the grinder and the filter unit with the dust hose.
4. Connect the supply cable of the PM200 with the site supply. Make sure that the correct electric supply is available.

5.2 Initial Operation



All persons near the machine must wear safety glasses with lateral protection, ear protection as well as safety shoes. The operator is obliged to wear close fitted protective clothing.

Before start-up the operating personnel must be familiar with the safety regulations given in this manual.



Attention! Before you plug the equipment to a power supply make sure the power supply is equivalent to the voltage shown on the machine label.

The start of the grinder and the filter unit is affected in the following sequence:

1. Switch on the filter unit.
2. Adjust speed of motor on keypad.
3. Press start and immediately begin moving machine side-to-side or in a straight line. Failure to move machine immediately will leave gouges in the flooring surface.
4. To shut down machine, press the red "stop" key on keypad.



Do not overfill the bin to avoid dust exposure when opening the bin. Comply with the local waste treatment regulations considering the removed material.

6.0 Operation of the Machine

6.1 Daily Operation

6.2 Failure

6.3 Safety Switch Off

6.4 Restart

6.1 Daily Operation

Normal start-up and operation of the Grinder is not different as has been described in Chapter 5—Initial operation.

Carry out grinding operation in parallel tracks in a way that the dust hose and electric cable do not become twisted.

Make sure that no vehicles, such as forklift trucks and other equipment run over the electric cable and the dust hose.

The speed of moving the grinding machine over the work surface will influence the final finish and production.

In the case that the surface shows different characteristics, means different hardness or different coating thicknesses, a uniform grinding result will be achieved by varying the speed of movement over the surface.

6.2 Failure

Irrespective of the following information, the local safety regulations are valid in any case for the operation of the machine.

Assure all turning machine parts have come to standstill before inspection or maintenance work starts. Always arrange the Safety Off as described in Chapter 2.

6.3 Safety Switch Off



The machine must be set into its "Safety Off Position" before starting any kind of maintenance or repair work.

See Chapter 2—Safety Instructions.

6.4 Restart



All persons in the proximity of the machine must wear safety glasses with lateral protection as well as safety shoes. Ear protection may be required. The operator is obliged to wear close fitting protective clothing.

See Chapter 5—Initial Operation.

7.0 Maintenance

- 7.1 Recommendations
- 7.2 Maintenance and Inspection
- 7.3 Maintenance

7.1 Recommendations



Prior to any repair work on the machine and its drives, secure the machine against unintentional switch-on. Put the machine to its Safety Off Position as described in chapter 2.

Failures due to inadequate or incorrect maintenance may generate very high repair costs and long stoppage periods of the machine. Regular maintenance is essential.

Safety and service life of the machine depend, among other things, on proper maintenance.

The following table will show recommendations about time, inspection and maintenance for the normal use of the machine.

The time indications are based on uninterrupted operation. When the indicated number of working hours is not achieved during the corresponding period, the period can be extended.

Due to different working conditions it cannot be foreseen how frequently inspections for wear checks, inspection, maintenance and repair works ought to be carried out. Prepare a suitable inspection schedule considering your own working conditions.

Our specialists would be happy to give you advice.

7.2 Maintenance and Inspection

Operating Hours / Time Period	Inspection Points / Maintenance Instructions
Daily — Prior to Operation	<ul style="list-style-type: none"> • Check all electrical cables for cuts or damage • Check the hose connections for tightness and fixed seat. • Check the hose to the filter for damages. • Make sure that the dustbin of the filter has been dumped. • Check tool plate and diamond tooling for wear and damage. • Check that shroud and rubber seal are in good working condition. • Check the electric connections for sediments of dirt or foreign bodies. • Check the electric motor for dirt and other contaminants.
Daily — After Operation	<ul style="list-style-type: none"> • Check for debris, if any, in the dust ports under gear box as well as at handle. • Check for dirt build up on variable speed drive and electric motor.

7.3 Maintenance

Only those repair works are described which occur within the context of maintenance or which are required to replace wear parts.

If you replace parts yourself for specific reasons, the following instructions and work sequence have to be observed.

You should also stock all spare or wear parts that cannot be supplied quickly. As a rule, production standstill periods are more expensive than cost for the corresponding spare part.

Screws that have been removed must be replaced with those of the same quality (strength, material) and design.



Prior to any repair work on the machine and its drives, secure the machine against unintentional switching-on. Pull out the main plug in order to do this. Store the plug near the machine to avoid accidents.

8.0 Troubleshooting / Diagnostics

8.1 Diagnosis of Failures

8.2 Diagnosis of Electrical Failure

8.1 Diagnosis of Failures



Prior to any repair work on the machine or drives, the machine must be secured against unintentional start-up. Put the machine in its Safety-off position.

Failure	Possible Reasons for the Failure	Corrective Actions
Unusual Vibrations	Uneven or loose surface being ground	Verify suitability of substrate being ground.
	Loose or damaged tooling	Inspect tooling to make sure that all connecting hardware is tight and tool is firmly seated to holder.
Unusual Noise	Uneven or loose surface being ground	Verify suitability of substrate being ground.
	Loose or damaged tooling	Inspect tooling to make sure that all connecting hardware is tight and tool is firmly seated to holder.
	Shroud is dragging on the floor	Adjust shroud and tighten to no more than ¼ inch above floor
Reduced performance or no performance	Diamond tooling is worn or damaged	Inspect diamond tooling for remaining abrasive. If depleted, replace with new tooling.

Failure	Possible Reasons for the Failure	Corrective Actions
Dust being produced	Shroud is out of adjustment	Adjust shroud and tighten to no more than 2 mm above floor.
	Dust hose is clogged	Inspect dust hose and ports for debris that may be clogging hose.
	Dust collector malfunction	Verify dust collector is operating properly

8.2 Diagnosis of Electrical Failure



Prior to any repair work on the machine or drives, the machine must be secured against unintentional start-up. Put the machine in its Safety-off position.



Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician in accordance with the electrical engineering regulations.

Failure	Possible Reasons for the Failure	Corrective Actions
Motor does not start up	Missing Phase	Check power supply
	Faulty Switch or relays	Get diagnosis and replacement by a skilled electrician
	Emergency Stop	Unlock the emergency stop button
Motor stops during operation	Current power is too high.	Disconnect plug.
	Supply circuit breaker is disengaged.	Reset circuit breaker or replace fuse.
	Motor is damaged.	Inspect motor.



Call your local dealer if you can't solve the problem.

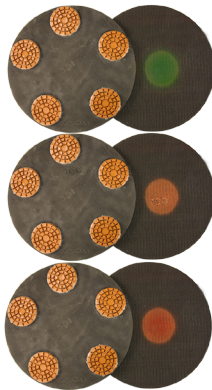
PM200 Tools & Accessories



3 Oval Segment Tools

- Metal bond tools
- Size: 3 in.
- EG attachment
- Available in three grits
- Requires three tools per set

Grit	Item #
30	571403030
50	571403050
80	571403080



CASH Dots

- Size: 9¼ in.
- Velcro backing
- Resin dots
- Available in three grits

Grit	Item #
50	349140050
100	349140100
200	349140200



MG Pads

- Size: 9¼ in.
- Use dry only
- Available in four grits

Grit	Item #
#1	349140400
#2	349140800
#3	349141500
#4	349143000



Magnetic Plate

- Size: 9¼ in.
- EG slots to hold three 3-Oval-Segment Tools
- Use magnets to attach Velcro Plate

Item #820040914



Velcro Plate

- Size: 9¼ in.
- Male Velcro backing for attaching polishing pads
- Three pins to line up with Magnetic Plate

Item #820030914



Service • Support • Success

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