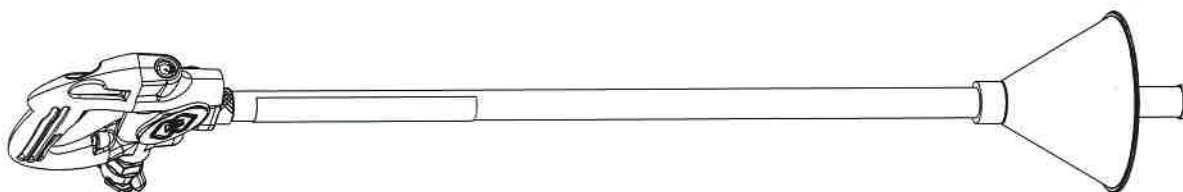


SPECIFICATIONS



SP125

	SP80	SP125	SP160
Volume of Air	80 cfm (38 L/s)	125 cfm (59 L/s)	160 cfm (76 L/s)
Minimum Operating Pressure	100 psi (689 kPa)	100 psi (689 kPa)	100 psi (689 kPa)
Maximum Operating Pressure	175 psi (1210 kPa)	175 psi (1210 kPa)	175 psi (1210 kPa)
Exit Velocity	1476 mph (660 M/s)	1476 mph (660 M/s)	1476 mph (660 M/s)
Cutting Edge¹	4 in (10 cm)	4 in (10 cm)	8 in (20 cm)
Operating Weight	6.7 lbs (3.0 kg)	6.7 lbs (3.0 kg)	6.7 lbs (3.0 kg)
Noise Level²	100 dBA	100 dBA	100 dBA

1. Cutting edge will vary with different soil conditions.

2. Noise levels based upon normal operating conditions.

Specifications subject to change without notice

OPERATION

Introduction

This parts manual contains only standard parts. Variations of these parts as well as other special parts are not included. Contact your local MBW distributor for assistance in identifying parts not included in this manual.

Before Starting & Operating

- REMEMBER! It is the owner's responsibility to communicate information on the safe use and proper operation of this unit to the operators.
- Review ALL of the Safety Precautions listed on page 1 of this manual.
- Familiarize yourself with the operation of the machine and confirm that all controls function properly.
- Know how to STOP the machine in case of an emergency.
- Make sure hands, feet, and clothing are at a safe distance from any moving parts.

Connecting to Air Compressor

For proper operation, the air supply must deliver the volume and pressure required for the Soil Pick model being used. Refer to SPECIFICATIONS, page 3 for minimum requirements.

1. Start compressor and check pressure gage to verify proper operation of the compressor.
2. Connect air hose to compressor outlet and install safety clips if required.
3. Connect air hose to Soil Pick coupler and install safety clips if required.
4. Open compressor valve to pressurize Soil Pick.

Starting Soil Pick



WARNING



Never aim the Soil Pick at exposed skin or people.

1. Aim Soil Pick away from people, and pull the trigger.
2. If the pressure reading is less than 100 psi (indicated as a red section on some gages), the air pressure at the source must be increased.
3. If the pressure reading is greater than 125 psi, the air pressure at the source must be decreased to prevent damage and possible injury.



WARNING



Do not operate the Soil Pick at a pressure greater than 175 psi.

4. Adjust the rubber deflector so the bottom of the cone is about three inches (3") above the nozzle tip.

Operating



WARNING



Always wear safety goggles and hearing protection when operating Soil Pick.

1. If the area to be excavated is covered with grass or other plant material, it may be easier to remove it with a shovel or rake before proceeding with the Soil Pick.
2. Hold the Soil Pick perpendicular to the soil surface to be worked.
3. With the nozzle in contact with the soil, pull the trigger momentarily to break up the soil in immediate contact with the nozzle tip.
4. While keeping the nozzle submerged in the loosened soil, hold the trigger down and work the nozzle in a circular motion.
5. As the soil is loosened and the Soil Pick is worked deeper into the ground, move the deflector up the barrel to minimize scatter.
6. After loosening the soil, it can be easily removed using an industrial vacuum system or using conventional methods.

Stopping Soil Pick

1. Close compressor valve to release supply pressure to Soil Pick.
2. Aim Soil Pick away from people, and pull the trigger to relieve all residual air pressure in the hose.
3. Disconnect air hose on both ends.
4. Turn compressor OFF.
5. Slowly open compressor valve to relieve air pressure in the tank.

Tips & Tricks

1. The Soil Pick can be used alone for safe excavation on small jobs, or used as an underground locating and exposing tool in conjunction with higher production excavators, backhoes, and trenchers.

2. The Soil Pick is not an elaborate blow pipe. Conventional blow pipes produce subsonic air stream velocities between 500 and 600 mph, and cannot provide the cutting edge required for soil excavation. Blow pipes can be used for moving loose debris, but even then are outperformed by the Soil Pick.
3. The Soil Pick is a selective excavator. The violent decompression of air is sufficient to loosen porous soil, but will have virtually no effect on non-porous objects such as buried utilities or plant roots.
4. The Soil Pick has a cutting edge of four to eight inches, depending on the model. This means the nozzle must be kept close to the soil for the decompression to be effective. Beyond the cutting edge, substantial decompression has occurred and the Soil Pick becomes a highly effective blower for loose debris.
5. The Soil Pick will not cut through frost, but it will work well below the frost line.
6. The Soil Pick works extremely well in all types of granular soils and cohesive soils with a good granular gradation. The effectiveness will drop off as the granular component in cohesive soils decreases. Wet clay soils may be too plastic to loosen.
7. The Soil Pick does not require lubrication. The air supply must be free of oil to achieve proper performance.
8. The Soil Pick is not designed as an impact or prying tool. The barrel is manufactured of a composite material designed to withstand high internal pressure. It is not designed to withstand prying or impact forces.
9. The Soil Pick is an effective excavation tool even when there is no concerns of buried utilities. In most cases, productivity is enhanced dramatically compared to pick and shovel work.
10. The Soil Pick is highly effective when used to clean saw joints and cracks in concrete. It can grossly outperform a blow pipe, and provide a very clean surface for excellent sealant adhesion.
11. The Soil Pick is an effective tool for nursery applications. Because it is a selective excavator, it will not damage roots. Because it is an air tool, it is also aerating the soil while digging.
12. The Soil Pick has an almost endless list of uses. It can effectively clean barges, railroad cars, construction equipment, and more. It can be used for shallow trenching, post hole digging, stump removal, pothole preparation prior to patching, and many more unique applications.

SAFETY INFORMATION

Introduction



This Safety Alert Symbol is used to call attention to items or operations which may be dangerous to those operating or working with this equipment. The symbol can be found throughout this manual and on the unit. Please read these warnings and cautions, along with all decals, carefully before attempting to operate the unit. Make sure every individual who operates or works with this equipment is familiar with all safety precautions.



WARNING



GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.



CAUTION



GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

Safety Precautions



LETHAL EXHAUST GAS: An internal combustion engine discharges carbon monoxide, a poisonous, odorless, invisible gas. Death or serious illness may result if inhaled. Operate only in a properly ventilated area. **NEVER OPERATE IN A CONFINED AREA!**



DANGEROUS FUELS: Use extreme caution when storing, handling and using fuels as they are highly volatile and explosive in vapor state. Do not add fuel while engine is running. Stop and cool the engine before adding fuel. **DO NOT SMOKE!**



SAFETY GUARDS: It is the owner's responsibility to ensure that all guards and shields are in place and in working order.



IGNITION SYSTEMS: Breakerless, magneto, and battery ignition systems can cause severe electrical shocks. Avoid contacting these units or their wiring.



SAFE DRESS: Do not wear loose clothing, rings, wristwatches, etc. near machinery.



NOISE PROTECTION: Wear OSHA specified hearing protection devices.



EYE PROTECTION: Wear OSHA specified eye shields, safety glasses, and sweat bands.



FOOT PROTECTION: Wear OSHA specified steel-tipped safety shoes.



HEAD PROTECTION: Wear OSHA specified safety helmets.

OPERATOR: Keep children and bystanders off and away from the equipment.



DUST PROTECTION: Machining, crushing or handling of stone, concrete, masonry, metal and other materials may generate dust, mist and fumes containing chemicals such as silica

known to cause serious or fatal injury or illness such as respiratory disease, silicosis, cancer, birth defects, or other reproductive harm.

- Control dust, mist and fumes at the source where possible. Water should be used to control dust whenever feasible.
- Use good work practices and follow the recommendations of the manufacture, OSHA/NIOSH and other occupational trade associations.
- When hazards cannot be eliminated the operator and any bystanders should always wear a OSHA specified respirator for materials being handled.

REFERENCES: For details on safety rules and regulations in the United States, contact your local Occupational Safety and Health Administration (OSHA) office. Equipment operated in other countries must be operated and serviced in accordance and compliance with any and all safety requirements of that country. The publication of these safety precautions is done for your information. MBW does not by the publication of these precautions, imply or in any way represent that these are the sum of all dangers present near MBW equipment. If you are operating MBW equipment, it is your responsibility to insure that such operation is in full accordance with all applicable safety requirements and codes. All requirements of the United States Federal Occupational Safety and Health Administration Act must be met when operated in areas that are under the jurisdiction of that United States Department.

Safety Decals

Carefully read and follow all safety decals. Keep them in good condition. If decals become damaged, replace as required. If repainting the unit, replace all decals. Decals are available from authorized MBW distributors. Order the decal set listed on the following page.

nce Check

Pick for any signs of

d the pin is in place.

ling zero.

ling the correct

d any deformation.

barrels and check for

and has a cable tie to

Handle Vibration Test

Product type - MBW Soil Pick SP125

Serial number – 3801746

Manufacturer of testing apparatus – Castle

Model – GA2003

Location – MBW (Inc), Slinger, Wisconsin, USA.

Material type – N/A

Moisture content – N/A

Air temperature – 75°F

Date test conducted – 29th October 2001

Accelerometer was affixed to the rear of the handle on the Soil Pick. The product was held at a 45° angle to the soil and all three axes were tested.

Accelerometer position:

X axis – 0.0M/S²

Y axis – 0.0M/S²

Z axis – 0.0M/S²

Hand/arm vibration – 0.0M/S²



We strongly advocate the wearing of all elements of protective clothing and these images are supplied for illustration purposes only.

The **Soil Pick** will not damage –

1. Gas pipes
2. Electricity cables
3. Water pipes
4. Fibre optic cables
5. Tree roots
6. **The OPERATOR**

Before using your Soil Pick please ensure that all connections are tight and that the whip check is securely in place. Please take a moment to view the video entitled "MBW Europe Soil Pick Operational Guide" available at www.mbweurope.com. Click on the 'INFORMATION+' tab then 'Resources' to access the video.

The **MBW Soil Pick** is designed and built with an infinitely variable trigger. If the trigger is pulled a little then a little air will pass through the tip. If the trigger is pulled at maximum then the maximum amount of air will be used. This feature is beneficial as it enables the operator to control, and indeed eliminate any projectiles. Once the operator starts to work with the **Soil Pick** he should use the trigger sparingly until such time as the bottom of the tube "falls" into the soil. Once the tip is within the soil then maximum power can be used whilst creating very few projections. At this time the operator should work the area in a stirring motion.

The rubber deflector (part number 03829) should always be as close to the tip of the tube as possible. This will help to minimise the amount of projections but by using the trigger correctly these can be eliminated completely.

When working within a trench it is highly unlikely that projections will occur, nevertheless please ensure that the trigger is used sparingly until the tip of the tube is within the soil.

It is best practice to hold the **Soil Pick** as vertical as possible at all times and when working very closely to pedestrians or parked cars it is best that the operator creates a barrier.



This is easily achieved by the operator turning his back and holding his feet similar to that of a penguin.

This will shield the effects of there will be virtually no risk causing unnecessary problem