

# SOIL PICK



*Quality Survives*

**MBW, INC**

Since 1967, MBW has been manufacturing one of the industry's most interesting lines of construction equipment. What makes the MBW line interesting? MBW is not a copyist – we do not simply duplicate designs developed by others. MBW begins each new engineering project with the assumption that significant progress can be made in terms of productivity, maintenance, longer life, enhanced user safety, or lower long-term cost of ownership. Often, MBW's R&D efforts result in entirely fresh approaches to industry problems. A number of our "fresh approaches" solve problems in municipal and utility applications.

**SOIL PICK**

The **Soil Pick** is a selective excavator. Selective in the sense that it fractures, pulverizes and displaces porous and semi-porous soils, yet leaves non-porous objects unaffected. The Soil Pick excavates soil without risk of damaging buried utilities.

The Soil Pick employs converging/diverging nozzle technology to accelerate compressed air to supersonic speed (to 1475 mph). The high velocity air stream travels approximately 4 inches from the distal end of the Soil Pick – "the cutting edge" – before decompressing to atmospheric pressure with sufficient violence to pulverize and displace soil.



The Soil Pick's non-sparking, brass nozzle weighs 4.2 ounces. It is important that the nozzle does not detach from the barrel to become a high velocity projectile. For this reason, the nozzle is threaded into the Soil Pick's barrel and cemented in place. Some manufacturers promote easily exchanged nozzles. MBW's view is that safety comes first.

The Soil Pick requires no periodic maintenance. A pressure gauge on the handle assembly advises the operator if the tool is working at acceptable pressure. The Soil Pick weighs 6.2 lbs., has zero hand/arm vibration and can be used for extended periods without fatigue.

What separates the MBW Soil Pick from other excavation tools employing converging/diverging nozzle technology?

Safety. MBW holds US and international patents on the combination of dielectric and non-sparking characteristics embodied in the Soil Pick. Non-conductive, non-sparking tools are of obvious benefit to those working in environments that may be gas enriched and/or are in close proximity to live electric lines.

Also for reasons of safety, MBW standardizes the Soil Pick's cutting edge at approximately 4 inches\*. A 4 inch cutting edge is long enough to facilitate rapid excavation, yet short enough to minimize the potential for personal injury caused by misdirection of the cutting edge. Very importantly, soil aeration beyond the target utility is minimized, thus simplifying and facilitating effective backfilling and compaction of the excavation. The 4 inch cutting edge also provides better control of the air stream while working in the immediate area of a gas leak.

\* NOTE: Nozzle capacity (cfm, air stream velocity and cutting edge) is dependent on interior nozzle profile. Contact MBW for nozzle options.

SPECIFICATIONS	SP80	SP125	SP160
Weight	6.2 lbs (3 kg)	6.2 lbs (3 kg)	6.2 lbs (3 kg)
Length	52 in (132 cm)	52 in (132 cm)	52 in (132 cm)
Barrel Diameter	1.25 in (3 cm)	1.25 in (3 cm)	1.25 in (3 cm)
Airstream Velocity	1475 mph (2375 km/h)	1475 mph (2375 km/h)	1475 mph (2375 km/h)
Effective Cutting Depth**	4 in (10 cm)	4 in (10 cm)	4 in (20 cm)
Air Volume	80 cfm (2265 L/min)	125 cfm (3540 L/min)	160 cfm (4531 L/min)
Pressure at Tool Inlet	100 psi (6.9 bar)	100 psi (6.9 bar)	100 psi (6.9 bar)
Claw Type Quick Connector (optional 3/4" Dual Lock Connector is available)	3/4 in	3/4 in	3/4 in
Optional Accessories			
Extension Tubes	42 in (107 cm) 21 in (53 cm)	42 in (107 cm) 21 in (53 cm)	42 in (107 cm) 21 in (53 cm)
Cart Assembly for crack cleaning	7.5 in (19 cm)	7.5 in (19 cm)	7.5 in (19 cm)
Nozzle	45° or 90°	45° or 90°	45° or 90°

\*\* Dependent on soil type  
( ) Metric Measurements. Specifications subject to change without notice.

## HANDLE VIBRATION TEST

Product type – MBW Soil Pick SP125

Manufacturer of testing apparatus – Castle

Accelerometer was affixed to the rear of the handle on the Soil Pick and all three axes were tested.

Accelerometer position:

X axis = 0.0M/S<sup>2</sup>

Y axis = 0.0M/S<sup>2</sup>

Z axis = 0.0M/S<sup>2</sup>

Hand/arm vibration = 0.0M/S<sup>2</sup>

## TREE CARE

MBW's Soil Pick provides a multi-functional air tool for a variety of applications in the tree care industry including:

### Radial Trenching

Radial trenching is a process which involves aerating the soils around a tree root in a pattern resembling a wagon wheel. The Soil Pick provides a safe and damage free means of utilizing a high air pressure to loosen tightly compacted soils.

### Aeration & Excavation

### Root Locating for Utility Line Installation or Pruning

### Investigating Root Structure and Damage

### Transplanting or Bare Rooting

### Reducing Soil Compaction



**Non-Conducting Barrel**  
independently certified safe  
for 100,000 Volts/12" Barrel

**Large Deflector**  
protects operator from  
scatter of dirt and debris

**Non-Sparking Nozzle**  
allows safe use around  
leaking gas lines



**Pressure Gauges**  
ensure maximum performance

**Variable Polymer Trigger**  
reduces operator fatigue

**Ergonomic Handle**  
Unlike the competition,  
the Soil Pick handle maintains  
a cool temperature and allows  
for extended operator use



## SOIL PICK ACCESSORIES



**45 DEGREE NOZZLE**



**90 DEGREE NOZZLE**

**42" EXTENSION**



**21" EXTENSION**



**SOIL PICK CASE**



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