



IF IT'S WORTH BUILDING, IT'S WORTH TESTING

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532-180/01

**PM Compressor 220-240V 50Hz 1Ph.**

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## 5-Bar Pressure Plate Extractor.

Code: 532-100

Product Group: Pressure plate extractors

Used to determine - available water capacity, water retentivity, hydraulic conductivity and field capacity.

Applications include - soil classification and survey, optimisation of irrigation and drainage, calibration of soil water and measuring apparatus for field use.

The pressure plate is used to determine soil water retention and suctions greater than 0.4 bar. The apparatus consists of strongly built metal chambers containing one or more ceramic plates, on to which uniform soil samples are placed. Having attained maximum moisture retention (field capacity) the samples within the cells are then subjected to controlled positive air pressures and water is gradually removed. By careful control of pressure, the various equilibrium conditions of pressure and soil water tension or suction are obtained.

The air pressure is provided either from a compressor, compressed air bottle or nitrogen bottle. The air pressure source must always be routed via a pressure regulation manifold.

ELE can supply three types of pressure plate extraction systems, which cover the pressure range 0-15 bar.

## Specification

Capacity	4 pressure plate cells. (Up to 48 samples)
Pressure	0-5 bar extractor (75psi)
Closure	6 bolts with wing nuts; O-ring seal on lid
Support Clips	Stainless steel, adjustable
Outflow	4 tube assemblies with 3 plug bolts; screw into side wall
Dimensions	30cm dia x 22cm deep
Weight	10 kg



## 1-Bar Pressure Plate Cell

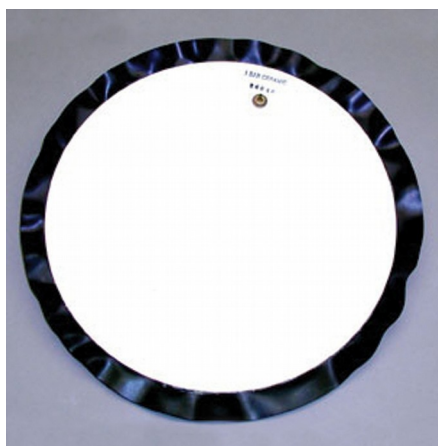
Code: [532-104](#)

Product Group: [Pressure plate extractors](#)

Developed from a high fired Alumina body. Extremely porous, inert to most all solutions, possesses hard exterior and interior surfaces, and pure white in colour. Recommended for standard pressure differentials under 1 Bar (14.5 psi). Typical bubbling pressure: 28 - 32 psi. Effective pore size: 2.5 microns. Hydraulic conductivity: .0000086 cm/sec. Approximate porosity: 45% by vol. Flow through.

## Specification

Weight	1.17 kg
Diameter	27.30 cm
Dimensions (l x w x h)	6 x 6 x 2 mm



## 3-Bar Pressure Plate Cell

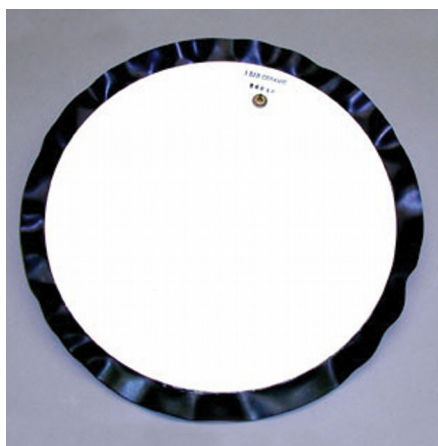
Code: [532-106](#)

Product Group: [Pressure plate extractors](#)

A complex mixture of ball clays into a moderately fired ceramic body. Good porosity and good hydrologic flow capability. The material is moderately hard and tannish-white in colour, not recommended for fluid sampling. Recommended for specialised applications where the pressure differentials are under 3 Bars (43.5 psi). Typical bubbling pressure: 46 - 70 psi. Effective pore size: 0.7 microns. Hydraulic conductivity: .00000025 cm/sec. Approximate porosity: 34% vol. Flow through.

## Specification

Weight	1 kg
Diameter	27.30 cm



## 5-Bar Pressure Plate Cell

Code: [532-107](#)

Product Group: [Pressure plate extractors](#)

Developed from a complex mixture of ball clays into a fired ceramic body. Good porosity and good hydrologic flow capability. The material is very hard and brownish-white in colour, is not recommended for fluid sampling. Recommended for specialised applications where the pressure differentials are under 5 Bar (72.5 psi). Typical bubbling pressure: 80 psi. Effective pore size: 0.5 micron. Hydraulic conductivity: .000000121 cm/sec. Approximate porosity: 31% by vol. Flow through.

## Specification

Weight	1 kg
Diameter	27.30 cm





## Soil Sample Retaining Rings Pack of 12.

Code: [532-108](#)

Product Group: [Pressure plate extractors](#)



## Low Pressure Manifold

Code: [532-110](#)

Product Group: [Pressure plate extractors](#)

Required to regulate gas pressure source in pressure plate extraction systems.

3 types available to cover all requirements.

Enables precise control of pressure.

The 532-110 Pressure Control Manifold is designed for regulating and monitoring the pressure supplied to pressure extractors. It is comprised of an air filter, pressure regulators, control valves, and test gauges. Mounted by standoffs to a 19 mm 3/4 thick baseboard suitable for mounting on a laboratory wall. (The Connecting Hose, from the manifold to the compressor is ordered separately).

Precise low-pressure control manifold designed for use with the 532-100 5 Bar Pressure Plate Extractor. Output pressure can be regulated from 3 to 60 psi (0.2 to 4 bars). Double regulation is provided. Readout pressure test gauge is graduated from 0 to 60 psi (0 to 4 bars) in 0.2 psi and 0.02 bar intervals.

## Specification

Output pressure range	3-60 psi (0.2 to 4 bars)
Double regulation pressure range	0-60 psi (0 to 4 bars)
Readout pressure test gauge	0-60 psi (0 to 4 bars)
Weight	5.6 kg
Dimensions	660 x 482 x 330 mm





## Hose Manifold to 5 Bar Extractor.

Code: [532-111](#)

Product Group: [Pressure plate extractors](#)

1.5m long.



## PM Compressor 220-240V 50Hz 1Ph.

Code: [532-180/01](#)

Product Group: [Pressure plate extractors](#)

IDEAL FOR PRESSURE PLATE EXTRACTION SYSTEMS.

ELECTRICALLY POWERED AND FULLY CE ACCREDITED

CONFORMS TO EC DIRECTIVE 98/37/CE

This unit provides compressed air for all ELE's pressure plate apparatus. The compressor is designed for sustained, continuous operation and provides up to 20 bar operating pressure.

These compressors are compact and can be transported easily by one person. The compressor consists of motor and block, which is cast in one piece. This improves heat dissipation considerably. Pistons, piston rings, con-rod, bearings and crank flange have been designed with efficiency and durability in mind. Valves in the compressor block are machined in non-corrosive stainless steel and the valve reeds are fitted with heat dissipating lift limiters. This ensures air-tight valves and longer life.

The robust electric motor features strengthened bearings and a generously-sized winding. This lengthens motor life considerably. The motors start without problem even if the supply voltage is low.

Every compressor is filled with special, temperature resistant top performance lubricating fluid. The result is almost no oil carbon deposits on the valves.

This compressor must be used in conjunction with a manifold assembly if intended for use in pressure plate extraction systems.

## Specification

Max. gauge working pressure	20 bar
Weight	29.5 kg
Dimensions	525 x 260 x 430 mm
Air receiver capacity	4 litres
Highest sound pressure value	75dB when tested to DIN 45635
Theoretical inlet capacity	160 l/ min
Free air delivered	20 bar (at 8 bar working pressure)
No. of cylinders	1
Speed	2850 rpm

## Product Sheet

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Oil capacity	0.13 l
Oil top-up quantity	0.05 l
Max. mains fusing (slowblow or gl glass)	16 amp
Max. rated current	6.2 amp
Rated power	1.1 kW
Rated speed	2850 rpm
Protection class	IP54
Max. cut-in frequency	30 times / hour