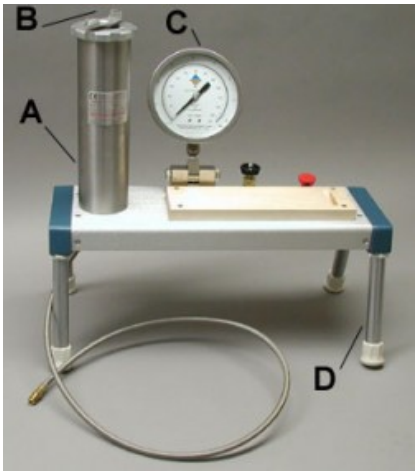
Scholander PWSC for Round Stems

The Model 3000 Scholander Plant Water Status Console, also known as the pressure bomb, has been the standard of excellence in plant water status research for over 2 decades. This work horse has all the features needed to make extensive readings in record time. Supplied without a bottled gas tank and regulator it is designed for use within the lab where a large air supply tank or mains air supply is available.

The 3000 Series Plant Water Status Console provides a means of quickly and accurately measuring the water status of plant leaves. A leaf or small branch is placed in the sample chamber with the cut end protruding from the specimen holder. Pressure is built up inside the chamber until the pressure exceeds the tension inside the plant material, and xylem sap begins to flow from the cut end. The tension can then be read directly from the pressure gauge. The model 3000 must be connected to an external source such as a compressed gas cylinder. Sample chambers are available in several different lengths, ranging from 18 cm to 51 cm. Two operating pressure ranges, 0 to 40 bars and 0 to 80 bars, are available. Two specimen holders are available, one for use with round-stem materials, and one for blade-type plant materials. A number of differently sized and shaped sealing sleeves and grommets assure that the plant material of interest is safely sealed in the specimen holder, allowing measurements to be made.

3000 Plant Water Status Console, without air supply. Must include 1 each of options A, B, C, and D (see image above). The most common configuration, 3000-1412, has a 18cm high Pressure Vessel, 3015G4 Specimen Holder, 0 to 40 bar range, and set of 20cm legs.



A solid polyethylene sample preparation board is mounted to the heavy-duty aluminum chassis. Sample chambers are available in several different lengths, ranging from 18 cm to 51 cm). Two operating pressure ranges, 0 to 40 bars and 0 to 80 bars, are available. Two specimen holders are available, one for use with round-stem materials, and one for blade-type plant materials. A number of differently sized and shaped sealing sleeves and grommets assure that the plant material of interest is safely sealed in the specimen holder, allowing measurements to be made.

The unique modular leg design vastly increases the versatility of the plant status console, changing from 20cm feet to 81cm feet is a snap. The monolithic design of the chassis increases strength while reducing weight. Now with locking castors, the unit can be effortlessly transported through the lab.

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Specifications

- 22 cubic foot aluminium DOT-3AL aluminium cylinder with CGA-580 fitting rated for 2216 psi – requires hydrostatic testing every 5 years.
- Single stage, step-down regulator set to 600 psi at the factory (can be reset by user if necessary).
- Standard pressure vessel 18cm, 0.5 litre volume, 2.4 kg, 40 or 80 bars. Cam lock. Specimen holder with safety valve. Internal diameter 6.9cm with vertical usable height 14.8cm.
    - 30.4cm and 50.8cm vessels also available. 30.4cm, 3.8 kg, 1 litre volume, 27.5cm height. 50.8cm, 6.3 kg, 1.8 litre, 50.3cm height.
    - All vessels 6.9cm diameter and rated for 80 bars with cam lock and safety valve features. Made of stainless steel for a lifetime of use.
- 15.2cm scientific test gauge with beryllium copper movement and stainless steel case, 0.25 of 1% full scale accuracy and the highest quality you can buy for many years of service.
- 600 psi gauge, 40 bars. Subdivisions 2 psi, 0.2Bars, 20 kPa and
- 1500 psi gauge, 80 bars. Subdivisions 10 psi, 0.5 Bars, 50 kPa.
    - Resolution half a division. Dual scale psi + kPa, Parallax mirror and adjustable needle to re-zero if necessary.