PLANT MOISTURE

Choice of chamber heads & sealing options

SKPM 1410 High pressure head with compression seal for hardy plants.

SKPM 1465 Low pressure head with soft, gentle seal for delicate plants.

3 part stem seal. Includes SKPM 1450 rubber seal, SKPM 1460 brass and delrin compression washers. The petiole is passed through the central holes and the head screwed together to make the seal.

SKPM 1445 Specimen holding adapter. Choice of 3 sizes. Change using the 4 screws

SKPM 1447 Rubber stem seal with slit opening to place gently around the petiole. Allow the gas pressure to make the seal once the system is assembled.

Skye's Plant Moisture system is available in 6 models. Choose a dial gauge or digital readout display, and a working range of 0-40, 0-50 or 0-80 bar.

All models are compatible with both the SKPM 1465 Low Pressure and SKPM 1410 High Pressure heads. However, Skye recommend that the SKPM 1465 Low pressure head is not used above 40 bar.

The Low Pressure head is most suitable for delicate or easily damaged plant petioles, whereas the High Pressure head is more suitable for hardy plants with difficult shaped petioles. However, with a few trials by the user most species can be measured using either type head.

Many users prefer to order both heads with their Plant Moisture System, especially if a wide range of plants are to be measured.

SKPM 1465 Low Pressure Head

The SKPM 1465 Low Pressure head has a choice of Specimen Holding adapters SKPM 1445, with has a maximum petiole diameter hole of 6 or 10 mm, or a slit aperture for grasses. It is advised to always choose the smallest usable size. The specimen holding adapters are easily interchanged using the 4 screws on the underneath of the Low Pressure head.

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Choice of chamber heads & sealing options (continued)

The soft rubber stem seal SKPM 1447 has a range of petiole diameter holes from 1.5 to 5.5 mm. A blank is also supplied for users to create their own size hole if necessary. The rubber seal has a central split so that the rubber seal can be gently placed around the petiole. This avoids having to force a delicate specimen through the centre which may cause petiole damage.

The rubber seal is then gently located in the specimen holding adapter. When the Low Pressure head is connected to the main system chamber the initial gas pressure pushes the rubber seal further into its location, making the full system seal. It may appear to the user that the system is leaking in this initial period, but this is intentional and soon rectifies itself before the gas pressure rises.

This design minimises the handling of a delicate petiole and lets the gas pressure do the work of making the firm seal.

SKPM 1410 High Pressure Head

The SKPM 1410 High Pressure head consists of 2 parts which are screwed together to make a compression seal. This head is more suited to hardier plants and especially where the petiole is uneven or difficult to seal.

The sealing washers comprise three parts, a black delrin (acrylic plastic) upper washer (one of the SKPM 1460 pair), a central rubber seal (SKPM 1450) and a lower brass washer (second of the SKPM 1460 pair). These seals and washers come in a range of sizes for a maximum petiole size of 9 mm, plus a blank rubber seal for users to create their own size hole if necessary. It is advised to always choose the smallest usable size.

The 3 sealing washers are placed in the lower part of the High Pressure head. The petiole is passed through the central hole in each, and then the top of the High Pressure head is screwed in place. The tighter the head is screwed together, the tighter the compression of the sealing washers, and so the greater the seal.

Care must be taken not to overtighten the head as this can cause damage to the petiole itself. Delicate petioles are easily damaged by this compression seal and so are better used with the Low Pressure head.

When the High Pressure head is attached to the main system there should be no obvious gas leaks as with the initial stages of the Low Pressure head. All seals should be complete before the gas pressure begins to rise.