



Technical Help

Plant Moisture Systems

Digital Operating Instructions

SKPM 1400- Brief Operating Instructions

Refer to the cross sectional diagram opposite for names of components

1. Select a rubber sealing washer to suit the material under test. Always choose the seal with the smallest aperture possible to ensure a good seal.
- 2a. Using low pressure head SKPM 1465 (maximum usable pressure 40bar): Choose the specimen holding adapter with the smallest aperture or slit suitable and secure to the underside of the head using the four screws. Open rubber stem seal, lay the petiole in the groove, close seal and push the rubber seal firmly in place.
- 2b. Using high pressure head SKPM 1410: Assemble the rubber seal in the vessel lid with an Upper and Lower stem seal washer of appropriate size. The upper and lower washer will need to have just slightly larger diameter holes than the rubber seal. Ensure that the sealing washers and their seat are clean and free from grease and grit. Insert the plant material through the stem seal and gently tighten the stem seal clamp.
3. Locate the large 'O' ring and place it in its groove in the vessel base. Ensure that both are clean and free from grit and grease.
4. Screw the vessel head to the vessel base, by having the red dot facing towards you. Do not force the threads. To help their engagement turn them in the reverse direction for a part of a turn until a gentle click is felt when the threads locate at their starts.
5. Clip the perspex safety shield in place over the head and put on the safety glasses provided. Set the gas control to 'vent chamber'. Switch on the electronics, allow a few seconds to settle and then adjust the zero on the 0-20 Bar range.
6. Prepare the pressure source (see separate or the manufacturers instructions) and connect the quick connect coupling, ensuring it is fully home and hose cannot be pulled off by hand. Use only Compressed Air or Nitrogen. Do not turn it on until the flexible hose is connected. Set the flow rate control almost fully clockwise. (Do not screw up tight! As this may damage the needle valve.) Set the gas control to off. Turn on the pressure source.
7. Set the gas control to 'fill chamber' and adjust the flow rate for a suitable rate of pressure rise.
8. Observe the cut end of the stem and when you first see moisture appearing, press the display hold button. Turn the gas control to 'off'. If a repeat measurement is required, reduce the chamber pressure by slowly turning the gas control to 'vent chamber' until the pressure has reduced sufficiently and repeat steps 7 and 8.
9. To change the plant specimen make sure that chamber is completely vented to atmosphere. Press the 'free display' button.
10. Make sure that there is no pressure in the flexible hose before disconnecting it by turning off the gas source and using the residual gas to fill the chamber before removing the last specimen. The chamber can then be vented and the procedure repeated to be sure the hose is empty. Do not vent the hose with the vessel lid removed, as grit etc. may be blown into the operators eyes.

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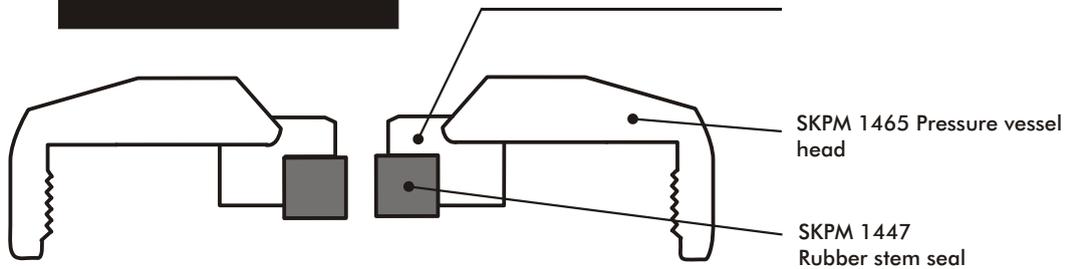
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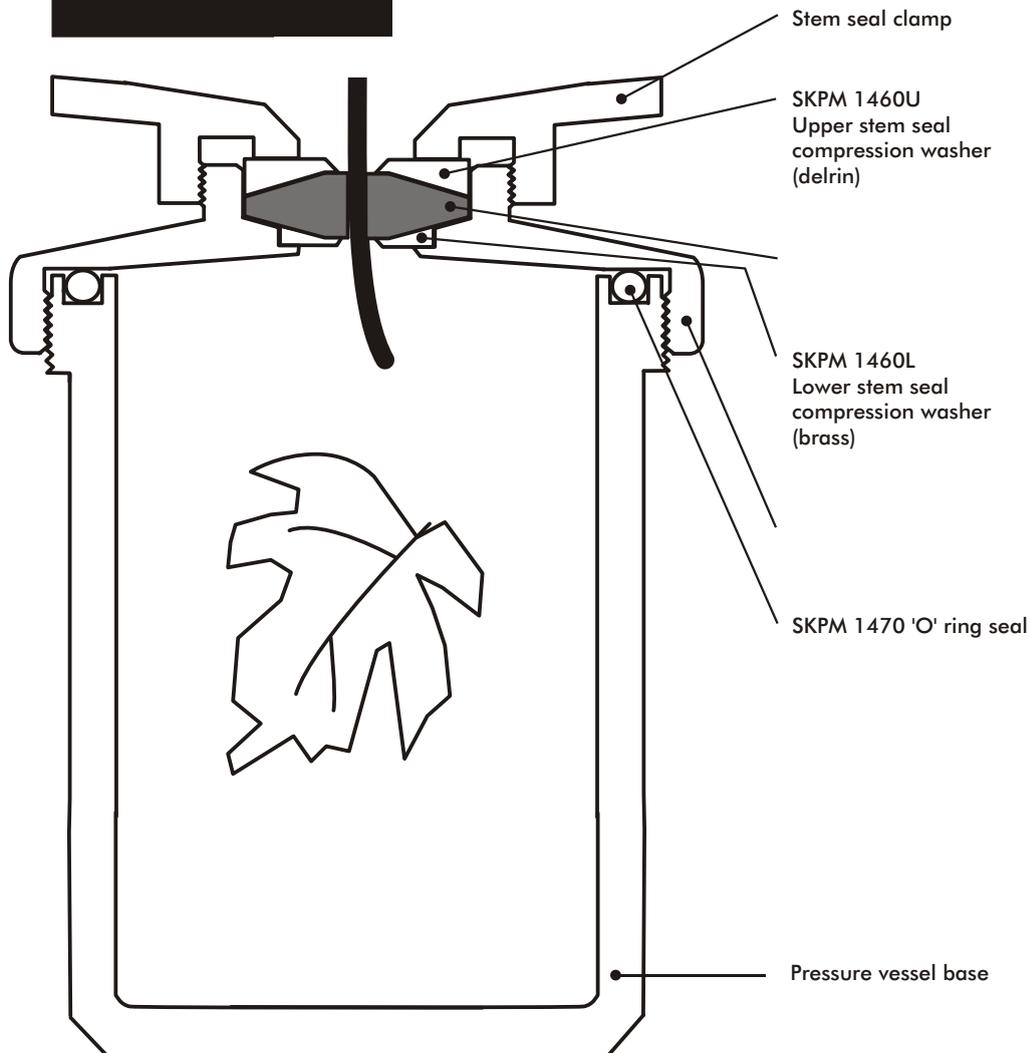
Digital Operating Instructions (cont)

Low pressure head
SKPM 1465

Cross section of pressure vessel



High pressure head
SKPM 1410



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