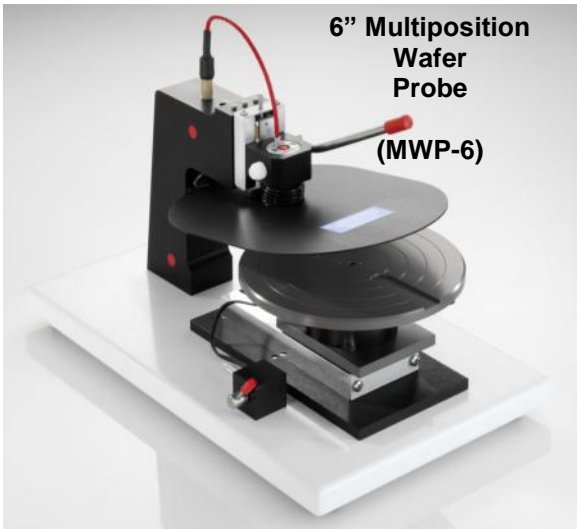


## JANDEL ENGINEERING LTD.

# Multiposition Wafer Probe

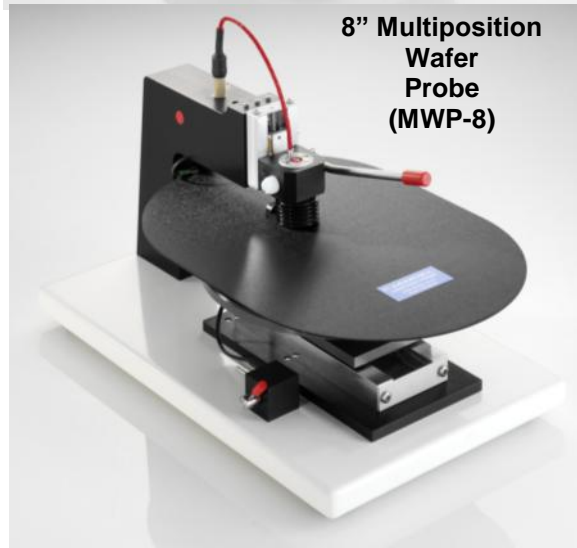


6" Multiposition  
 Wafer  
 Probe  
 (MWP-6)

The Jandel Multiposition Wafer Probe is available in four versions, each of which sell for the same price. The four versions are: 1) The 6" wafer system with light shield (shown left), 2) The 8" wafer system with light shield, 3) The 6" system without light shield, but with a multi-height probe arm and removable wafer stage, and 4) The 8" system without light shield, but with a multi-height probe arm and removable wafer stage. With items 3 & 4, the wafer stage can be removed and the height of the probe arm can be adjusted to allow measuring of a wide range of samples sizes, up to 12" in diameter and up to 6" tall.

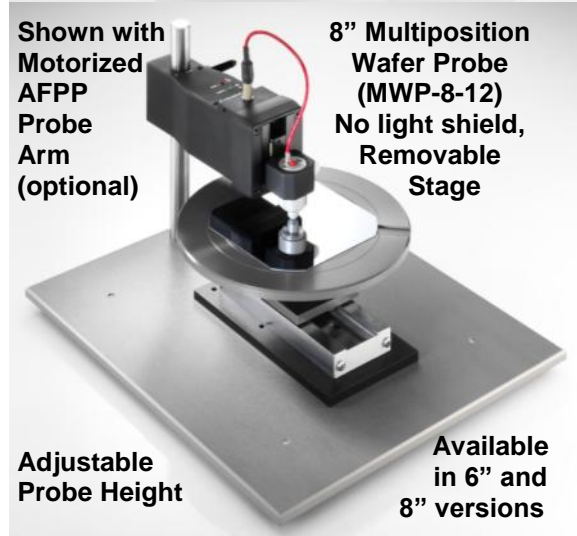
### Principal Features

- Easily pre-set to measure wafer at 1, 5, 9, or more positions with 1mm repeatability from wafer to wafer
- 6" or 8" wafer capacity, vacuum chuck
- Lever-operated probe with switched current leads to prevent arcing
- Repositioning accuracy within +/- 1 mm
- Precision low maintenance slides
- Shrouded measuring area to eliminate light and electrical interference
- Includes one Jandel Cylindrical probe head



8" Multiposition  
 Wafer  
 Probe  
 (MWP-8)

The models that include the light shield have a white powder-paint coated metal base carrying a Delrin column supporting the vertical slide, operating lever shaft, and micro-switch. The MWP-6-12 and MWP-8-12 which have the removable stage and adjustable height probe arm, but not light shield, the base plate is hard anodized aluminum large enough to accept a 12" wafer. In all models, the probe head is positioned so that the microswitch does not pass current until the probes have made contact. Lost motion ensures that the current is switched off before the probes are raised. The wafer table slides in the "Y" direction to enable the wafer to be centrally positioned, after which the vacuum control valve can be operated to secure it in position. Annular rings allow each wafer size to be centered. When the table is pushed to the limit of its travel, a measurement can be made at its center. Four radial positions at right-angles are denoted by a spring-loaded index ball incorporated in the rotary table. The radial distance of measurement is denoted by a similar arrangement on the linear slide index plate. Unwanted settings can be blocked off by easily removed screws. So, for example, one could choose to measure at the center and four points at 50mm radius. On the two models which include a light shield, a grounded metal shield screens the wafer from light and electrical noise during measurement. It is arranged that the shield rises when the probe head is fully lifted to permit loading. More information about the spacing options for the table detents can be found in the operating manual which is available online.



Shown with  
 Motorized  
 AFPP  
 Probe  
 Arm  
 (optional)

8" Multiposition  
 Wafer  
 Probe  
 (MWP-8-12)  
 No light shield,  
 Removable  
 Stage

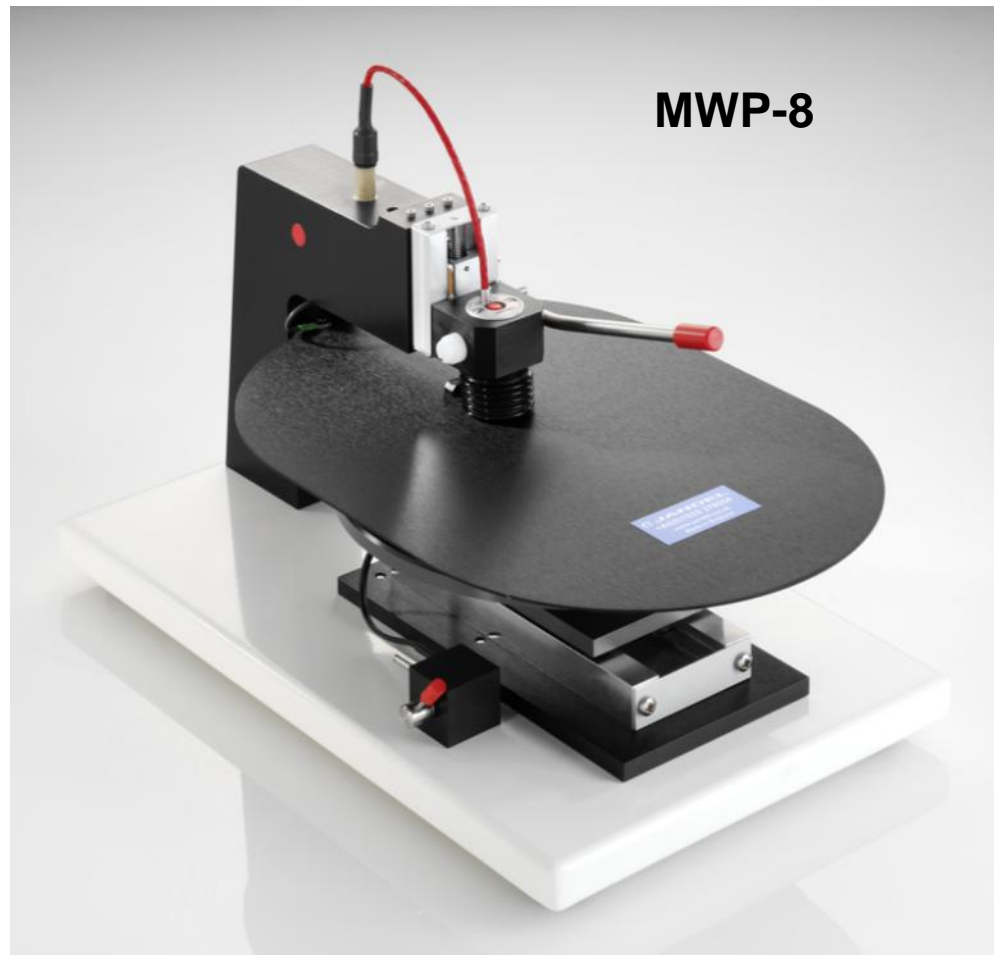
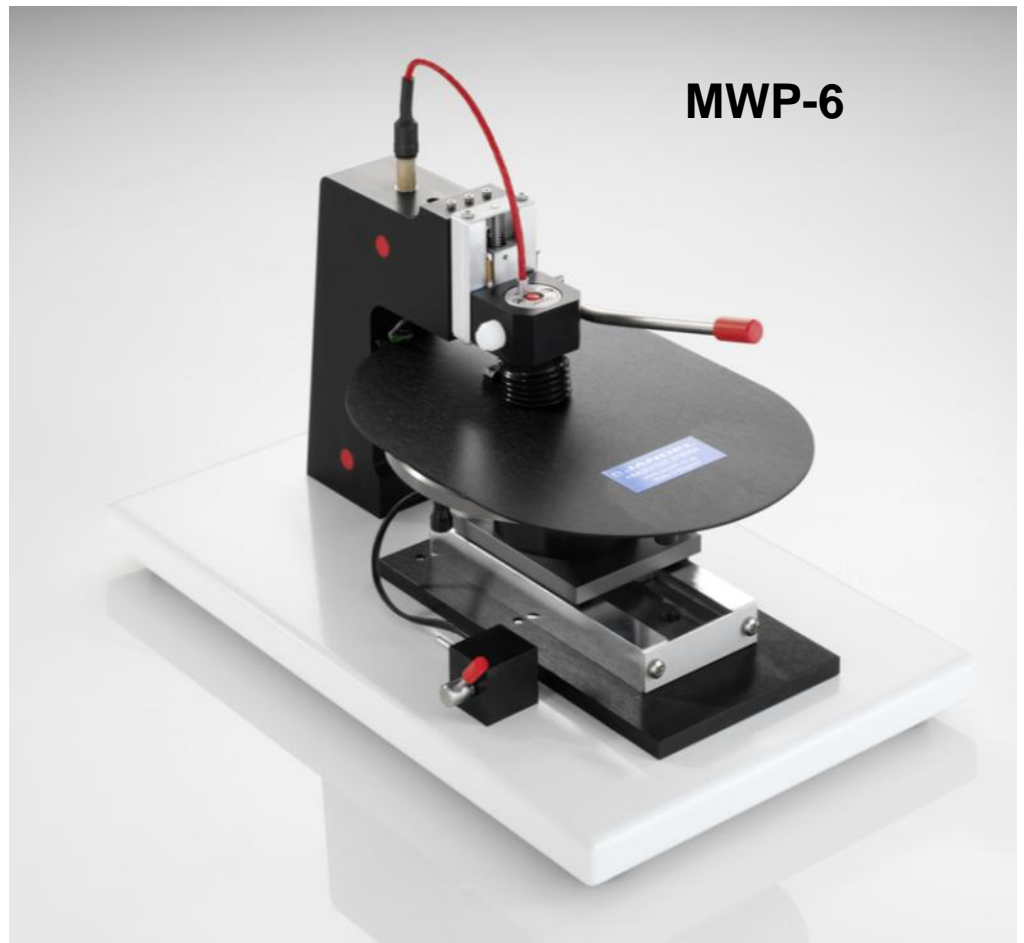
Adjustable  
 Probe Height

Available  
 in 6" and  
 8" versions

## **6" Multiposition Wafer Probe and 8' Multiposition Wafer Probe**

The MWP-6 is for use in measuring 6" diameter and smaller wafers. The MWP-6 is recommended for wafers that are 6" in diameter or smaller due to the increased ease of centering the wafer on the wafer chuck. The user selectable detents for setting the distance from the wafer center that measurements will be made are more appropriately spaced for 6" and smaller wafers when using the MWP-6 as opposed to the MWP-8. Both the MWP-6 and MWP-8 include an integral light shield, a vacuum switch, and one vacuum hole in the wafer chuck center for wafer hold-down. To aid in centering smaller wafers on the wafer chuck of the 6" Multiposition Wafer Probe, circular patterns (0.5mm deep machined grooves) are machined into the wafer chuck with diameters of 25mm, 50mm, 75mm, 100mm, and 125mm. The 8" system has the machined circles at 125mm and 150mm.

Samples up to 10mm thick can be measured.

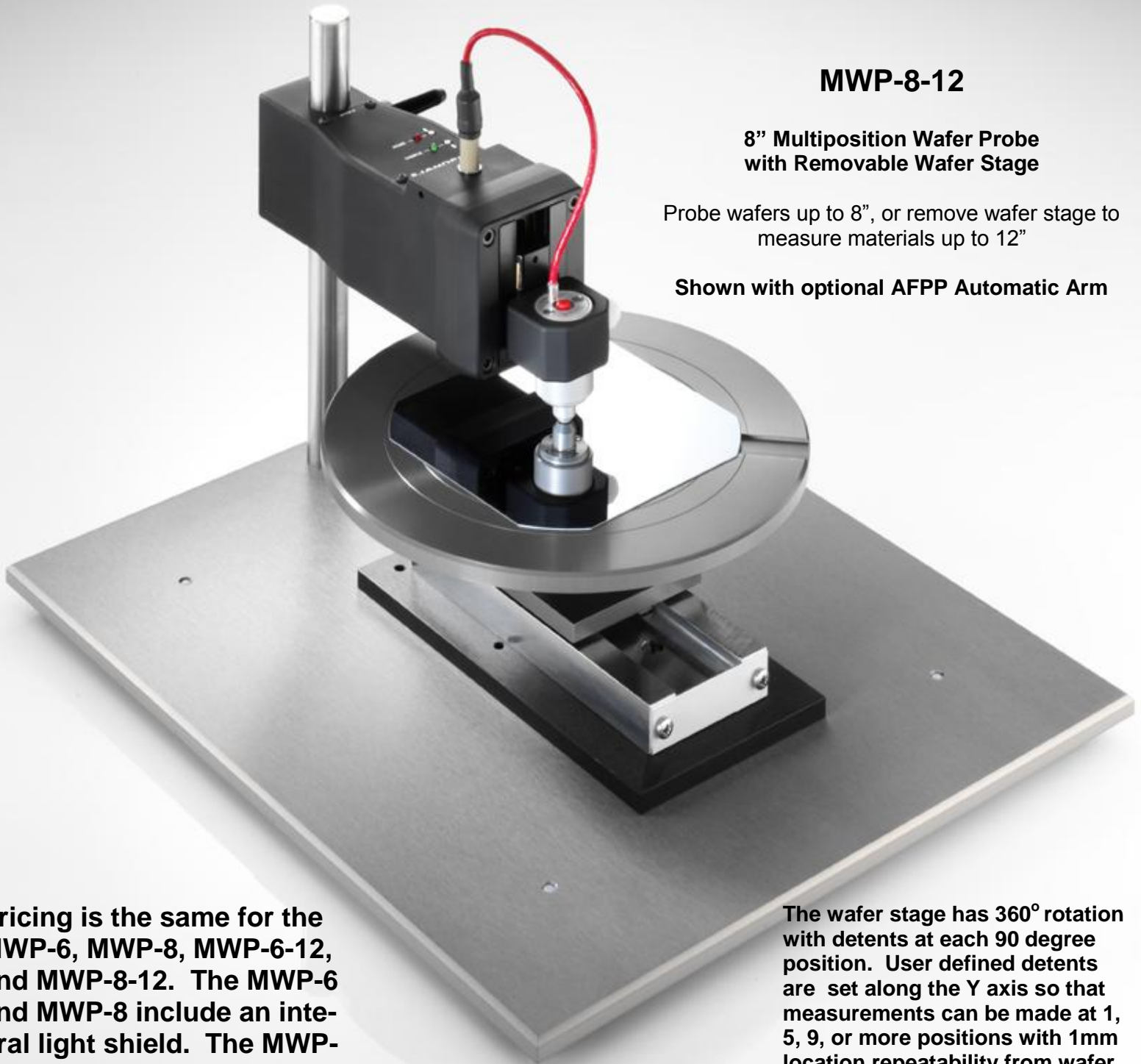


## **MWP-8-12**

### **8" Multiposition Wafer Probe with Removable Wafer Stage**

Probe wafers up to 8", or remove wafer stage to  
measure materials up to 12"

**Shown with optional AFPP Automatic Arm**

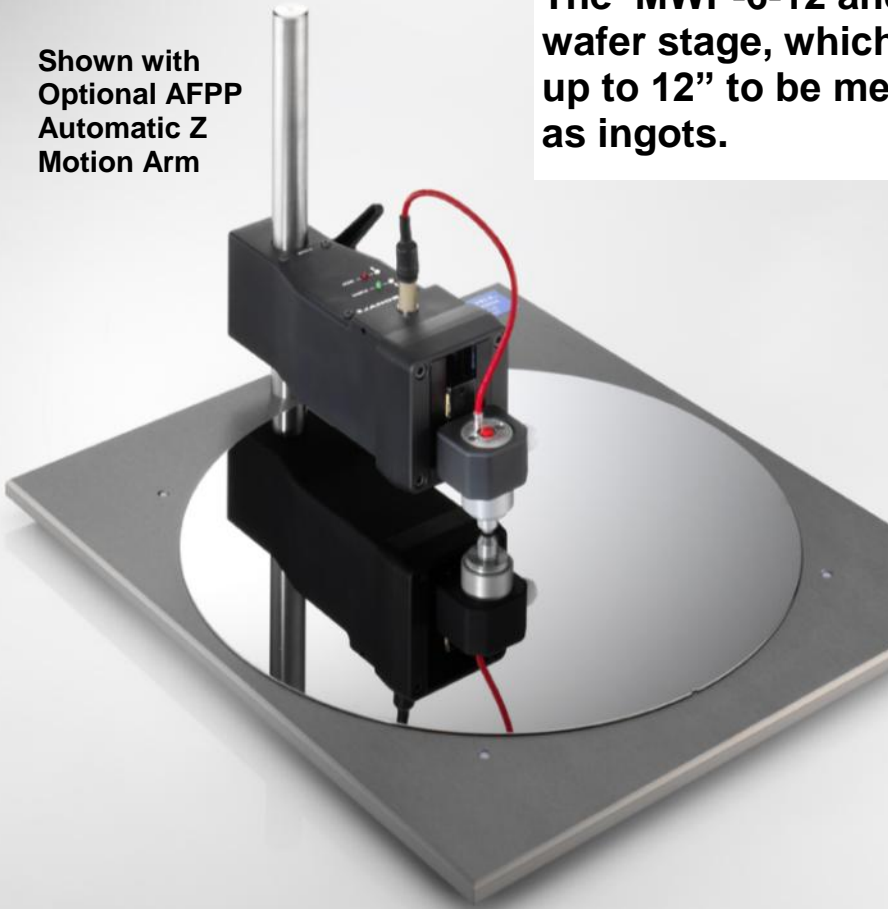


**Pricing is the same for the MWP-6, MWP-8, MWP-6-12, and MWP-8-12. The MWP-6 and MWP-8 include an integral light shield. The MWP-6-12 and MWP-8-12 do not.**

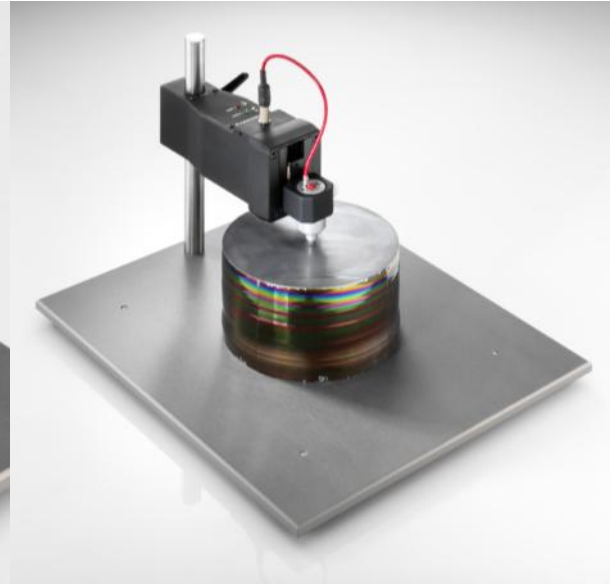
**The wafer stage has 360° rotation with detents at each 90 degree position. User defined detents are set along the Y axis so that measurements can be made at 1, 5, 9, or more positions with 1mm location repeatability from wafer to wafer.**

**The Multiposition Wafer Probe is available in a version which is built upon a large base plate that provides a 12" x 12" sample area once the wafer stage is removed. The system is available with either the 6" or 8" wafer chuck & stage. The wafer chuck/stage can be removed by the user for use in measuring larger materials such as wafer up to 12" in diameter. The probe arm can be moved up and down the support post so that wafers or thicker samples can be measured with the 6" or 8" wafer chuck in place, or the arm can be lowered for use when the stage is removed. The probe arm can be either the standard manually raised and lowered arm, or the motorized AFPP Automatic probe arm as shown here. The MWP-6-12 and the MWP-8-12 are not available with the integral light shield which is provided on the MWP-6 and MWP-8 system which do not have a removable wafer stage.**

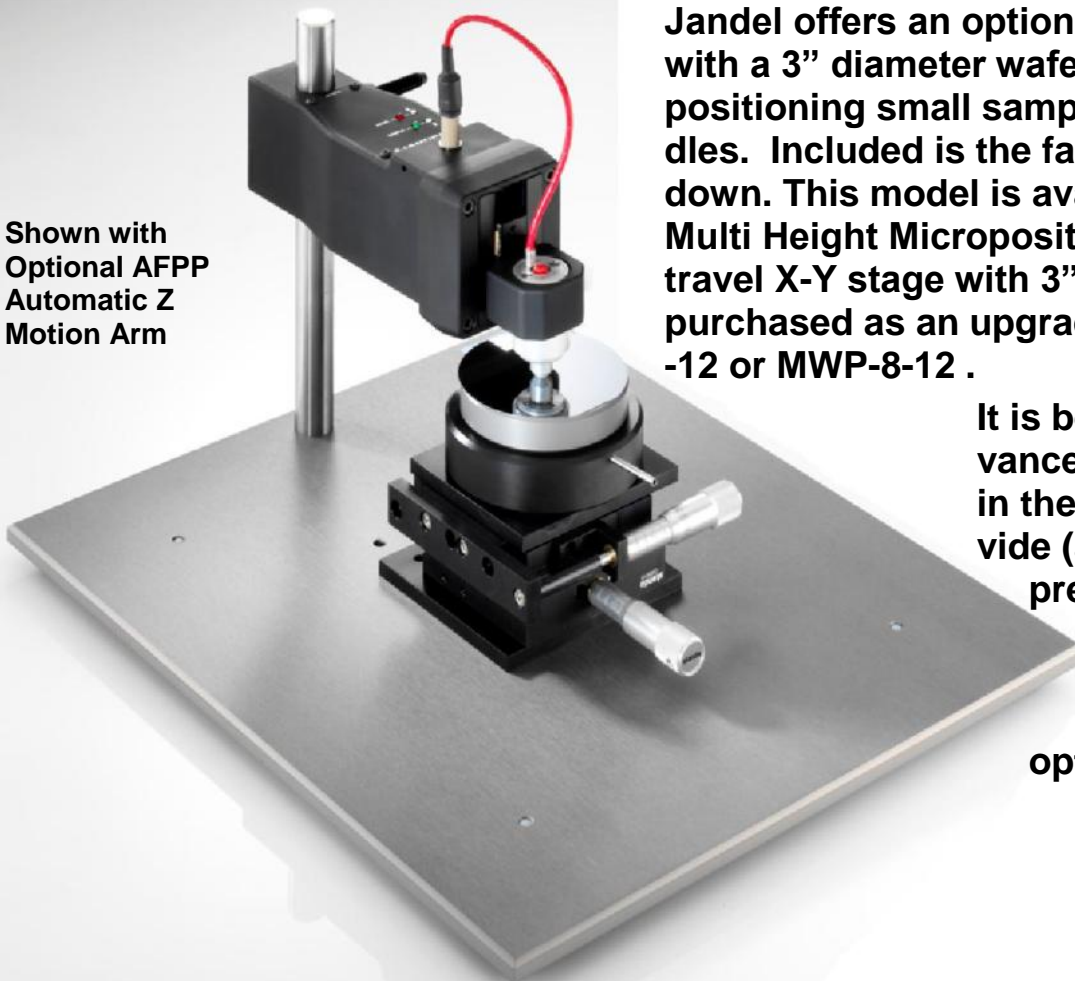
Shown with  
Optional AFPP  
Automatic Z  
Motion Arm



The MWP-6-12 and MWP-8-12 have a removable wafer stage, which when removed will allow wafers up to 12" to be measure, as well as taller items such as ingots.



Shown with  
Optional AFPP  
Automatic Z  
Motion Arm



Jandel offers an optional 1" travel X-Y stage with a 3" diameter wafer chuck for use when positioning small samples under the probe needles. Included is the facility for vacuum hold-down. This model is available initially as the Multi Height Microposition Probe, or just the 1" travel X-Y stage with 3" vacuum chuck can be purchased as an upgrade to an existing MWP-6-12 or MWP-8-12 .

It is best if Jandel knows in advance that this may be upgraded in the future so that they can provide (at no additional charge) the predrilled hole pattern.

Otherwise the base plate must be returned to the factory to mount the optional sample stage.