

Automatic 3-Axis Goniometer System



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This is a precision remote control 3-axis goniometer, typically used for ion beam channelling experiments. The goniometer allows for crystal orientation in three planes inside a vacuum chamber at pressures of the order of $10^{-6}\,\mathrm{torr}$. Also available is a translation table attachment (shown in the picture) which gives the operator an additional fourth linear movement of $\pm 30\,\mathrm{mm}$. The movements on the goniometer are driven by 200-step Phytron stepping motors.

Specification

- each movement is independently driven by 200-step Phytron stepping motors
- rotation in the x and y axes has a full 360° movement, the resolution being 3 steps of motor = 0.01°
- the tilt z-axis is $\pm 30^{\circ}$ about the vertical, the resolution being 3 steps of motor = 0.01°
- \bullet intersection of all three axes is to be within a $0.05\,\mathrm{mm}$ diameter sphere
- \bullet specimen mount is threaded, $50\,\mathrm{mm}$ diameter by $1\,\mathrm{mm}$ pitch
- translation capability is $\pm 30 \, \mathrm{mm}$

Outline dimensions

 $\begin{array}{ll} \mbox{Height} & 336\,\mbox{mm} \\ \mbox{Base or table diameter} & 191\,\mbox{mm} \\ \mbox{Maximum protrusion from vertical axis} & 140\,\mbox{mm} \end{array}$

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Data Sheets

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