Tool Maker Microscope

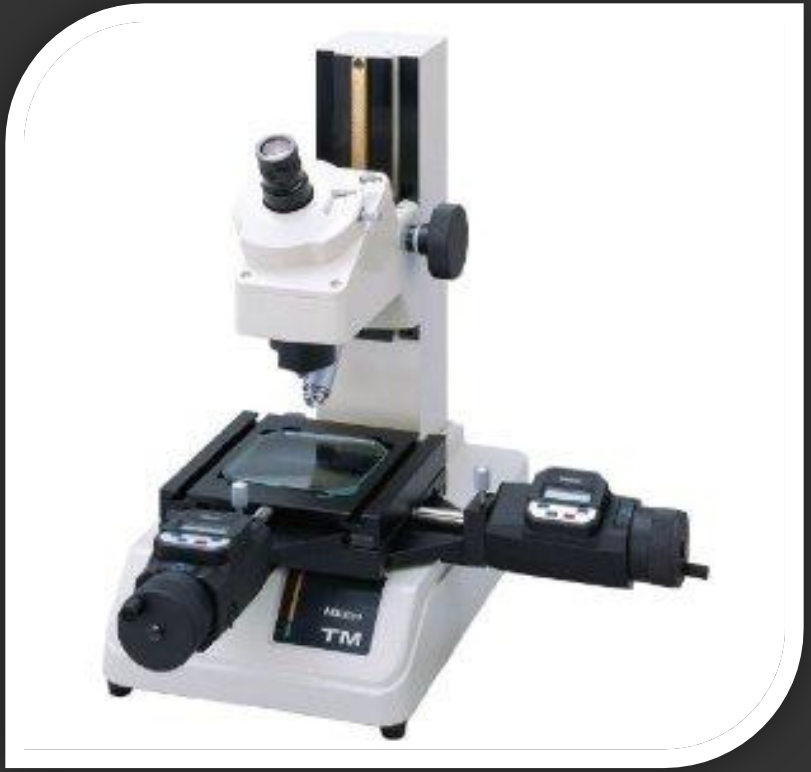
Introduction

What Is A Tool Maker Microscope?

- Understand what tool maker microscopes are and their specific uses. These microscopes are special type of microscopes that are used to create precision tools and measure small distances between two points of a specimen.
- A tool maker microscope is a type of a multi functional device that is primarily used for measuring tools and apparatus. These microscopes are widely used and commonly seen inside machine and tools manufacturing industries and factories. These microscopes are also inside electronics production houses and in aeronautic parts factories

Toolmakers Microscope

Mitutoyo 176-808A, Toolmaker's Microscope With Digimatic Micrometer Heads, 30X Magnification, 6 X 6 Stage Size.



Use

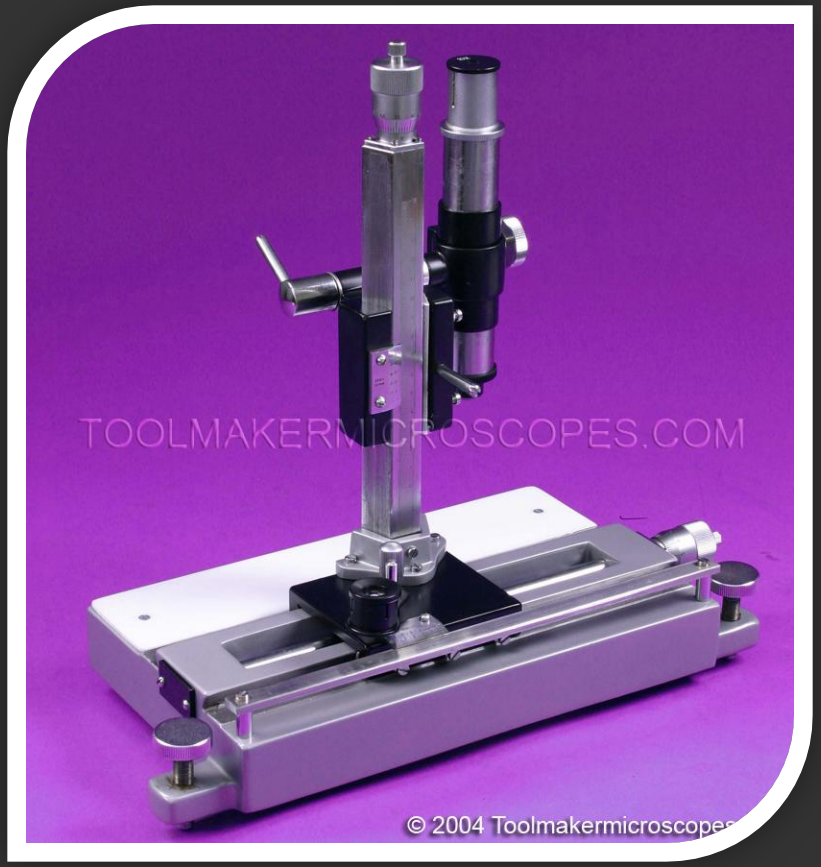
The main use of a tool maker microscope is to measure the shape, size, angle, and the position of the small components that falls under the microscope's measuring range. More often than not, a tool maker microscope is outfitted with a CCD camera that has the ability to capture, collect, and store images into specialized computer software. Certain computer aided design software is commonly used for such applications. The image produced by the camera and processed by the software is normally a two dimensional image.

Use . . .

A tool maker microscope is primarily used for measuring the shape of different components like the template, formed cutter, milling cutter, punching die, and cam. The pitch, external, and internal diameters are specifically measured as well. The thread gauge, guide worm, and guide screw are conveniently handled as well. As far angles are concerned, the thread and pitch angle are of chief concern.

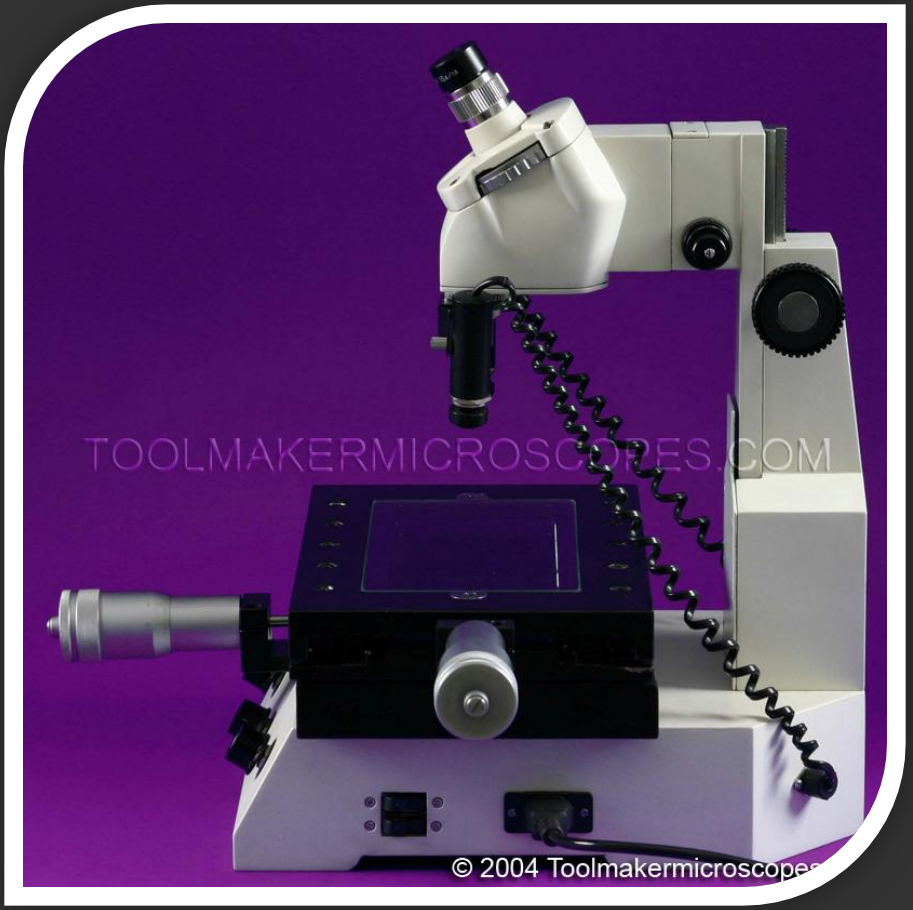
Type

VERNIER TRAVELING MEASURING TOOLMAKER'S MICROSCOPE WOODEN CASE



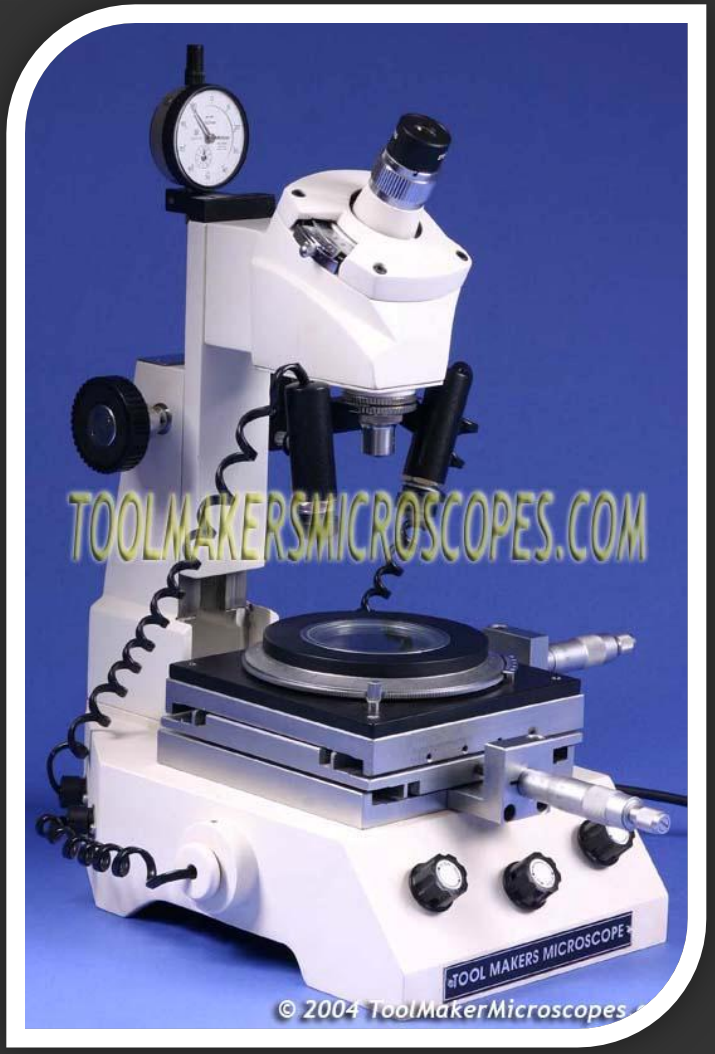
Type . . .

20X POWER MEASURING TOOLMAKER'S MICROSCOPE W/ X–Y MICROMETERS



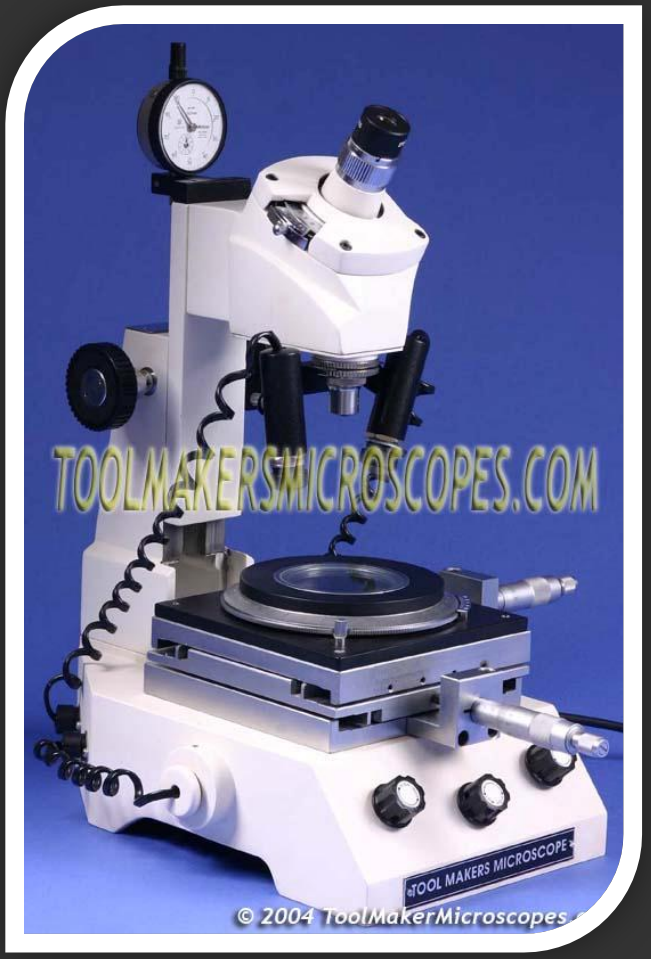
Type . . .

30X POWER MEASURING TOOLMAKER'S MICROSCOPE W/ X–Y MICROMETERS



30X POWER MEASURING TOOLMAKER'S MICROSCOPE W/ X-Y MICROMETERS

overview...



Overview

- High Precision Toolmaker's Measuring Microscope.
- Excellent for Precise Measurements of Angles, Lengths, Diameters, and any Distances on the Specimen!
- Toolmaker's Microscopes are also known as Measuring Microscopes. The Stage is Equipped with Linear Scales to Measure Stage Movement.
- Stage Micrometers are Mounted to the Frame and Control the Stage Movement in the X and Y Axes to Precisely Measure Positional Differences on the Specimen.
- Wide Variety of Applications for this Instrument.

Overview . . .

- Use it for the Traditional Toolmaker's needs such as Examining the Edges of a Cutting Tool or the outcome of utilizing the Tool.
- Use it to verify surface finishes, measure surface defects and hardness test indentations, and verify small parts alignment.
- It's perfect for Thread Inspection and Verification of Tool Angles.

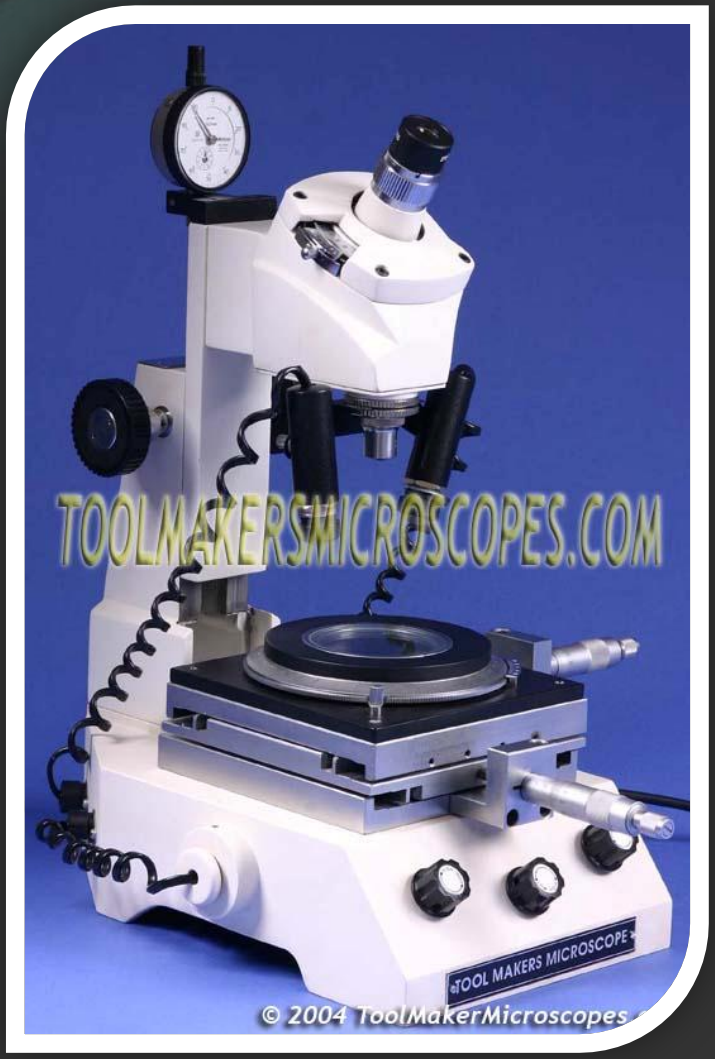
Eyepieces and Magnification

- 30x Magnification.
- Wide Field 15x Eyepiece with Built-In Crosshair Reticule.
- 2x Long Working Distance Achromatic Objective.
- Working Distance: 67mm.
- Field of View: 6.5mm Diameter.

Illumination

- Two Illumination Systems to Meet Any Application.
- Sub-stage Transmitted Variable Intensity Illumination (from bottom) Provides Green Filtered Collimated Light that is Excellent for Viewing Contours and Transparent Objects.
- Oblique Incident Variable Intensity Illumination from Twin Spot Lights with Adjustable Inclination provides Light Source on Each Side of Object. Great for Uniform Illumination of Surface Items with Textures.
- 6V/20W Halogen Bulb in Base. 6V Bulbs in Spot Lights.

Toolmakers microscope



Microscope Head Details

- Observation Tube: Monocular, Inclined at 30 Degrees from Vertical.
- Goniometric Head for Measuring Angles.
- Eyepiece Protractor: Graduated 0 – 360 Degrees with Adjustable Vernier Reading to 6 Min.

Stage Specifications

- Rotary Measuring Stage: 115mm Diameter.
- Measuring Stage Outside Dimensions: 152 mm x 152 mm.
- Stage Movement: X = 60mm, Y = 50mm.
- Glass Stage Plate, 70mm Diameter.
- Two Micrometer Heads: One for X-Direction, One for Y-Direction.
- Standard Micrometer Head: 0 - 25mm, Least Count Resolution 0.01mm.

Stage Specifications . . .

- Stage has Circular Graduated Scale Divided into 360 Degrees with 5 Minutes Vernier Reading on Side.
- Capability to Lock Stage Rotation.
- Stage has Interchangeable Intermediate Table to receive Different Optional Accessories.
- Hard Steel Ball Bearings for Accurate and Smooth Stage Movement.

Frame - Base - Size - Weight

- Extra Large and Heavy Base for Overall Rigidity and Stability.
- Maximum Total Overall Height of Microscope: 490mm.
- Instrument Weight: 36 lbs (16.2 Kg).

Thank you