With superb Italian technology, Microtecnica has a full line of Profile Projectors and video comparators. Ranging from table top models to large floor model Optical Comparators to Optical Video Inspection Systems, Microtecnica has a solution for each application demanding reliable measuring systems.

**Optical Comparators**

**ANTEUS**

The high quality and reliability of Microtecnica’s Optical Comparators achieved through over half-a-century experience in the field of high precision optical instrumentation is fully integrated into **Anteus** which is a versatile, highly accurate instrument with an excellent price/performance ratio. **Anteus** is provided with a 450 mm diameter screen and is in the medium size optical comparator range. Its performance can be increased by using a 5X magnification lens with 90 mm object field.

**Anteus** is characterized by an illumination system on the horizontal and the projection screen located nearly vertical. **Anteus** is therefore more versatile and sturdy than Optical Comparators with illumination system on the vertical axis. However, if required, **Anteus** can be quickly converted into a vertical axis illumination system by means of a simple accessory.

**Anteus** has a versatile selection of digital displays:

- **780-MT-1000-C** Standard digital display/data processor for the worktable displacement and angular projection screen measurements.
- **780-QC-200**
  Digital readout / Data processor for the calculation of geometrical data.
- **780-QC-4000**
  Personal Computer with two coordinates geometrical measurement software, Windows environment - graphic representation of the part under testing - CAD interface.
- **780-CNC**
  CNC for automatic part inspection based on teach-in system. Test certificate Print-out - CAD interface facility.
ARES

Outstanding Features

Peculiarities Of Ares Model:

• Vertical Projection System
• Vertical Projection Screen 406 Mm Ø
• Large Worktable Of 480 X 380 Mm With Micrometric displacements (X - Y) Of 305 X 204 Mm
• Focusing Through Projector Body Displacement

The system can be fitted with one of the following readout systems.

780-MT1000-CF
Digital readout/data processor for X-Y table displacements, resolution 0.001 mm and projection screen rotation, resolution 1'. Besides the features of the standard unit, it is fitted with edge finder (optical sensor) for automatic data acquisition.

780-QC-221-E
Digital Readout/Data Processor for geometric measurements. Data acquisition can be carried out through an edge detection which reduces human error, in respect of the cross-hair collimation, with consequent time saving, better accuracy and high efficiency.

780-PC/SW
Personal Computer with Software, in Windows environment, for both linear table and angular projection screen measurements. Graphic representation of the part under testing – CAD interface, for import – export acquired data.

ATLAS

Atlas, available in two Versions with 600mm (23"), respectively 760 mm (30") diameter screen, is a measuring system featuring the application of the latest developments in optics, optoelectronics, mechanics and electronics.

PROJECTION SYSTEMS

The Atlas Model operates with the following systems which allow an extensive range of applications: horizontal diascopic (standard), vertical diascopic and episcopic.

- **HORIZONTAL DIASCOPIC PROJECTION**
- **EPISCOPIC PROJECTION (Optional)**
- **VERTICAL DIASCOPIC PROJECTION**

The system can be fitted with one of the following readout systems.

780-MT-1000-C
Standard digital displays/data processor for the worktable displacements and angular projection screen measurements. Same

780-QC-200
Digital Readout/Data Processor for geometric measurements. Data acquisition can be
carried out through an sensor which reduces human errors, in comparison with the cross-hair collimation, with consequent time saving, better accuracy and high efficiency.

**780-QC-4000**
Personal Computer with two coordinates geometrical measurements software, Windows environment - graphic representation of the part under testing - CAD interface

**780-CNC**
CNC for automatic part inspection based on teach-in system. Test certificate Print-out - CAD interface facility.

**CYCLOP-1**

in 1954, MICROTECNICA became the first manufacturer in the world to produce a projector with 1000 mm diameter screen. LTF is proud to launch on the international market the new version of the well established **Cyclop-1**, integrating the most advanced technology used in the field of optical comparators.

The **Cyclop-1** features a screen size (1000 mm/40” dia.) and the exceptionally large worktable (800 x 200 mm/31.5 x 7.87”) positioned at the side of, and at an angle to the screen.

**Main Features OF Cyclop-1**

- Rotary encoder and digital display for angular measurements of projection screen
- Recalculating ball screws for powered horizontal and vertical table displacements
- Revolving turret for change of four magnification lenses
- Pivoting lamp holder arm for horizontal diascopic projection
- Vertical diascopic projection device
- Feeler/repeater device P4-N type for turbine blades, dies and disc checking
- Data processor and printer for automatic data handling on two axes
- Numerical control for automatic checking with teach-in system

The **Cyclop-1** besides allowing comparison checks using master charts, it can be converted into a TWO-COORDINATE MEASURING MACHINE by means of digital readout systems combined with either Data Processor or Personal Compute.

**PROJECTION SYSTEMS**
The **Cyclop-1** can be used to check on diascopic (direct) and episcopic (surface) projections, either separately or simultaneously.

**HORIZONTAL DIASCOPIC PROJECTION (DIRECT)**
Is the direct projection system used for checking external profiles. It is mainly used for cylindrical components placed between the dead centers, on the "V" support or in a vice support, the latter in case when checking flat pieces.

**EPISCOPIC PROJECTION (SURFACE)**
Is used for checking surfaces, reliefs and cavities.
The illumination system is axial (with beam splitter mirrors) for 5, 10, 20, 25, 30, and 50X magnification lenses and oblique (with total reflecting mirrors) for 100X.
The illumination is given by a 800W 220V halogen bulb lamp with unified optical condenser, light intensity adjustment and motor fan lamp cooling system. High brightness of the system enables excellent performance even when using 100X lens.

**VERTICAL DIASTOMIC PROJECTION**
Is obtained by means of the same illuminator as for the episcopic projection, but with the addition of a glass support with integral 45° mirror, on which small and/or thin pieces can be placed directly. This effectively creates a second optical comparator giving a big increase in the scope and use of Cyclop-1.

**OPTICAL SYSTEM**
Cyclop-1 optical equipment includes 5, 10, 20, 25, 30, 50 and 100X magnification lenses, optical condensers, 302 mm (11.88") and 680 mm (26.77") Ø mirrors.

The system can be fitted with one of the following readout systems.

**780-MT-1000-C**
Digital readout/Data Processor for horizontal/vertical measurements of the worktable and angular measurements of the protractor screen.

**780-QC-200**
Digital Readout/Data Processor for geometric measurements. Data acquisition can be carried out through an edge detection which reduces human error, in comparison with the cross-hair collimation, with consequent time saving, better accuracy and high efficiency.

**780-QC-4000**
Personal Computer with two coordinates geometrical measurements software, Windows environment - graphic representation of the part under testing - CAD interface.

**780-CNC**
CNC for automatic part inspection based on teach-in system. Test certificate - Print out - CAD interface facility.

**HELIOS 350H - HELIOS 350V**

**PROFILE PROJECTOR/BIDIMENSIONAL MEASURING INSTRUMENT**

The 350 H VERSION is particularly suitable for checking cylindrical components to be fixed between dead centers or placed on “V” supports as well as for specimen to be clamped by means of vice.

The 350 V VERSION is suitable for checking small and thin components to be placed directly on the worktable. This version is therefore useful for small mechanic parts, as well as plastic, rubber, electronic and similar components.

The system can be fitted with one of the following readout systems.

**780-MT-1000-C**
Standard digital display/data processor for the worktable displacements and angular projection screen measurements. Same data processor allows geometric measurements of the components under testing.

**780-QC-221-E**
The Data Processor model Quadra check 221E (optional) fitted with edgefinder for “on fly” data acquisition of the piece under testing.
ORION 400-H - ORION 400-V

Profile Projector Bi-Dimensional Measuring Instrument

Version 400-H is particularly suitable for checking cylindrical parts either placed between centers or on “Vee Supports”, or using a Vice Support to clamp components.

The Data Processor model Quadra Chek 200 (optional) fitted with edgefinder for automatic data acquisition of the piece under testing.

Version 400-V is intended to check small or thin parts placed directly on the glass table insert.

The system can be fitted with one of the following readout systems.

**780-QC-200**
Digital Readout/Data Processor for geometric measurements. Data acquisition can be carried out through an edge detection which reduces human error, in respect of the cross-hair collimation, with consequent time saving, better accuracy and high efficiency.

**780-QC-4215**
Personal Computer for both linear table displacement and angular projection screen measurements, geometrical measurements software, Windows environment - graphic representation of the part under testing - CAD interface. CNC facility for automatic part inspection based on teach-in system.

SIRIUS

PROFILE PROJECTORS - BI-DIMENSIONAL MEASURING SYSTEM

Sirius features a provided with a 500 mm diameter screen and it is placed in the medium size optical comparator range. Sirius is characterized by an illumination system on the horizontal and vertical projection screen. The heavy duty table set is mounted on a sturdy vertical slide with preloaded roller ways allowing high accuracy and sturdiness. Worktable is available in two versions with powered displacements of 300 x 200 mm and 710 x 200 mm.

Sirius model can be used to check on diascopic (direct) and episcopic (surface) projections, either separately or simultaneously.

CONTROL PANEL AND JOY-STICK
The Control panel includes following functions:

- two pre-adjusted light intensities for diascopic projection and one for episcopy.
- automatic protection against over-heating and automatic stand by of the projection lamps and digital display model MT-1000-C.
Joy-stick, proportional type, for powered table axes and preset for CNC application. The system can be fitted with one of the following readout systems.

**780-MT-1000-C**
Digital display/data processor for the worktable displacement and angular projection screen measurements. Same data processor allows geometric measurements of the components under testing.

**780-MT1000-CF**
Digital readout/data processor as above mentioned, but with edge finder for automatic data acquisition.

**780-QC-200**
Digital readout / Data processor for the calculation of geometrical data. The data acquisition occurs by means of an optic fiber with the advantage of minimizing the visual collimation error and increasing rapidity of checking.

**780-PC/SW**
Personal Computer with Software, in Windows environment, for both linear table and angular projection screen measurements. Graphic representation of the part under testing - CAD interface for import - export acquired data.

**780-CNC**
CNC for automatic part inspection based on teach-in system. Test certificate Print-out - CAD interface facility.

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### Video Comparators

**ARGUS SPECIAL**

Main technical features:

- Solid granite base with column
- Heavy duty worktable with micrometric travel of mm 300X200X200
- Admitted weight on the table 30 Kg.
- Powerful diascopic and episcopic illumination with LED
- High resolution CCD Sony camera
- Magnifications. Optical zoom: 0,7-4,5X Image zoom: 28X-180X
- Three-dimensional measuring software.
- Monitor LCD 19"
- Personal Computer and Monitor
- Cabinet
- Single phase feeding 220 V 50 Hz
- Overall dimensions cm 80X50X165 (wide/depth/height).
LUX VISION V300

Standard composition complete with:

⇒ Monitor LCD 17” tilting 15°
⇒ High power diascopic and episcopic illumination with LED
⇒ Worktable with 300 mm horizontal and 200 mm transverse displacements
⇒ Zoom magnification 20-120X
⇒ Measuring system with lineal transducers and Digital Display/Geometrical Data processor model MT 1000-C
⇒ Single phase feeding 200 V 50 Hz.