

TESAVISIO 300 and 300 DCC

TESAVISIO 300 and TESAVISIO 300 DCC

Brochure (PDF)

Description

The innovative TESAVISIO 300 vision measuring system is available in three models, two manual and one DCC. Each systems measurement range is 300 mm x 200 mm in (X-Y) x 150 mm range in the Z-axis.

Manual Machine Versions:

These two versions have a coordinate stage fitted with a quick release system in both the X and Y axes. This system enables fast system displacements for locating the geometric features to be measured. Disengageable wheel drives are used for quick motion in the Z-axis as well as fine setting for focusing the system. TESAVISIO 300 manual models are available with either TESA-VISTA software or PC-DMIS VISION software.

DCC Machine Version:

On this system, the coordinate stages along with the vertical axis are displaced by means of DC servomotors and are user controlled by a joystick. This allows the user to easily locate geometric features and provides for automatic motor driven execution of software driven part application programs. The DCC model is also available with a touch probe option to assist the user with added measurement functionality.

Software:

TESA-VISTA software provides easy-to-use software designed for basic shop floor applications. PC-DMIS VISION software provides users with a powerful tool for measurement in two and three dimensions including many programming capabilities. PC-DMIS provides a long-term solution in an ever evolving manufacturing environment as it can be continuously updated to the latest technology level. All inspection reports issued in a variety of formats can be custom-made to suit the operator's specific needs.

Features

TESA-VISIO 300 Features

- Pre-stressed carriages mounted on ultra-precise monorails
- Linear encoders mounted on each axis
- Encoder resolution (X/Y/Z) 0.05 μm
- Red laser pointer- helps locating features to be checked
- Long lasting LED light sources
- Transmitted light produced by a green LED with programmable light intensity
- Reflected light (ring light) created by Fresnel lens consisting of a dual line of 24 white LEDs. An additional ring light fragmented into 4 segments is also available. Both ring lights are programmable
- A programmable coaxial light (white LED) can be supplied for use in conjunction with the motorized zoom
- High resolution color camera
- Optional 75 mm or 150 mm height extensions allow easy inspection of large workpieces
- Both manual and DCC VISION models are available with a 0.7X to 4.5X motorized zoom
- The software includes a zoom calibration routine
- The TESA-VISTA manual model with TESA-VISTA software is available with a 2X telecentric fixed objective

TESA-VISTA Software Features

- Viewing in X, Y or Z-axis with a resolution to 0.05 μm
- Zero setting of displayed axis by just a click
- Metric/inch conversion

- Cartesian and polar coordinates
- Creation and execution of part programs
- Video image storage
- Measured feature drawing shown in the active window
- Automatic edge detection
- Z measurement with on-screen help and guidance
- Point, radius, diameter, arc of circle, angle, line, distance (X/Y), slot, Z measurement
- Alignment, perpendicularity, parallelism, theoretical point, theoretical diameter, translation of X/Y origin points
- Features and Functions: Point, radius, diameter, arc of circle, angle, line, slot, distance (X/Y, and Z Measurement)
- Provides for alignment, perpendicularity, parallelism, theoretical point, theoretical diameter and translation of X/Y origin points

PC-DMIS VISION Software Features

- PC-DMIS software has a 20,000 installed base for a single software solution across multiple products
- Automatic edge detection
- Acquisition of a higher number of points to make the measurement of shape and form deviation more accurate
- CAD file import (various formats)
- User-friendly point and click programming
- Off-line program sequences
- Reverse engineering with CAD file export option
- Automatic recognition of used magnification without the need to recalibrate the objective inside an application program
- Automatic or manual control of the tools
- Z axis measurement made easier through computer aided focusing in graph mode
- On-screen viewing of the measured values, including those related to the position of geometric elements and edge capture
- Touch Probe Option
- ...Plus all the features included with TESA-VISTA Software

Product Specs

Video machine
TESA-VISIO 300
TESA-VISIO 300
TESA-VISIO 300 DCC

Software
TESA-VISTA
PCDmis
PCDmis

Machine version
Manual
Manual
Motorised

Measuring spans X/Y (mm)
300 x 200
300 x 200
300 x 200

Measuring span Z (mm)
150
150
150

DC servomotors X/Y/Z
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–
•

X and Y quick release system
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•
–

Manual focus, coarse and fine settings
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•
–

Profile illumination with 1 green LED
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X/Y-Accuracy at 20°C
 $3+10\text{•L}/1000$
 $3+10\text{•L}/1000$

2,4+4•L/1000

Z-Accuracy at 20°C

3+2•L/100*

3+2•L/100*

3+1•L/100*

Encoder resolution (X/Y/Z)

0.05 µm

0.05 µm

0.05 µm

High-resolution color camera

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•

•

Red laser pointer

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Max. perm. load (in the middle of the stage)

16 kg

16 kg

16 kg

Size (monitor and PC not included) (LxHxD in mm)

680 x 990 x 800

680 x 990 x 800

680 x 990 x 800

Weight (monitor and PC not included)

78 kg

78 kg

78 kg

Operating temperature range

20°± 2°C

20°± 2°C

20°± 2°C

Power supply

115 to 220 Vac ±10%

115 to 220 V ±10%

115 to 220 V ±10%

50 to 60 Hz

50 to 60 Hz

50 to 60 Hz

Z height extension, 75 mm (Z)

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- •
- •

Z height extension, 150 mm (Z)

- •
- •
- •

Touch Probe Option

- –
- –
- •

DELL Computer GX 280, 512 MB, 2,53 GHz, 40 GB HD

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- •
- •

DELL Monitor TFT, 15"

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- –
- –

Touch screen monitor, 15"

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- –
- –

DELL Monitor TFT, 17"

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- •
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Keyboard according to language (FR, CH, DE, IT, ES, GB, USA, NO, SE, FI, DK)

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PC-DMIS-Vision PRO (manual software)

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PC-DMIS-Vision CAD (manual software)

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PC-DMIS DCC PRO (motorized version)

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PC-DMIS DCC CAD(motorized version)

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Upgrade PC-DMIS PRO / CAD (manual software)

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Updrade PC-DMIS DCC PRO / DCC CAD

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OPTICS

Video machine
TESA-VISIO 300

TESA-VISIO 300
TESA-VISIO 300 DCC

Software
TESA-VISTA
PC-DMIS
PC-DMIS

Machine version
Manual
Manual
Motorised

Motorized zoom
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•

Motorized zoom with coaxial light (white LED)
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Telecentric fixed objective, 2x
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Lens, 0.5x
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Lens, 0.75x
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•

Lens, 1.5x**
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•

Lens, 2x**
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ILLUMINATION

Ring light (48 white LEDs)

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Fragmented ring light (4 x 90° programmable segments)

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*Accuracy obtained with use of the motorized zoom at highest magnification on a textured surface

**Lens with magnifications 1.5x and 2x require the use of the zoom with coaxial light.

• Available

– Not Available

Additional Resources

- [Click Here](#) to request additional information.
- [Click Here](#) to request literature for this product.
- [Click Here](#) to download our current catalog. (PDF 60 MB)

