

TESA-VISIO 300 / 300 DCC / 300 DCC Multisensor



Manual or automatic video-based machines with unique design for non-contact measurement.

The manual version comes with TESA-VISTA – the software for metrology applications in the world of industry. Made simple to use, this version can also be equipped with PC-Dmis that provides Users with a powerful tool for 2D or 3D part inspection.

Running the PC-DMIS-Vision software, the DCC machine version is capable to operate automatically. This variant is one of the most cost-effective machines of this kind available today on the market.

Principales caractéristiques

- Machine compacte et ergonomique, manuelle ou automatique.
- Zoom motorisé autorisant un grossissement de 20x à 130x, ou plus selon la taille de l'écran.
- Eclairages par diodes électroluminescentes (LEDs). Cette lumière froide n'influence pas les valeurs mesurées.
- Eclairage de surface (épiscopique) par une double rangée de 24 LEDs réparties sur 4 segments (lentille de Fresnel), programmables et réglables en intensité par l'intermédiaire du logiciel. Lumière coaxiale en option.
- Eclairage de profil (diascopique) par une LED de couleur verte, à intensité réglable.
- Pointeur laser (classe 1) pour le repérage de la zone de mesure.
- Table à coordonnées équipée de règles incrémentales opto-électroniques. Résolution 0,05 µm.
 - Volume de mesure X = 300 mm, Y = 200 mm, Z = 150 mm.
 - Axes X/Y dotés d'un système de débrayage pour un déplacement rapide (version manuelle).
 - Déplacement dans les deux directions de coordonnées X/Z pour droitier et gaucher.
 - Charge maximale 16 kg.
- Ecran TFT 17"
- Logiciel TESA-VISTA ou PC-Dmis avec détecteur de bords.
- Pré-équipement pour le montage d'un palpeur (version DCC Multisensor)

Main vision machine



All aluminium rigid construction

Measuring system with incremental, glass scales, opto-electronic. Resolution to 0,05 µm.

In one coordinate direction:

Manual version
X/Y-axes (3+10•L/1000) µm,
Z-axis (3+2•L/100) µm*

DCC version
X/Y-axes (2,4+4•L/1000) µm,
Z-axis (3+1•L/100) µm*
L in mm

* Accuracy was obtained at highest magnification on a textured surface. Also with an evenly distributed workload of 3 kg at glass plate level.



Measuring volume:
X = 300 mm,
Y = 200 mm, Z = 150 mm
CCD colour camera, analogue
PAL 640 x 480 pixels



Resolution
0,001 mm



Transmitted light through green LED, brightness adjustable over the software



10°C to 40°C



20°C



80%, non-condensing



115 to 230 Vac
±10%,
50 to 60 Hz



72 kg (manual)
80 kg (DCC)



IP40



EN 61010-1
EN 60204
EN 61336-1
EN 60825-1



Identification number



Inspection report with a declaration of conformity



Provided fully assembled



Shipping packaging



The DCC Multisensor version allows the use of a touch-trigger probe – thus increasing the machine versatility and capability owing to a clever combination of both optical and tactile systems.

Touch-Trigger Probes for the DCC version Multisensor

03939170	TESASTAR-mp LF – Low Force	0,055 N, L = 10 mm	Red	0,35 µm
03939171	TESASTAR-mp SF – Standard Force	0,08 N, L = 10 mm	Yellow	0,35 µm
03939172	TESASTAR-mp MF – Medium Force	0,10 N, L = 25 mm	Green	0,5 µm
03939173	TESASTAR-mp EF – Extended Force	0,10 N, L = 50 mm	Blue	0,65 µm
03939174	TESASTAR-mp probe body			
03939175	Kit of 4 touch trigger probes (LF, SF, MF, LF) plus 1 TESASTAR-mp probe body			

Modular Probe Changer for the DCC version Multisensor

			H mm
03939185	TESASTAR-pr, 1 module		90
03939186	TESASTAR-pr, 2 modules		90
03939187	TESASTAR-pr, 3 modules		90

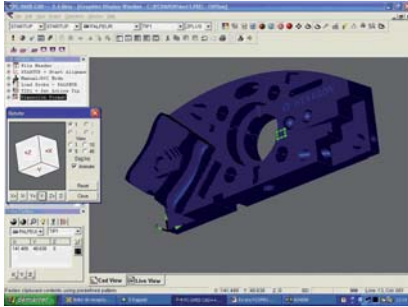
For further information on styli, report to pages Q-24 to Q-27



PC-Dmis Vision Application Software

Including many programming capabilities, this software provides a long-term solution through continuous upgrading to the most advanced technology.

All inspection reports can be defined by the Users and further output in a variety of formats to suit their specific needs.

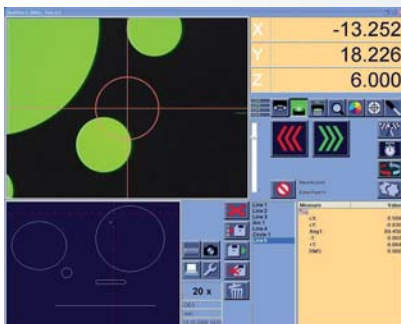


Main Features

- Real time inspection up to the subpixel.
- Point and click programming facility.
- Automatic edge detection (eliminates positioning uncertainty of the crossline reticule, increases velocity and repeatability).
- Ability to collect a higher number of points to measure form errors even more accurately.
- Import option for CAD-files (various formats).
- Creation of programmes off-line.
- Simple programme sequences.
- Reverse engineering along with export option in CAD format.
- Automatic recognition of the used magnification, without the need for the objective to be requalified within a programming sequence.
- Automatic or manual tool control.
- Measurement in Z-axis made easier through computer-aided focusing in graph mode.
- On-screen Viewing of all measured values, including those related to the position of geometric form elements or edge detection.

TESA-VISTA Application Software

Easy-to-use, user-friendly metrology software. Lets you measure the widest number of geometric elements quickly and precisely.



Main Features

- On-screen viewing in X/Y/Z coordinate directions. Resolution to 0,001 mm.
- Zero-setting of display related to selected axis with just a mouse click.
- Metric/inch conversion.
- Cartesian and polar coordinates.
- Possible storage of the video image.
- Drawing of the measured element as shown in the active window.
- Automatic edge detection.
- Z-measurement with on-screen help and guidance.
- Automatic measurement of circles and straight lines.
- Three-axis alignment.

Geometric Features and Functions

- | | | |
|-----------------|--------------------|------------------------|
| • Point | • Distance (X/Y) | • Theoretical point |
| • Radius | • Slot | • theoretical diameter |
| • Diameter | • Z-measurement | • Translation of both |
| • Arc of circle | • Alignment | X and Y origin points |
| • Angle | • Perpendicularity | |
| • Straight line | • Parallelism | |



Measuring Table

- Anodized aluminium
- 510 x 395 mm surface area (X/Y)
- 800 x 200 mm measuring span (X/Y)
- Max. workload capacity 16 kg

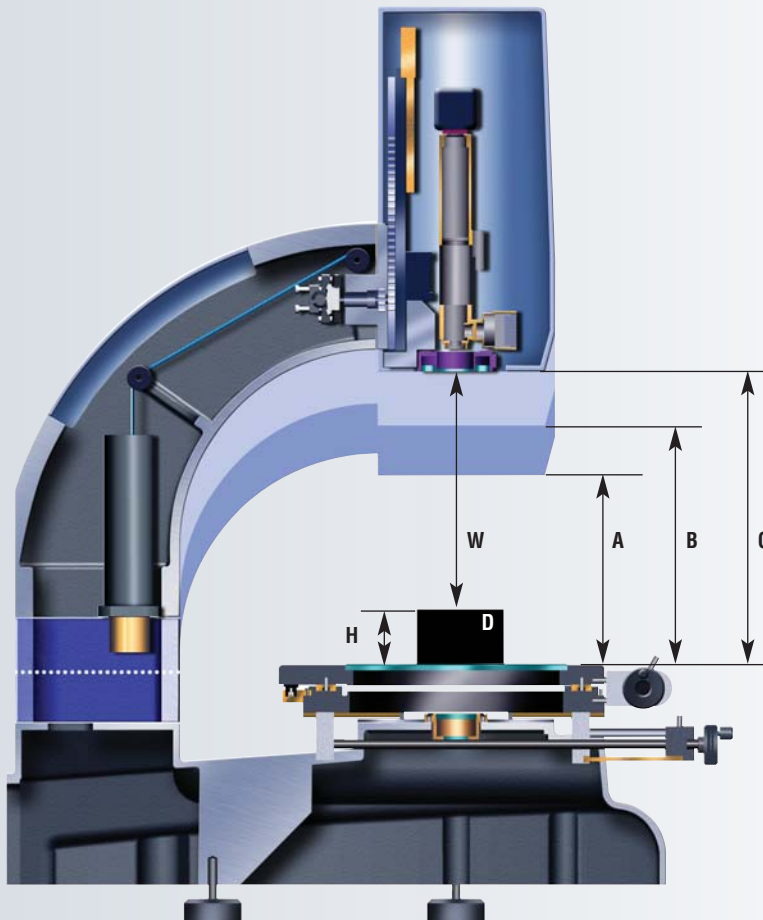
Computer (minimum requirements)

- DELL Optiplex GX620MT
- Small minitower 412 x 432 x 190 mm, black / silver grey colour
- Processor: Intel Celeron, 2,8 GHz, FSB533
- Memory capacity: dual-channel, 1 Go (2 x 512), 533 Mhz NON-ECC DDRII
- Bus extension: 2 PCI connectors 4,2 x 11", 1 PCIe connector x 16 standard height for graphic card, 1 PCIe connector x 1 standard height
- Built-in graphic card: Intel® Media Accelerator 950 with shared memory up 224 Mo. Using PC-DMIS = 128 Mo memory card.
- 40 GB hard disc SATA, 7200 rpm
- DVD / CD-ROM drives, 16x
- Integrated diskette drive, 3,5", 1,44 MB
- Integrated AC-97 Audio-Chip card
- Network card: Solution LAN Broadcom, 5751 GB, Ethernet 10/100/1000, integrated
- Hardware ports: 1x RS232, 1x Centronics, 8x USB-2 (6 at the rear plus 2 on the front face of the computer unit). RJ-45 network port.
- Keyboard with two-button mouse
- Operating system: Windows XP Professional, multilingual
- TFT flat screen, 17"

Warranty:
3-Year on-site warranty (computer and monitor only)

Additional Objectives

	0,5x	0,75x	1x	1,5x	2x
	06860030	06860031	–	06860032	06860033
TESA-Visio 300 Manual					
Magnification	10x ÷ 65x	16x ÷ 97x	20x ÷ 130x	32x ÷ 195x	42x ÷ 260x
Working distance (W) mm	150	90	60	30	15
Maximum height (H) mm	0 ÷ 60	0 ÷ 120	0 ÷ 150	0 ÷ 180	15 ÷ 195
Maximum field of view mm	11,3 x 15,2	7,4 x 9,8	5,5 x 7,4	3,6 x 4,8	2,7 x 3,6
Minimum field of view mm	1,8 x 2,4	1,2 x 1,6	0,9 x 1,2	0,6 x 0,8	0,4 x 0,6
TESA-Visio 300 DCC					
Magnification	16x ÷ 85x	24x ÷ 130x	30x ÷ 175x	45x ÷ 270x	60x ÷ 355x
Working distance (W) mm	150	90	60	30	15
Maximum height (H) mm	0 ÷ 60	0 ÷ 120	0 ÷ 150	0 ÷ 180	15 ÷ 195
Maximum field of view mm	16,3 x 12,2	10,9 x 8,2	8,8 x 6,5	5,8 x 4,3	4,4 x 3,2
Minimum field of view mm	2,9 x 2,2	2,0 x 1,5	1,5 x 1,1	0,9 x 0,7	0,7 x 0,5



- A** 60 ÷ 210 mm main machine
- B** 135 ÷ 285 mm with a 75 mm raising block
- C** 210 ÷ 360 mm with a 150 mm raising block
- D** Work piece
- H** Work piece height
- W** Working distance (focus distance)



Sales Programme

Nº	TESA-Visio 300 Manual	TESA-Visio 300 DCC	Software	Episcopic illumination (Top mounted)	Coaxial light	Value sensor (Multisensor)
06830211	●	–	TESAVISTA	4 segments x 90°	–	–
06830212	●	–	TESAVISTA	4 segments x 90°	●	–
06830214	●	–	TESAVISTA	1 segment x 360°	–	–
06830221	●	–	PC-Dmis	4 segments x 90°	–	–
06830222	●	–	PC-Dmis	4 segments x 90°	●	–
06830223	●	–	PC-Dmis + TESAVISTA	4 segments x 90°	●	–
06830231	–	●	PC-Dmis	4 segments x 90°	–	–
06830232	–	●	PC-Dmis	4 segments x 90°	●	–
06830242	–	●	PC-Dmis	4 segments x 90°	●	●

