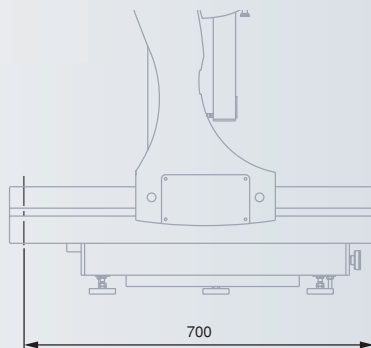
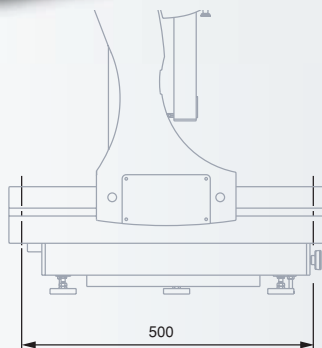
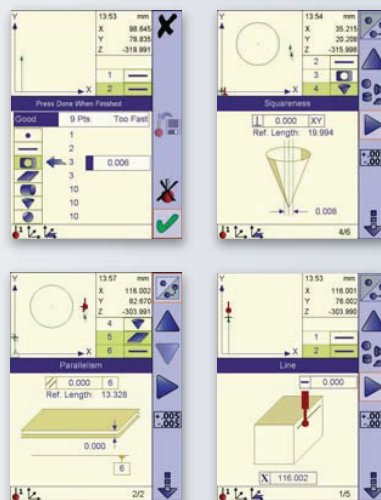


TESA Micro-Hite 3D manual Machine Version 454 or 474

- Fast and easy workpiece alignment.
- Point-to-point part probing or manual scanning.
- ZMouse for significant time savings.
- Fine adjust device.
- TESA-REFLEX MH3D software.

Main Features

- Three probe heads are available:
 - TESASTAR with adjustable trigger force
 - Indexable TESASTAR-i
 - Indexable TESASTAR-i M8 with matching coupling thread (optional)



General



EN ISO 10360-2

CMM with moving bridge.

Measuring systems along with air bearing guiding in the three axes.

Measuring volume (X/Y/Z):

Machine version 454
460 x 510 x 420 mm
Machine version 474
460 x 710 x 420 mm

TESA-REFLEX MH3D:
0.001 mm or
0.00001 in

Manual or motorised (RC version only)

Light alloy machine base; measuring table in granite.

Opto-electronic measuring systems based on incremental glass scales

0.039 µm (system)

Manual version:
760 mm/sec.
RC version:
1 µm/pas, 10 or 20 mm/sec.

TESA-REFLEX MH3D Control Panel

154 x 116 mm display field with illuminated background

7-decade display (digits) plus sign for the measured values. Icon-based graphic User's interface.

RS232

$MPE_E^* = (3 + 4 \cdot L/1000) \mu m$
 $MPE_P = 3 \mu m$
* L in mm

Workpiece-oriented features



Overall dimensions:
(W x D x H):

Machine version 454

600 x 750 x 430 mm

Machine version 474

600 x 990 x 430 mm



Maximum weight:

Versions 454: 227 kg

Versions 474: 200 kg

CMM-oriented features



Mass
(W x D x H):

Machine version 454, manual

970 x 930 x 1620 mm

Machine version 474, manual

970 x 1130 x 1660 mm

Machine version 474, RC

970 x 930 x 1700 mm

Machine version 474, RC

970 x 1130 x 1730 mm



Net weight:

Versions 454/474
= 210/315 kg (granite tables
included).

Tables alone: 99/120 kg.

Gross weight: 300/445 kg.



Air pressure:
3,9 bars

(60 à 120 psi).

Air absorption:

60 Nl/min.



115 to 230 Vac

± 10%,
50 to 60 Hz



20° ± 1°C



13°C to 35°C



✓



Shipping box

(W x D x H):

Version 454, manual

1100 x 1150 x 2200 mm

Version 454, RC

1350 x 1350 x 2200 mm

Versions 474, manual + RC

1580 x 1400 x 2200 mm



Inspection report

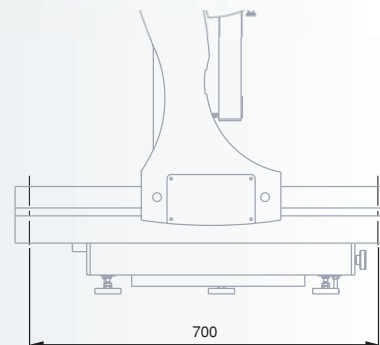
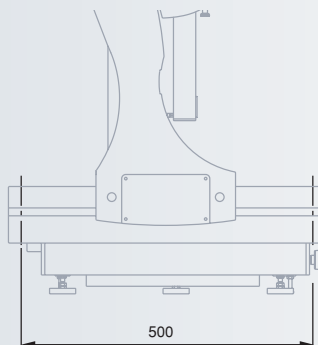
TESA Micro-Hite 3D 454 or 474, Remote Control Machine Version

A well-timed addition to the existing range of TESA small CMMs for exact positioning on small workpieces having a complex shape – Three servo-motors individually controlled over a joystick ensure a correct displacement in each coordinate axis with a positioning accuracy down to the micron – Manual displacement through the fine adjust option – Value acquisition through a single button – Specially recommended for those vision based applications using a CCD camera.



Main Features

- Motorised displacement in the three axes X/Y/Z at a selectable speed of 1 µm/step, 10 mm/sec. or 20 mm/sec.
- Manual displacement in the three coordinate axes at the speed of 760 mm/sec.
- Fine adjust device.
- TESASTAR-i probe head, indexable.
- TESA Reflex software learned in a few hours.
- Joystick with integrated ZMouse.



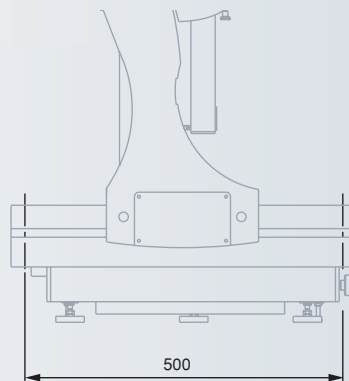
TESA Micro-Hite 3D 454, Recorder Machine Version

The Recorder coordinate measuring machine is the latest development in the whole range of small TESA MICRO-HITE 3D. An added functionality makes it possible for the operator to control the servomotors in the three coordinate axes, but also to reproduce a programme sequence of the machine displacements in the automatic mode. Each displacement can either be operated manually or using the joystick. No preliminary programming is needed.

Through the evolution of their manual CMM, TESA provide today a flexible and user-friendly machine version for hand-operated and/or automated measurements.

Main Features

- Fast and easy workpiece alignment.
- Point-to-point part probing or manual scanning.
- ZMouse for significant time savings.
- Manual displacement in the 3 coordinate axes.
- Automatic reproduction of the manual machine displacement.
- Displacement speed in automatic mode: 200 mm/sec.
- TESA-REFLEX Recorder application software.
- TESASTAR-i indexable probe head.



General



EN ISO 10360-2



CMM
with moving
bridge.

Measuring systems along
with air bearing guiding in
the three axes.



Measuring
volume
(X/Y/Z):

440 x 490 x 390 mm



TESA-REFLEX
Recorder:
0,001 mm or
0,0001 in



Manual
probing
movements.

Manual or motorised execu-
tion of a part programme.



Light alloy
machine base;
granite measuring
table.



Opto-electronic
measuring systems
based on incremen-
tal glass scales



0,039 µm
(system)



Manual version:
760 mm/sec.

Motorised version:
200 mm/sec.

TESA-REFLEX Recorder Control Panel



154 x 116 mm
display field
with illuminated
background



7-decade
display (digits)
plus sign for

the measured values.
Icon-based graphical User
interface.



RS232



Manual mode:
 $MPE_E^* =$
 $(3 + 4 L/1000) \mu m$

$MPE_p = 3 \mu m$

Motorised mode:

$MPE_E^* =$

$(2,5 + 3,9 L/1000) \mu m$

$MPE_p = 2 \mu m$

* L in mm

Additional technical Data on
the page opposite.

Workpiece-oriented features

Overall dimensions:
(W x D x H):
600 x 750 x 430 mm

Maximum weight:
227 kg

CMM-oriented features

Mass
(W x P x H):
1030 x 1100 x 1680 mm

Net weight:
225 kg
(granite table included).
Table alone: 99 kg.
Gross weight: 350 kg

Air pressure:
3,9 bars
(60 à 120 psi).
Air absorption:
60 Nl/min.

115 to 230 Vac
±10%,
50 to 60 Hz.
Air absorption:
0,3 to 0,7 A

20°C ±1°C

13°C to 35°C



Shipping box
(W x D x H):
1350 x 1350 x 2200 mm

Inspection report

EN ISO 10360-2

Sales programme

		03939042	03939242	03939043	03939243	03939120	03939122	03939169
Machine version		MH3D F	MH3D F	MH3D Fi	MH3D Fi	MH3D RC	MH3D RC	MH3D Recorder
Machine type		454	474	454	474	454	474	454
Consisting of:								
	Fine adjust device	●	●	●	●	●	●	-
03939020	TESASTAR probe head	●	●	-	-	-	-	-
03939030	TESASTAR-i probe head	-	-	●	●	●	●	●
03969040	M3 probe styli kit	●	●	●	●	●	●	●
03960381	TESA REFLEX MH3D Control panel plus software	●	●	●	●	●	●	-
03960303	TESA REFLEX Recorder Control panel plus software	-	-	-	-	-	-	●
03969011	Reference sphere	●	●	●	●	●	●	●
82-703-1	Granite table	●	●	●	●	●	●	●
049746	Air filter and regulator	●	●	●	●	●	●	●
052283	Joystick (RC version)	-	-	-	-	●	●	-
M1604.6011	Joystick (Recorder version)	●	-	-	-	-	-	-
01962003	USB-Stick	●	●	●	●	●	●	●

Optional Accessories for Manual CMMs

03939020	TESASTAR probe head
03939030	TESASTAR-i probe head
03939031	TESASTAR-i M8 probe head
03969009	ReflexScan software
03969007	RS232 connecting cable
03960309	RS232 adapter cable for TESA-REFLEX Recorder control panel
03969001	Cabinet with top mounted table
03939170	TESASTAR-mp touch-trigger probe LF, 0,055 N, L = 10 mm
03939171	TESASTAR-mp touch-trigger probe SF, 0,08 N, L = 10 mm
03939172	TESASTAR-mp touch-trigger probe MF, 0,10 N, L = 25 mm
03939173	TESASTAR-mp touch-trigger probe EF, 0,10 N, L = 50 mm
03939174	TESASTAR-mp probe body
03960175	Air saver
03939210	TESASTAR-mp probe kit (2 TESASTAR-mp probes, type SF + 1 TESASTAR-mp probe body)
82-1631	TESA practice piece
03969095	Hexagon practice piece
03969003	Dust cover
03969040	M3 styli kit
03960223	Camera kit with cross line generator included
03969047	Straight probe, Ø 6,35 mm

