

AccuStop



**AccuStop
specimen holders
for controlled material
removal and target
preparation**



AccuStop Specimen Holders

- Controlled material removal
- Improved reproducibility
- Adjustable polishing depth
- Absolute planeness during manual grinding
- Preparation of electronic components
- Available for 30 mm and 40 mm dia. specimens
- Large selection of inserts for special applications

AccuStop-T

- Tiltable AccuStop for 30 mm dia. specimens
- Tilt angle ± 2 degrees in any direction
- Reach multiple targets simultaneously



Introducing Struers AccuStop

AccuStop is a line of specimen holders that are ideal for controlled manual grinding on SiC paper and for the high demands of accuracy and precision necessary in target preparation.

The AccuStop Holders

All the AccuStop holders are based on a system where the mounted specimen is clamped in the holder by means of a screw or a rubber gasket.

Around the outside of the holder there is an adjustment ring with a wear-resistant ceramic base. The holder can be relocated in relation to the adjusting ring so that grinding will stop at a preset depth in the specimen, i.e. when the ceramic base makes contact with the grinding paper, preventing further removal of material.

The ceramic base also ensures that the specimen surface is kept totally plane - a common problem when grinding manually.



Applications

With a reproducibility of 20 microns, AccuStop is ideal for grinding down to well-defined depths in microelectronic components in order to check soldered joints and connections.

In target preparation, several points can be reached at the same time, e.g. rows of solder balls and PCB vias.

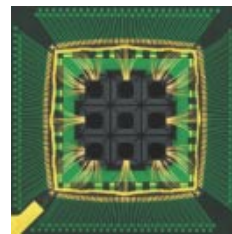
Other possible applications include step-grinding for hardness testing and removal of non-representative surfaces; and successive grinding to follow certain features, e.g. crack paths in failure investigations, or to check the homogeneity of the material structure.

AccuStop is an indispensable tool for ensuring absolute plane-ness during manual grinding.

Specimen size

AccuStop is available in two sizes: AccuStop 40 with a capacity up to 40 mm dia. and AccuStop 30 and AccuStop-T which can be used for specimens up to 30 mm dia. In the standard form, AccuStop can be used for both cylindrical mounts and for quick fixation of specimens mounted with a flange, e.g. Flangeform. Generally, AccuStop is suitable for mounted and unmounted specimens of different shapes and sizes which can be clamped using the large selection of inserts (see reverse). Two different O-rings are provided for use with either type of form.

AccuStop is available for both 30 mm and 40 mm dia. samples



Automatic Preparation

Specimens fixed in AccuStop can be ground automatically in TegraForce-5 using the specimen mover plate PEDAF or PEDAC (photo on reverse). With this, 1 to 3 specimens can be automatically ground to a precise position. For further information on TegraForce-5 please see separate brochure on the TegraSystem.

With the ASPAR insert plane-parallelism of $\pm 5 \mu\text{m}$ can be achieved



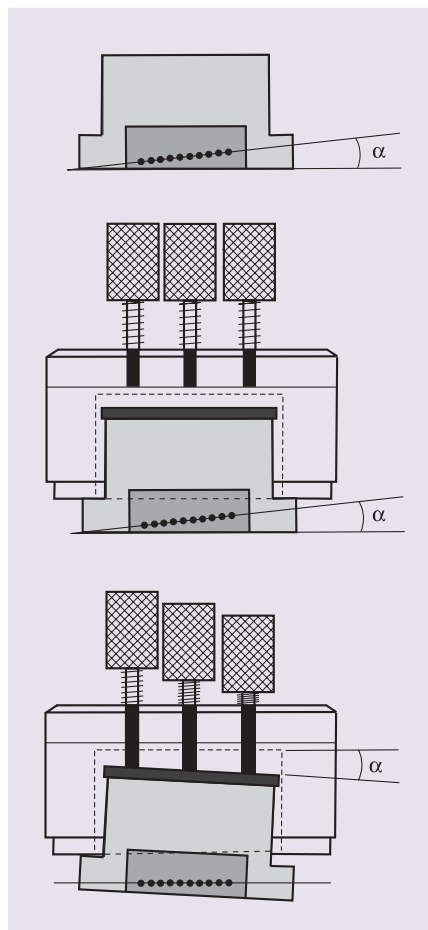
Target Preparation

Target Preparation

AccuStop-T is designed specifically for target preparation in the microelectronic industry.

The unique tilt feature of AccuStop-T allows several points in a specimen target plane to be reached at the same time, e.g. rows of solder balls and PCB vias. The AccuStop-T specimen holder has the ability to tilt the specimen ± 2 degrees in any direction.

Two different O-rings are provided for use with either Struers' Flangeform or a 30 mm mould like Seriform.



AccuMeter and AccuStop-T

The AccuMeter Measuring Station was developed especially for use with AccuStop-T. AccuMeter provides easy measurement of the tilt angle and has a micrometer measuring range is 0-25 mm in steps of 10 μ m.

AccuStop-T used as AccuStop

AccuStop-T may be used as an ordinary AccuStop by removing the three adjustment screws. This reduces the height of AccuStop-T, permitting semi-automatic polishing with a TegraForce-5, using a PEDAC specimen mover plate.

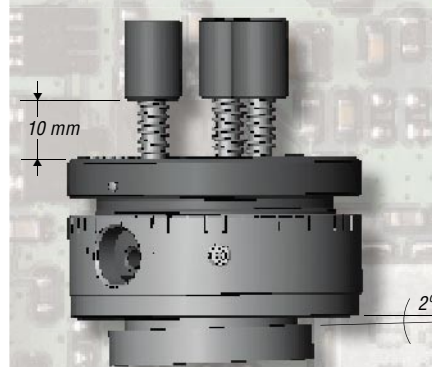
A useful tool for recovering target distance

Also when using AccuStop 30 the AccuMeter can come in handy. Have you ever tried to 'lose' your target distance? By using the AccuMeter measuring station, the distance from the specimen to the ceramic ring can be determined accurately, so you do not have to start all over.



AccuStop-T - Specifications

- Specimen holder for 30 mm specimens
- Tilt area ± 2 degrees
- 1 turn of adjustment screws = 0.5 mm
- 1 turn of specimen cylinder = 1 mm in 20 μ m steps



Multiple targets are aligned by placing AccuStop-T on the AccuMeter measuring station



Special Inserts

The inserts for special applications can be mounted directly in AccuStop 30 and AccuStop-T.

ASITE is intended to adapt AccuStop 40 to 30 mm dia. specimens. It can be used directly for mounting of 30 mm dia. specimens or to prepare AccuStop 40 for the complete range of AccuStop inserts.

ASPAR is an insert for plane-parallel grinding of flat specimens. With this insert it is possible to obtain plane-parallelism of $\pm 5 \mu\text{m}$. Furthermore, this insert is especially well-suited for the thinning of Si-wafers down to a thickness of 100 μm .

ASTYV is an insert to allow the preparation of specimens with a diameter of 25 mm/1".

ASMIN is intended for three kinds of preparation:

- Specimens with a diameter of 20 mm, mounted or unmounted.
 - Oblong, round or long flat specimens of small size, unmounted.
 - Taper sections with magnifications x 3 and x 5 without mounting.
- This insert acts as a specimen holder for polishing and provides far better edge retention when preparing unmounted specimens.

ASTEN is intended for pre-thinning of specimens with a diameter of 3 mm in preparation for electrolytic thinning in Tenupol.

Technical Data

AccuStop 40 / AccuStop 30

Positioning range: 13 mm	Diameter: 61 / 51 mm
Scale divisions: 0.02 mm	Max. height: 35 mm
	Weight: 300 / 240 g

AccuStop-T

Positioning range: 13 mm	Diameter: 51 mm
Scale divisions: 0.02 mm	Max. height: 35 mm
Tilt area ± 2 degrees	Weight: 320 g

AccuMeter

Measuring range: 0-25 mm in steps of 10 μm

Specification

AccuStop 40

Specimen holder for accurate removal of material by manual grinding. For specimens 38-40 mm dia. Insert (ASITE) can be mounted

AccuStop 30

Specimen holder for accurate removal of material by manual grinding. For specimens 28-30 mm dia. Inserts (ASPAR), (ASTYV), (ASMIN) and (ASTEN) can be mounted

AccuStop-T

Tilttable specimen holder for accurate material removal by manual grinding. For mounted specimens 28-30 mm dia. Inserts (ASPAR), (ASTYV), (ASMIN) and (ASTEN) can be mounted

Insert for AccuStop 40

For grinding of cylindrical specimens with a dia. of 30 mm or for adaption of inserts (ASPAR), (ASTYV), (ASMIN) and (ASTEN)

Insert for AccuStop 30/40-T

For plane parallel grinding of flat specimens
For grinding of cylindrical specimens with a dia. of 25 mm / 1"
For grinding of:
- Specimens 20 mm dia., mounted or unmounted
- Long cylindrical or long flat specimens
- Taper sections without mounting, magnifications x 3 and x 5
For pre-thinning of specimens 3 mm dia. For electrolytic thinning on Tenupol

Locating Pins for AccuStop 30

For mounting of PCB-coupons. 200 pcs. 2 mm dia., length 33 mm

Flangeform

Mounting cups with flange, 40 mm dia. For AccuStop 40. Set of 3
Mounting cups with flange, 30 mm dia. For AccuStop 30/-T. Set of 3

Specimen Mover Plate

For TegraForce-5 and Pedemat, for AccuStop 40
For grinding of 3 specimens with AccuStop 40. 3 pressure plates for AccuStop 40 are included. Coupling (PEDKO) and AccuStop (ASTIF) are ordered separately

For TegraForce-5 and Pedemat, for AccuStop 30/-T
For grinding of 3 specimens with AccuStop 30. 3 pressure plates for AccuStop are included. Coupling (PEDKO) and AccuStop (ASTOP) are ordered separately

Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.



ASPAR



ASMIN



ASTEN



PEDAF / PEDAC

Code

ASTIF

ASTOP

ASTOT

ASITE

ASPAR

ASTYV

ASMIN

ASTEN

PECTE

MAXMI

MAXIL

PEDAF

PEDAC



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