

## 2. Compression Test Jigs

These test devices are for compression and tensile-compression cycle testing under ordinary temperature conditions. These test jigs are attached to the compression and bending load jigs of the main tester unit.

### 2-1 Compression Plates

#### 2-1-1 Fixed Type Compression Plates

Plastics Metals Rubber Timber Cement

These are general-purpose compression plates with fixed upper and lower plates. Standard and special models with different dimensions are available.

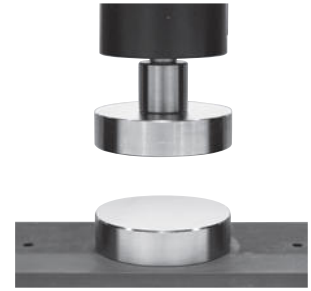
- Types and main specifications

Kit No.	346-53882-XX	346-53884-XX	346-53885-XX
Plate size (dia. × thickness) (mm)	ø100 × 25	ø50 × 25	ø200 × 40*
Max. capacity	300 kN		
Upper plate weight (kg)	1.6	0.5	9.9
Operational temp. range (°C)	0 to +250		0 to 40
Allowable surface pressure	200 MPa		

Surface hardness: Hrc 60

Note: Compression plates indicated by \* require the compression plate connector 345-08502-XX separately.

\* ø200 interferes with the safety cover on the AGS-X main unit.



#### 2-1-2 Spherical Seat Compression Plates

Plastics Metals Rubber Timber Cement

These compression plates are constructed with a spherical seat type upper plate. Flexibility in contact of the plate with the sample surface enables a uniform load to be applied.

- Types and main specifications

Kit No.	346-53883-XX		
Compression plate dimensions (diameter) mm	ø100	ø210*	ø310*
Max. capacity	300 kN		
Upper plate weight (kg)	3.8	42.5	66.0
Operational temp. range (°C)	0 to +250	0 to 40	0 to 40
Allowable surface pressure	200 MPa		

Surface hardness: Hrc 60

Note: Compression plates indicated by \* require the compression plate connector 345-08502-XX separately.

\* ø210 and higher are dealt with as special order except for the 250/300 kN main unit.



### 2-2 Material Testing

#### 2-2-1 Compression Test Jig for Foam Rubber Samples

Plastics

This test jig cannot be installed on instruments with safety covers attached. Consult Shimadzu separately.

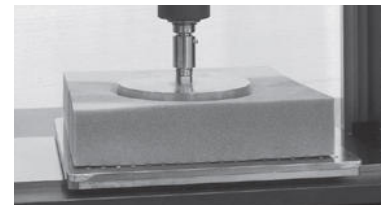
This test jig is for compression (hardness) testing of foam rubber and urethane foam used in vehicles, furniture and bedding. Air holes are provided for foam rubber compression tests.

- Applicable standards: ASTM D3574<sup>Note 1</sup>

- Main specifications

Kit No.	346-53846-XX	
Max. test force	1 kN	
Plate dia. (mm)	ø200	
Max. capacity	Dimensions (mm)	400 × 400
	Air hole (mm)	ø6.5, center distance 20
Operational temp. range	0 to +40 °C	

Note 1: Samples with one side of length 141 mm or less are supported.



## 2-3 Actual Object Testing

### 2-3-1 Keyboard Compression Test Jig **Electric/Electronics**

This test jig cannot be installed on instruments with safety covers attached. Consult Shimadzu separately.

This test jig is for compression testing of computer keyboards.

- Types and main specifications

Part No.	346-53925-XX
Capacity	100 N
Compression jig (compression plate) dia. (mm)	30

Note: Contact Shimadzu for further details.



### 2-3-2 Keyboard Compression Test Jig **Electric/Electronics**

This test jig is for key press tests on mobile phones and keyboards.

- Types and main specifications

Part No.	346-53926-XX
Capacity	100 N
Punch tip material, diameter (mm)	Silicon rubber, $\phi 3$

Note: Contact Shimadzu for further details.



## 2-4 Surface Plates

Surface plates are useful for testing actual objects and large samples. They are attached to the AUTOGRAPH table surface. Select the most suitable type according to the AUTOGRAPH model and your specific test purposes (tensile-compression testing or compression only).

### 2-4-1 Surface Plates for Tensile-Compression Test (With T-groove) **Actual objects**

This test jig cannot be installed on instruments with safety covers attached. Consult Shimadzu separately.

These surface plates are suitable for tensile, compression and tensile-compression testing.

- Types and main specifications

Applicable AUTOGRAPH	For AGS Series	AG table-top type 10 kN	AG table-top type 20 kN	AG table-top type 50 kN
Part No.	346-51548-06	346-51548-05	346-51548-07	346-51548-08
Max. capacity	10 kN	20 kN	50 kN	50 kN
Number of grooves	6 (total of vertical and horizontal directions), L1: 125 mm			
Weight (kg)	33	33	50	50
Plate dimensions (mm)	350 × 350		400 × 400	
Plate thickness (mm)	35		40	
a × b (mm)	a=200 (2 locations only)		340 × 180 (4 locations)	

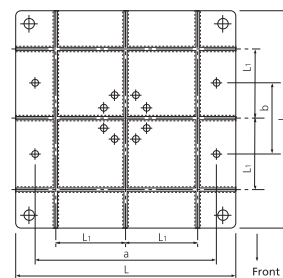
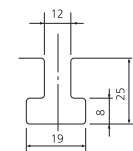


Plate dimensions

- Surface plate dimensions: 500 × 500 mm

- Types and main specifications

Applicable AUTOGRAPH	For AG-20 kN	For AG-50 kN	For AG-100 kN	For AG-250/300 kN
Part No.	346-51548-04	346-51548-03	346-51548-02	346-51548-01
Max. capacity	20 kN	50 kN	100 kN	250 kN/300 kN
Number of grooves	6 (total of vertical and horizontal directions), L1: 160 mm			
Plate thickness (mm)	40	40	45	50
Weight (kg)	80	80	90	100
a × b (mm)	410 × 160 (4 locations)			



Groove dimensions

Note 1: The maximum test force in the tensile direction when the test sample is fixed using a T-groove depends on the number and strength of bolts used.

Note 2: The T slot nuts corresponding to the T-groove are not included. The customer must provide them. The Super Tool Co. FTS1012 (M10) is a compatible product, so it can be obtained as part number 339-82129-02.

## OPTIONAL ACCESSORIES FOR AUTOGRAPH

Accessories for Universal Tester Instruments

- Surface plate dimensions: 900 × 900 mm
- Types and main specifications

Applicable Autograph (Floor type)	Max. capacity	For compression test				For tensile-compression test			
		10 grooves (vertical and horizontal)	5 grooves (vertical)	6 grooves (vertical and horizontal)	3 grooves (vertical)	10 grooves (vertical and horizontal)	5 grooves (vertical)	6 grooves (vertical and horizontal)	3 grooves (vertical)
AG-20 kN/50 kN wide type	20 kN/50 kN	346-51220-01	346-51220-11	346-51220-21	346-51220-31	346-51221-06	346-51221-16	346-51221-25	346-51221-36
AG-100 kN wide type	100 kN	346-51220-02	346-51220-12	346-51220-22	346-51220-32	346-51221-07	346-51221-17	346-51221-26	346-51221-37
AG-250/300 kN wide type	300 kN	346-51220-03	346-51220-13	346-51220-23	346-51220-33	346-51221-08	346-51221-18	346-51221-27	346-51221-38
Groove interval (mm)		160	160	320	320	160	160	320	320

## 2-4-2 Surface Plates for Compression Test (Without T-groove) Actual objects

This test jig cannot be installed on instruments with safety covers attached. Consult Shimadzu separately.

- Types and main specifications

Applicable AUTOGRAPH <sup>Note 1</sup>	AGS Series	AG-10 kN table-top type	AG table-top type For 20/50 kN	AG-20 kN AG-50 kN	AG-100 kN	AG-250/300 kN
Part No.	346-52860-41	346-52860-21	346-52860-31	346-52860-01 346-52860-11	346-52860-02 346-52860-12	346-52860-03 346-52860-13
Max. capacity	20 kN		50 kN	20 kN/50 kN	100 kN	300 kN
Dimensions (mm)	350 × 350 × 35		400 × 400 × 35	500 × 500 × 35	500 × 500 × 35	500 × 500 × 35
				900 × 900 × 45	900 × 900 × 60	900 × 900 × 75
Weight (kg)	34		44	68	68	68
				286	382	477

Note 1: A wide-type (W=975 mm) tester is required for use of the 900 × 900 mm surface plate.

Note 2: If the LJ is installed, tensile tests can be carried out using the tensile test jig.