

# Film Grip FC Series

- Designed to grip film and other thin samples
- Different types of clamps for various testing requirements and methods
- JIS complying standard measurements are possible



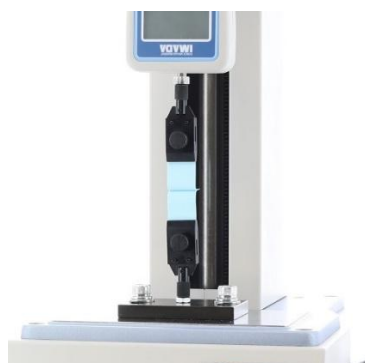
FC-21



FC-20



FC-21UQ






Testing Image with FC-21



Testing Image with FC-20

## Related Standards

- **JIS Z 1707: 2019** [General rules of plastic films for food packing] (corresponding part only)
- **JIS Z 0238: 1998** [Testing methods for heat sealed flexible packages] (corresponding part only)
- **JIS Z 1711: 1994** [Polyethylene film bags] (corresponding part only)
- **JIS Z1712: 2009** [Oriented polypropylene films for packaging] (corresponding part only)
- **1959 Ministry of Health and Welfare notification** [Standards and criteria for food and food additives] (corresponding part only)
- **ASTM F88/F88M-15: 2015** [Standard Test Method For Seal Strength Of Flexible Barrier Materials]
- **ISO 11607-1: 2019** [Packaging for terminally sterilized medical devices - Part 1: Requirements for materials, sterile barrier systems and packaging systems] (Corresponding Japanese standard: **JIST0841-1: 2019**) (corresponding part only)

How used example (FC-20)		
Fix grip to the measuring shaft	Open the chuck with the screw	Tighten the screw to grip samples
		

Specifications (Standard models)			
Model	<b>FC-21</b>	<b>FC-20</b>	<b>FC-40</b>
Capacity	250N	500N	500N
Material	Aluminum	Steel	Steel
Feature	Lightweight	Standard	Wide
Jaw width	20mm	20mm	40mm
Max. sample thickness	2mm		
Dimensions	See [Dimension]		
Weight *1	Approx.16g	Approx.73g	Approx.125g
Mounting Part Angle	Approx. 13°	Approx. 24°	Approx. 20°
Mounting screw	M6		
Available option	-F : Fixed model(*2)(*3)(*4)		

Specifications (Special models)			
Model	<b>FC-21U</b>	<b>FC-41U</b>	<b>FC-21UQ</b>
Capacity	250N	250N	250N
Material	Aluminum	Aluminum	Aluminum
Feature	<b>One side urethane</b>	<b>One side urethane, Wide</b>	<b>One side urethane, Lever</b>
Jaw width	20mm	40mm	20mm
Max. sample thickness	2mm		0.2mm
Dimensions	See [Dimension]		
Weight *1	Approx.40g	Approx.58g	Approx.38g
Mounting Part Angle	Approx. 10°	Approx. 10°	Approx. 10°
Mounting screw	M6		
Available option	-F : Fixed model(*2)(*3)(*4)		



\*1 Weight of the attachment is also applied as a load on the force gauge. Please check the weight when selecting the capacity of a force gauge.

\*2 Fixed model is an optional attachment (sold separately) that the mounting screw part does not move.

\*3 We recommend -F option when use for horizontal test stand.

\*4 Add the option code after the model name to complete the model with options.

e.g. when adding -F option to FC-20...Model: FC-20-F

Example of Product Configuration FC-21		
<b>Configuration 1</b> <b>Code : 1F2004A</b> Simple tension (tensile) test for capacity up to 250N  Digital force gauge : DST-500N Manual test stand : HV-500N II Optional attachment : FC-21 (2pcs)	  FC-20 Configuration 1 Image	
Example of Product Configuration FC-20		
<b>Configuration 1</b> <b>Code : 1F2005A</b> Capacity up to 500N according to a part of <b>JIS Z 0238:1998”</b> <b>Testing</b> methods for heat sealed flexible packages”  Digital force gauge : ZTS-500N Motorized test stand : MX2-500N Optional attachment : FC-20 (2pcs) Optional cable : CB-528		
Example of Product Configuration FC-21U		
<b>Configuration 1</b> <b>Code : 1F2003A</b> Capacity up to 250N according to a part of <b>JIS Z 1707:2019”</b> <b>General</b> rules of plastic films for food packing”  Digital force gauge : ZTS-500N Motorized test stand : MX2-500N Optional attachment : FC-21U (2pcs) Optional cable : CB-528	  FC-21U Configuration 1 image	
Example of Product Configuration FC-21U		
<b>Configuration 2</b> <b>Code : 1F2003B</b> Capacity up to 250N according to a part of <b>JIS Z 1711:1994</b> “Polyethylene film bags”  Digital force gauge : ZTS-500N Motorized test stand : MX2-500N-L Option for motorized test stand : -V600 Optional attachment : FC-21U (2pcs) Optional cable : CB-528		

\*Refer to the specification of each product for details

\*Product configuration varies depending on the shape and characteristic of the sample, and measurement conditions. Please contact us or authorized distributor for further details.

\*The recommended capacity of force gauge is different depending on the expected force to be loaded.

\*Longer stroke Test-stand required/suitable for samples with a high elongation rate. Please contact the authorized distributor or us for more information/concerns.







Available Options	
Jaw width	Specify up to maximum of 100mm (in 10mm increments). (*1) Define the desired jaw width following the model "FC-." e.g.) When the jaw width is 30mm, FC-30 / When the jaw width is 100mm, FC-100
Material	Steel and Light Aluminum options are available. The first digit following the model "FC-" is "0" for steel and "1" for light aluminum. e.g.) When the jaw width 30mm and light aluminum material, FC-31
Tooth type	Available to change to the one side urethane type. (Standard type: V-Notch) Add "U" to the end of the number following the model "FC-." e.g.) When the jaw width 30mm, light aluminum material and one side urethane type : FC-31U
Max. sample thickness	Max. 7mm (*2) If not specified, the max. sample thickness is 2mm. (One side urethane, Lever type: 0.2mm)
Others	Fixed mounting screw option (-F) One side urethane, Lever type (UQ) (Jaw width up to 40mm)

※1 Please contact us if you need jaw widths in increments other than 10mm, for example, 15mm.

※2 This option has no model code. Please contact us if you require a change in the sample thickness.

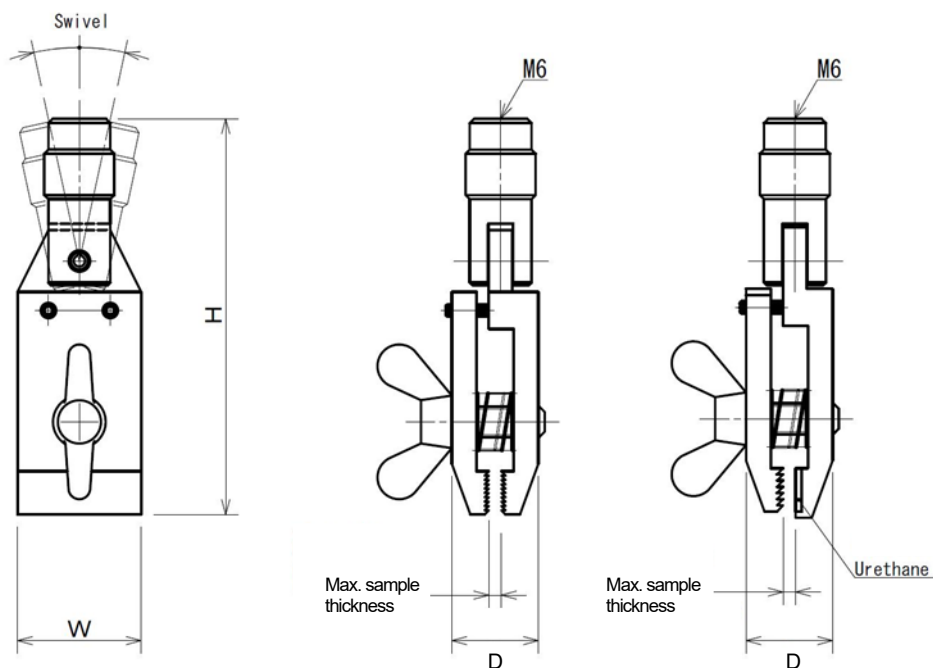
Flat Chuck GC series is recommended for a sample thicker than 7mm.

## [Related products]

Attachment for 90 Degree Peel Test <b>P90-200N/P90-200N-EZ/ P90-200N-BB</b>	Attachment for 180-degree Peel Test <b>P180-200N/P180-200N-BB</b>	Cam Grip <b>GR-30/2000</b>
Testing attachment to peel samples with 90 degree such as adhesive tapes.	Testing attachment to peel samples with 180 degree such as adhesive tapes	Attachment for gripping thin samples of rectangular shape.
		
Tape Grip <b>GC-60/100</b>	Film Cutter <b>FSC-1525</b>	Rubber roller for Peel Test <b>APR-97</b>
Grip extensible samples such as rubber by winding.	Cut paper or film in constant width.	Supports to adhere samples with equal pressure for higher test accuracy
		
	Standard Width 1inch	Standard: JIS Z0237:2022(*1)
	Standard Width 15mm	
	ASTM F88(*1)	
	JIS Z1707:2019(*1) JIS Z0238:1998(*1)	

\*1 It complies with a part of the standard.

## [Dimension]



Unit : mm

Model	Dimension W×H×D	Max. sample thickness
FC-21	20×53×8	2mm
FC-20	20×64×12	2mm
FC-40	40×64×12	2mm
FC-21U	20×64.5×12	2mm
FC-41U	40×64.5×12	2mm
FC-21UQ	20×64.5×12	0.2mm

## [Cautions]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and do not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- A force gauge (sold separately) is required to use this product.
- Some samples may not be suitable to measure with this product.

### IMADA CO., LTD

99 Jinnoshinden-cho aza Kanowari Toyohashi  
Aichi Japan 441-8077  
Tel: +81-(0)532-33-3288  
Fax: +81-(0)532-33-3866  
E-mail: [info@forcegauge.net](mailto:info@forcegauge.net)  
Website: <https://www.forcegauge.net/en/>



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