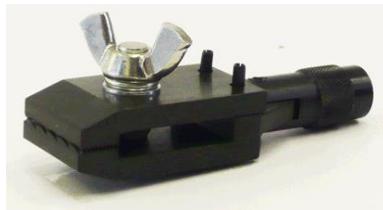


Film Grip FC Series

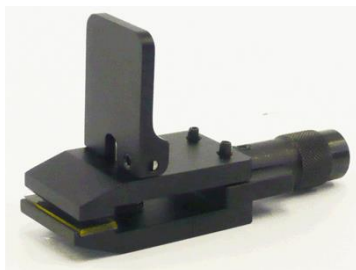
- Designed to grip film and other thin samples
- Different types of clamps for various testing requirements and methods
- JIS complying standard measurements are possible



FC-21



FC-20



FC-21UQ









Testing Image with FC-21



Testing Image with FC-20

Related Standards	<p>-JIS Z 1707 : 2019 [General rules of plastic films for food packing] (corresponding part only) (with FC-21U)</p> <p>-JIS Z 0238 : 1998 [Testing methods for heat sealed flexible packages] (corresponding part only) (with FC-20)</p> <p>-JIS Z 1711 : 1994 [Polyethylene film bags] (corresponding part only)</p> <p>-1959 Ministry of Health and Welfare notification [Standards and criteria for food and food additives] (corresponding part only)</p> <p>-ASTM F88/F88M-15 : 2015 [Standard Test Method For Seal Strength Of Flexible Barrier Materials]</p> <p>-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)</p>
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How used example (FC-20)		
Fix grip to the measuring shaft	Open the chuck with the screw	Tighten the screw to grip samples
		

How used example (Lever type FC-21UQ)		
Fix grip to the measuring shaft	Open the chuck with the lever	Push the lever up to fix the sample
		

Specifications (Standard models)			
Model	FC-21	FC-20	FC-40
Capacity	250N	500N	500N
Material	Aluminum	Steel	Steel
Feature	Lightweight	Standard	Wide
Gripping width	20mm	20mm	40mm
Opening width	Max.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	FC-21U	FC-41U	FC-21UQ
Capacity	250N	250N	250N
Material	Aluminum	Aluminum	Aluminum
Feature	One side urethane	One side urethane, Wide	One side urethane, Lever
Gripping width	20mm	40mm	20mm
Opening width	Max.2mm		Max.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


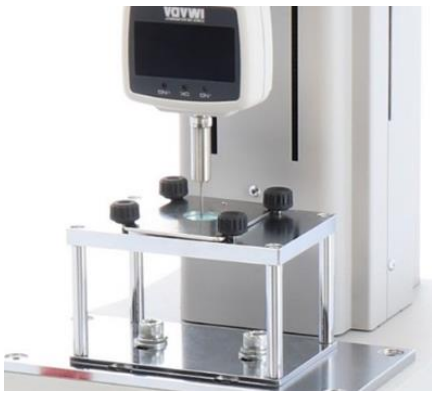
Example of Product Configuration FC-21		
<p>Configuration 1 Code : 1F2004A Simple tension (tensile) test for capacity up to 250N</p> <p>Digital force gauge : DST-500N Manual test stand : HV-500N II Optional attachment : FC-21 (2pcs)</p>	 <p>FC-20 Configuration 1 Image</p>	
Example of Product Configuration FC-20		
<p>Configuration 1 Code : 1F2005A Capacity up to 500N according to a part of JIS Z 0238:1998” Testing methods for heat sealed flexible packages”</p> <p>Digital force gauge : ZTS-500N Motorized test stand : MX2-500N Optional attachment : FC-20 (2pcs) Optional cable : CB-518</p>		
Example of Product Configuration FC-21U		
<p>Configuration 1 Code : 1F2003A Capacity up to 250N according to a part of JIS Z 1707:2019” General rules of plastic films for food packing”</p> <p>Digital force gauge : ZTS-500N Motorized test stand : MX2-500N Optional attachment : FC-21U (2pcs) Optional cable : CB-518</p>	 <p>FC-21U Configuration 1 image</p>	
Example of Product Configuration FC-21U		
<p>Configuration 2 Code : 1F2003B Capacity up to 250N according to a part of JIS Z 1711:1994 “Polyethylene film bags”</p> <p>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-518</p>		

*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.

Related test	
Peeling test for heat seal welds according to a part of JIS C 5016:1994 ” Test methods for flexible printed wiring boards”	Puncturing test for thin film according to a part of JIS Z 1707:2019 ” General rules of plastic films for food packing”
	
Example of Product Configuration (*) code : 1P2003A Digital force gauge : ZTS-200N Motorized test stand : MX2-500N Option attachment : P90-200N Option attachment : FC-20 Option cable : CB-518 Option software : Force Recorder Standard	Example of Product Configuration (*) code : 1T2002B Digital force gauge : ZTS-500N Motorized test stand : MX2-500N Option attachment : TKS-250N Option cable : CB-518

*Refer to the specification of each product for details.

*Product configuration varies depending on the shapes and characteristics of the samples, 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.

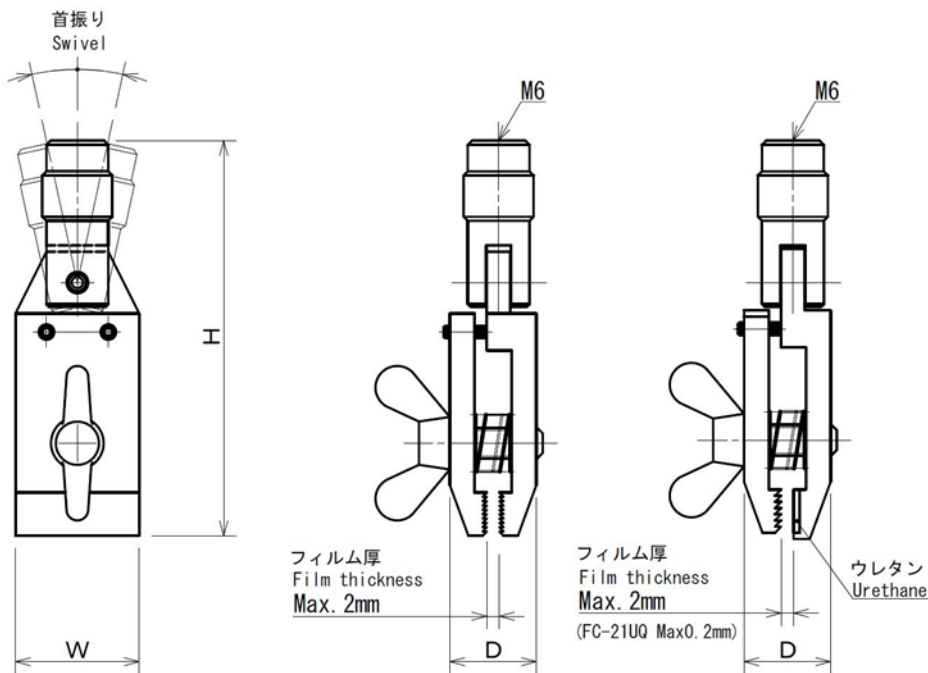
Related products		
Attachment for 90 Degree Peel Test P90-200N/P90-200N-EZ/ P90-200N-BB	Attachment for 180-degree Peel Test P180-200N/P180-200N-BB	Cam Grip GR-30/2000
Testing attachment to peel samples with 90 degree such as adhesive tapes.	Testing attachment to peel samples with 180 degree such as adhesive tapes	Attachment for gripping thin samples of rectangular shape.
		
Tape Grip GC-60/100	Film Cutter FSC-1525	Rubber roller for Peel Test APR-97
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 ASTM F88(*1)	Standard: JIS Z0237:2009(*1)
	Standard Width 15mm JIS Z1707:2019(*1) JIS Z0238:1998(*1)	

*1 It complies with a part of the standard.

Possible range of custom made	
Material	<ul style="list-style-type: none"> • Steel When the first digit after the model "FC" is "0", it means steel material. e.g.) FC-△<u>0</u>-□ • Light Aluminum When the first digit after the model "FC" is "1", it means light aluminum material. e.g.) FC-△<u>1</u>-□
Size	<ul style="list-style-type: none"> • Max. gripping width : 100mm The number after the "FC" in the model is the width. e.g.) When the width is 30mm, FC-<u>30</u>-□ *If the width number does not end with "0", use ",", to separate from material. • Max. opening width : 4mm The number at the end of the model is the opening width. e.g.) When the opening width is 3mm, FC-△0-<u>3</u>
e.g.) width 30mm / steel / opening width 3mm : FC-30-3 e.g.) width 15mm / aluminum / opening width 1mm : FC-15.1-1	

- * If the chuck part gets deteriorated, available to repair it by us. Please contact us or authorized distributor for further details.
- * When ordering a custom product, we would appreciate it if present it with the model referring to the above example.
- *1 The available option is limited. Please contact us for further details.

[Dimension]



Unit : mm

Model	Dimension W×H×D
FC-21	20×53×8
FC-20	20×64×12
FC-40	40×64×12
FC-21U	20×64.5×12
FC-41U	40×64.5×12
FC-21UQ	20×64.5×12

[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.

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Visit our website for more information on a wide range of product specifications, measurement applications and videos.