

Measuring Up To Your Standards

For LLOYD INSTRUMENTS and CHATILLON

Systems

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P-MT-6400-0202
MARCH 2002

Information within this document is subject to change without notice.

ISO 9001
Manufacturer

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Simplify Your Materials Testing and Force Measurement

AMETEK helps you optimise your force measurement and materials testing with a comprehensive range of grips and fixtures for just about any application, from lightweight miniature grips to heavy-duty and pneumatically operated models. Our grips and fixtures are carefully engineered to operate with your CHATILLON® force gauges and test stands or LLOYD INSTRUMENTS™ material testing systems. Grips and fixtures come in a variety of sizes, gripping surfaces, styles and capacities. Installation is easy and we offer a variety of adapters to fit any application.

We have provided solutions to measurements involving microscopic filaments to extremely large specimens tested up to 300 kN (67442 lbf). We have expertise in a variety of industries including:

- Adhesives
- Automotive
- Building Materials
- Business Equipment
- Ceramics
- Chemicals

- Composites
- Electronics
- Foams
- Food
- Glass
- Lumber and Wood Products
- Metals
- Medical Devices
- Non-wovens
- Paper and Board
- Plastic
- Packaging
- Rubber
- Textiles
- Wire and Cable

We also specialise in designing customised fixtures and grips for your unique application. If you need assistance in selecting a grip or fixture, or you have a custom application, contact your local representative for assistance.

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Grips & Fixture Selection Guide

Chuck Grips	Model Number	Capacity N	lbf	Maximum Sample Width	Maximum Sample Thickness	Part Number	Packaging Size	Mounting
Jacobs Chuck 5/32	GF-51	100 N	22.5 lbf	4 mm (0.16 in) Ø	N/A	GF51	Single	#10-32 Male
Jacobs Chuck 1/4	GF-52	100 N	22.5 lbf	6 mm (1/4 in) Ø	N/A	GF52	Single	#10-32 Male
Chuck Grips for Cement Samples	TG153	10 kN	2248 lbf	N/A	30 mm (1.19 in)	01/1555	Upper & Lower	15.85 mm (5/8 in) Eye End
Split Shoulder Profiled Chuck Grip	TG16/B	20 kN	4496 lbf	5 mm (0.12 in) Ø	N/A	01/1392	Upper & Lower	15.85 mm (5/8 in) Eye End
Split Shoulder Profiled Chuck Grip	TG16/C	20 kN	4496 lbf	7.5 mm (0.3 in) Ø	N/A	01/1520	Upper & Lower	15.85 mm (5/8 in) Eye End
Metal Dumbbell Chuck Grip	TG24	20 kN	4496 lbf	35 mm (1.38 in)	6 mm (1/4 in)	GPS/0015/00	Upper & Lower	15.85 mm (5/8 in) Eye End

GF-51

Drill Chuck 5/32

This stainless steel Jacobs chuck grip holds samples securely during tension or compression testing. Maximum sample diameter is 4 mm (0.16 in). #10-32 male mounting stud.

GF-52

Drill Chuck 1/4

This stainless steel Jacobs chuck grip holds samples securely during tension or compression testing. Maximum sample diameter is 6 mm (1/4 in). #10-32 male mounting stud.

Capacity

100 N, 20 lbf

Packaging

Single item.

Applications

Ideal for holding small cylindrical shapes during tension or compression testing.



Note: The GF-51 and GF-52 are supplied with the 1/4-28 x #10-32 adapter (part number: 17039) for mounting to some force gauges, loadcells and test stands.

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF51	GF-51	Drill Chuck Pin Vice 5/32 - 100 N (20 lbf)
GF52	GF-52	Drill Chuck Pin Vice 1/4 - 100 N (20 lbf)

TG153

Chuck Grips for Cement Samples

Profiled chuck grips are ideal for testing cement samples. Used with preformed cement bricks.

Capacity

10 kN, 2248 lbf

Packaging

Includes upper and lower grip.

Applications

Used for determining the tensile strength of cement mortar by casting and testing briquette samples. Test method is similar to ASTM C190: 1985 (Standard test method for strength by hydraulic cement mortars).

Specifications

Maximum Capacity	10 kN	2248 lbf
Minimum Loadcell	100 N	22.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1 Kg	2.20 lb
Length Each	80 mm	3.15 in
Temperature Limits	-70°C to 300°C	
	-94°F to 572°F	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG153	01/1555	Chuck Grips for Pre-Formed Cement Samples - 10 kN (2248 lbf)

TG16

Split Shoulder Profiled Chuck Grips

Ideal for metal dumbbell samples. Two types are available: TG16/B for metric B samples and TG16/C for metric C samples.

B = 5.5 mm (0.22 in) parallel section

C = 7.5 mm (0.3 in) parallel section

Capacity

20 kN, 4496 lbf

Packaging

Includes upper and lower grip.

Applications

Used for straining a metal dumbbell sample by tensile force, generally a fracture.

Standards Applicable

Test method is similar to that described in ISO 6892 (Metallic Materials - Tensile Testing) and BS18:1987.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	20 kN	4496 lbf
Minimum Loadcell	100 N	22.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1 Kg	2.20 lb
Length Each	38 mm	1.5 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG16/B	01/1392	Split Shoulder Profiled Chuck Grip for Metal Dumbbell Samples
TG16/C	01/1520	Split Shoulder Profiled Chuck Grip for Metal Dumbbell Samples

TG24

Metal Dumbbell and Plate Sample Chuck Grips

These grips are used for high tensile, flat plate, metal dumbbell samples. Samples must have clearance holes drilled in either end to accept the clamping disks. Clearance holes are 7.94 mm (0.31 in) in diameter. Maximum sample width is 35 mm (1.38 in). Maximum sample thickness is 6 mm (1/4 in).

Capacity

20 kN, 4496 lbf

Packaging

Includes upper and lower grip.

Applications

Used for straining a metal dumbbell sample by tensile force, generally to fracture.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	20 kN	4496 lbf
Minimum Loadcell	100 N	22.5 lbf
Clamp Diameter	38 mm	1.5 in
Maximum Sample Width	35 mm	1.38 in
Maximum Sample Thickness	6 mm	1/4 in
Eye End Diameter	15.85 mm	0.62 in
Weight Each	0.7 Kg	1.54 lb
Length Each	85 mm	3.35 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG24	GPS/0015/00	Flat Metal Dumbbell & Plate Samples Chuck Grips - 20 kN (4496 lbf)

Grips & Fixture Selection Guide

	Model Number	Capacity N	Capacity lbf	Maximum Sample Diameter	Part Number	Packaging	Mounting Size
Collet Grips and Faces							
Collet Grip for Hollow Tubes and Bars	TG167	100 kN	22480 lbf		01/1607	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Collet Faces							
12-15 mm	TG167 12-15			12-15 mm (0.47 - 0.59 in)	COT/0030/00	Faces Only, Pair	
15-18 mm	TG167 15-18			15-18 mm (0.59 - 0.71 in)	COT/0031/00	Faces Only, Pair	
18-21 mm	TG167 18-21			18-21 mm (0.71 - 0.83 in)	COT/0032/00	Faces Only, Pair	
21-25 mm	TG167 21-25			21-25 mm (0.83 - 0.98 in)	COT/0033/00	Faces Only, Pair	
25-30 mm	TG167 25-30			25-30 mm (0.98 - 1.18 in)	COT/0034/00	Faces Only, Pair	
30-35 mm	TG167 30-35			30-35 mm (1.18 - 1.38 in)	COT/0035/00	Faces Only, Pair	
35-40 mm	TG167 35-40			35-40 mm (1.38 - 1.58 in)	COT/0036/00	Faces Only, Pair	
40-45 mm	TG167 40-45			40-45 mm (1.58 - 1.77 in)	COT/0037/00	Faces Only, Pair	

TG167

Collet Grip for Hollow Tubes and Bars

This grip features circular, sliding, wedge-action and initial capstan tightening. Collet size should be specified to match the sample diameter. Collets are available in different diameters from 12 to 45 mm (0.47 to 1.77 in). Ideal for tube and bar stock.

Capacity

100 kN, 22480 lbf

Packaging

Includes upper and lower grip. Must order collet separately.

Applications

Used for testing tensile characteristics of hollow tubing and solid metal bars.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	100 kN	22480 lbf
Minimum Loadcell	500 N	112.5 lbf
Sample Diameter	12 - 45 mm	0.47 - 1.77 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	5.75 Kg	12.68 lb
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG167	01/1607	Collet Grip for Hollow Tubes & Bars - 100 kN (22480 lbf)

Grips & Fixture Selection Guide

Circular Compression Platens	Model Number	Capacity N	lbf	Maximum Sample Diameter	Part Number	Packaging	Mounting Size
Low Force Platens	TG87	500 N	112.5 lbf	36 mm (1.42 in)	01/1144	Upper & Lower	15.85 mm (5/8 in) Eye End
50 mm (2 in) Platens	TG67	20 kN	4496 lbf	50 mm (1.97 in)	01/2014	Upper & Lower	15.85 mm (5/8 in) Eye End
80 mm (3 in) Platens	TG63	100 kN	22480 lbf	80 mm (3.15 in)	01/1100	Upper & Lower	31.7 mm (1 1/4 in) Eye End
150 mm (6 in) Platens	TG64	100 kN	22480 lbf	150 mm (5.91 in)	01/1101	Upper & Lower	31.7 mm (1 1/4 in) Eye End
200 mm (8 in) Platens	TG364	300 kN	67442 lbf	200 mm (7.87 in)	01/2353	Upper & Lower	50 mm (1.97 in) Eye End
Compression Jig with Linear Guides	TG162	2.5 kN	562.5 lbf	115 mm (4.53 in)	01/1664	Upper & Lower	15.85 mm (5/8 in) Eye End

TG87

Circular, Low Force Compression Platens

This circular direct compression fixture is ideal for general purpose compression testing.

Capacity

500 N, 112.5 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used to determine compression characteristics at low force for small components and specimens.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	10 N	2.25 lbf
Maximum Sample Diameter	36 mm	1.42 in
Loadcell Fitting (Screw)	9.52 mm	0.37 in
Weight of Upper Platten	<0.1 Kg	<0.2 lb
Temperature Limits	-70°C to 200°C	-94°F to 392°F
Screw Thread	3/8 - 24 UNF	

Ordering Information

Model	Part No.	Description
TG87	01/1144	Low Force, Round Compression Platens - 500 N (112.5 lbf)

TG67

Circular Linear Compression Platens

This fixture consists of a 50 mm (1.97 in) diameter circular compression cage for machines operating in tension and compression or tension only. Ideal for use with furnaces and thermal cabinet accessories.

Capacity

20 kN, 4496 lbf

Packaging

Single item complete with upper and lower compression platens

Applications

Used for general purpose compression testing of a wide variety of materials and products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	20 kN	4496 lbf
Minimum Loadcell	100 N	22.5 lbf
Maximum Sample Diameter	50 mm	1.97 in
Eye End Diameter	15.85 mm	5/8 in
Weight	3.8 Kg	8.4 lb
Temperature Limits	-70°C to 300°C	-94°F to 572°F

Ordering Information

Model	Part No.	Description
TG67	01/2014	Circular Direct Compression Platens - 20 kN (4496 lbf)

TG63

Circular Direct Compression Platens

General purpose rectangular compression platens are ideal for samples up to 80 mm (3.15 in) in diameter.

Capacity

100 kN, 22480 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general purpose, high force compression testing of a wide variety of materials and products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	100 kN	22480 lbf
Minimum Loadcell	500 N	112.5 lbf
Maximum Sample Diameter	80 mm	3.15 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	5 Kg	11 lb
Temperature Limits	-70°C to 300°C	
	-94°F to 572°F	

Ordering Information

Model	Part No.	Description
TG63	01/1100	Circular Direct Compression Platens - 100 kN (22480 lbf)

TG64

Circular Direct Compression Platens

Circular direct compression platens intended for samples up to 150 mm (5.91 in) in diameter.

Capacity

100 kN, 22480 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general purpose compression testing of a wide variety of materials and products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	100 kN	22480 lbf
Minimum Loadcell	500 N	112.5 lbf
Maximum Sample Diameter	150 mm	5.91 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	5.2 Kg	11.5 lb
Temperature Limits	-70°C to 300°C	
	-94°F to 572°F	

Ordering Information

Model	Part No.	Description
TG64	01/1101	Circular Direct Compression Platens -100 kN (22480 lbf)

TG364

Heavy Duty Circular Compression Platens

Circular compression platens are intended for large samples up to 200 mm (7.87 in) in diameter.

Capacity

300 kN, 67442 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for high force compression testing of foams, boards, composites, metals, wood products and packaging materials and products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	300 kN	67442 lbf
Minimum Loadcell	5 kN	1124 lbf
Maximum Sample Diameter	200 mm	7.87 in
Eye End Diameter	50 mm	1.97 in
Weight Each	18 kg	39.6 lb
Temperature Limits	-70°C to 300°C	
	-94°F to 572°F	

Ordering Information

Model	Part No.	Description
TG364	01/2353	Heavy Duty Round Compression Platens - 300 kN (67442 lbf)

TG162

Circular Compression Jig with Linear Bearing Guides

Circular compression jig features linear bearing guides to maintain parallel alignment of face plates during testing.

Capacity

2.5 kN, 562.5 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Ideal for compression testing of corrugated materials such as cardboard and paper products. The test specimen is placed between the platens of a crush tester with the flutes perpendicular to the platens.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	2.5 kN	562.5 lbf
Minimum Loadcell	100 N	22.5 lbf
Maximum Sample Diameter	115 mm	4.53 in
Eye End Diameter	31.7 mm	5/8 in
Weight of Upper Platten	2.5 Kg	5.5 lb
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG162	01/1664	Circular Compression Jig with Linear Bearing Guides - 2.5 kN (562.5 lbf)

Grips & Fixture Selection Guide

	Model Number	Capacity		Maximum Sample Size	Part Number	Packaging	Mounting Size
		N	lbf				
Rectangular Compression Platens							
500 N Platens	TG37	500 N	112.5 lbf	175 x 115 mm (6.89 x 4.53 in)	01/2749	Upper & Lower	15.85 mm (5/8 in) Eye End
5 kN Platens	TG36	5 kN	1124 lbf	175 x 115 mm (6.89 x 4.53 in)	01/1136	Upper & Lower	15.85 mm (5/8 in) Eye End
10 kN Platens	TG61	10 kN	2248 lbf	400 x 300 mm (15.75 x 11.81 in)	01/1109	Upper & Lower	31.7 mm (1 1/4 in) Eye End
30 kN Platens	TG166	30 kN	6744 lbf	400 x 300 mm (15.75 x 11.81 in)	01/1383	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Square Compression Platens							
Low Force Platens	TG86	500 N	112.5 lbf	50 x 50 mm (1.97 x 1.97 in)	01/1143	Upper & Lower	15.85 mm (5/8 in) Eye End

Compression Cages

Complete range available - Please contact your local representative for further information

TG37

Rectangular Direct Compression Platens

General purpose rectangular compression platens are ideal for samples up to 175 x 115 mm (6.89 x 4.53 in).

Capacity

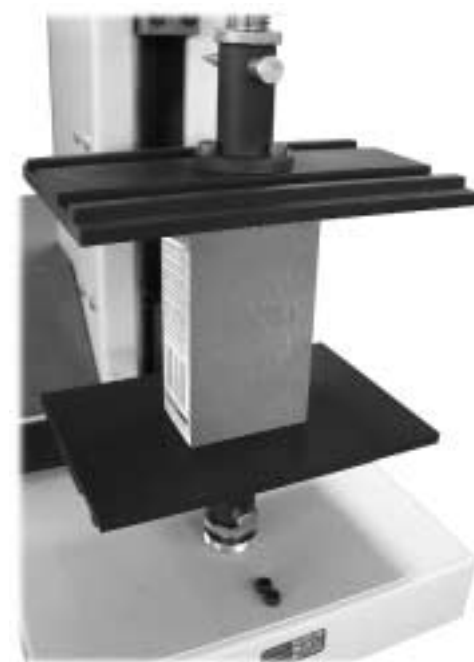
500 N, 112.5 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for low force compression testing of foams, boards, composites, metals, wood products and packaging materials and products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample Dimensions	175 x 115 mm	6.89 x 4.53 in
Eye End Diameter	15.85 mm	5/8 in
Weight of Upper Platten	0.6 Kg	1.3 lb
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG37	01/2749	Rectangular Direct Compression Platens - 500 N (112.5 lbf.)

TG36

Rectangular Direct Compression Platens

These direct compression platens feature a rectangular shape and are ideal for samples up to 175 x 115 mm (6.89 x 4.53 in).

Capacity

5 kN, 1124 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general compression testing on a wide range of materials and products.



Note: Not suitable for use with an LF500/TA500 test machine if fitted with a base mounted loadcell

Specification

Maximum Capacity	5 kN	1124 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample Dimensions	175 x 115 mm	6.89 x 4.53 in
Eye End Diameter	15.85 mm	5/8 in
Weight of Upper Platten	0.6 Kg	1.3 lb
Temperature Limits	Ambient	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG36	01/1136	Rectangular Direct Compression Platens - 5 kN (1124 lbf)

TG61

Rectangular Direct Compression Platens

General purpose rectangular compression platens are ideal for samples up to 400 x 300 mm (15.75 x 11.81 in). This platen may not be used on single column LFPlus, LRX or LRXPlus test machines.

Capacity

10 kN, 2248 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general purpose compression testing of a wide variety of materials and products.

Specification

Maximum Capacity (TG61)	10 kN	2248 lbf
Maximum Capacity (TG166)	30 kN	6744 lbf
Minimum Loadcell	1 kN	225 lbf
Maximum Sample		
Dimensions	400 X 300 mm	15.75 x 11.81 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight of Upper Platten	9 Kg	20 lb
Temperature Limits	Ambient	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG61	01/1109	Rectangular Direct Compression Platens - 10 kN (2248 lbf)
TG166	01/1383	Rectangular Direct Compression Platens - 30 kN (6744 lbf)

TG166

Rectangular Direct Compression Platens

General purpose rectangular compression platens are ideal for samples up to 400 x 300 mm (15.75 x 11.81 in). This platen may not be used on single column LFPlus, LRX or LRXPlus test machines.

Capacity

30 kN, 6744 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general purpose compression testing of a wide variety of materials and products.



TG86

Low Force Square Direct Compression Platens

These square shaped direct compression platens may be used for most general purpose low force compression tests.

Capacity

500 N, 112.5 lbf

Packaging

Single item complete with upper and lower compression platens.

Applications

Used for general purpose compression testing of a wide variety of small components, materials and products.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample		
Dimensions	50 x 50 mm	1.97 x 1.97 in
Loadcell Fitting (Screw)	15.85 mm	5/8 in
Weight of Upper Platten	<0.1 Kg	0.2 lb
Temperature Limits	-70°C to 200°C	
	-94°F to 392°F	

Ordering Information

Model	Part No.	Description
TG86	01/1143	Low Force, Square Compression Platens - 500 N (112.5 lbf)



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Compression Cages

A complete range of compression cages are available to fit both single and twin column 'Pogo' machines. Used to test large or awkwardly shaped samples which do not fit within the standard working area.

Compression cages are available in an extensive range of shapes and sizes, depending on individual applications and required specification.

Capacity

Up to 50 kN (11240 lbf) max.

Compression cages can be supplied for use with the following 'Pogo Design' materials testing machines (lower guide bearing included):

LFPlus	1 kN (225 lbf) maximum force
LRX	2.5 kN (562.5 lbf) maximum force
LRXPlus	5 kN (1124 lbf) maximum force
LR5KPlus	5 kN (1124 lbf) maximum force
LR10KPlus	10 kN (2248 lbf) maximum force
EZ20	20 kN (4496 lbf) maximum force
LR30K	30 kN (6744 lbf) maximum force
EZ50	50 kN (11240 lbf) maximum force



Compression Cage Applications

Used for general purpose compression testing of large or awkwardly shaped materials and products such as:

- Packing crates
- Large diameter pipes
- Mattresses
- Car seats

Packaging

Complete with upper and lower compression platens and connecting rod.



Cage size: 1300mm (51.18ins) high x 1600mm (62.99ins) wide x 1000mm (39.37 ins) deep

Specifying a Compression Cage

As all Compression Cages are custom made, due to varying sample types and size, you will need to discuss the following points when specifying a compression cage with your local distributor:

- Which materials testing machine is to be used with the compression cage?
- What is the sample type and size?
- What is the required internal cage dimensions?
- What is the maximum load?
- What stroke/vertical travel is required?
- What is the size and type of upper platen required? (flat/round/dome)
- A choice of polycarbonate safety shield or open mesh doors?



Grips & Fixture Selection Guide

Wedge Action Grips	Model Number	Capacity		Maximum Sample Width	Maximum Specimen Thickness	Part Number	Packaging	Mounting Size
		N	lbf					
Miniature Wedge Grip	GF-11 (ML4047)	500 N	112.5 lbf	12 mm (0.47 in)	2mm	GF-1	Single Grip	#10-32 Female
Miniature Tensile Grip	ML-1700	2 kN	450 lbf	5.6 mm (0.22 in)	#10 Wire	ML-1700	Single Grip	5/16-18 Female
Universal Wedge Grip	GF-9	2.5 kN	562.5 lbf	35 mm (1.38 in)	6 mm (1/4 in)	GF-9	Upper & Lower	5/16-18 Female
Heavy Duty Wedge Grip	GF-21	5 kN	1124 lbf	25 mm (0.98 in)	5 mm (0.2 in)	GF-21	Upper & Lower	5/16-18
Sliding Wedge Grip	TG15	5 kN	1124 lbf	25 mm (0.98 in)	10 mm (0.4 in)	01/1388	Upper & Lower	15.85 mm (5/8 in) Eye End
Capstan Wedge Grip (30 kN)	TG270	30 kN	6744 lbf	25 mm (0.98 in)	12 mm (0.5 in)	01/2399	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Capstan Wedge Grip (50 kN)	TG280	50 kN	11240 lbf	25 mm (0.98 in)	17 mm (0.6 in)	01/2405	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Capstan Wedge Grip (100 kN)	TG295	100 kN	22480 lbf	50 mm (1.97 in)	28 mm (1.0 in)	01/2951	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Capstan Wedge Grip (300 kN)	TG352	300 kN	67442 lbf	50 mm (1.97 in)	12 mm (0.5 in)	01/2781	Upper & Lower	50 mm (1.97 in) Eye End

GF-11 (ML4047)

Miniature Wedge Grip

Ideal for samples as small as 2.0 mm (0.08 in) in diameter, this miniature wedge grip features hardened steel, serrated jaw faces. Throat depth is 12 mm (1/2 in). A spring force lever permits quick release of the jaw face for simple loading or removing of the sample. Grip has #10-32 female thread.

Capacity

500 N, 112.5 lbf

Packaging

Single grip only.

Applications

Used for general purpose tensile testing.



Item shown larger than actual size.

Note: The GF-11 is supplied with the 1/4-28 x #10-32 adapter (part number: 17039) for mounting to some force gauges, loadcells and test stands.

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-11	GF-11	Miniature Wedge Grip - 500 N (112.5 lbf)

ML-1700

Miniature Tensile Grip

This hardened steel fixture has a 6 mm (1/4 in) retractable jaw with serrated teeth for extra gripping power. Jaw opens to 5.56 mm (0.22 in) to accept wire gauges up to #10 heavy duty. Ideal for rapid, semi-automatic testing of wire, filaments, fibers and cable.

Capacity

500 N, 112.5 lbf

Packaging

Single grip only.

Applications

Used for general purpose tensile testing.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
ML-1700	ML-1700	Miniature Tensile Grip - 500 N (112.5 lbf)

GF-9

Universal Wedge Action Tensile Grip

This self-tightening wedge grip is ideal for samples up to 25 mm (0.98 in) wide and 6 mm (1/4 in) in diameter. The throat depth is 35 mm (1.38 in). Grip features a spring force lever for quickly releasing the jaws and serrated, hardened steel faces.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes upper and lower grips.

Applications

Used for general purpose tensile testing.



Note: The GF-9 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-9	GF-9	Universal Wedge Action Tensile Grip - 2.5 kN (562.5 lbf)

TG15

Sliding Wedge Grip

This general purpose sliding wedge grip is self-tightening. It is supplied with standard 25 x 50 mm (0.98 x 1.97 in) straight cut jaw faces. Optional jaw faces are available.

Capacity

5 kN, 1124 lbf

Packaging

Includes upper and lower grips with standard straight cut faces. The TG15 is not included when ordering optional jaw faces.

Applications

Used on tensile testing of flat and round rigid materials including plastic and light metals.

Optional Jaw Faces for TG15

Face Type	Dimension	Model No.	Part No.
Cross Cut	25 x 50 mm 0.98 x 1.97 in	TG15/C1	01/1389
Straight Cut	25 x 50 mm 0.98 x 1.97 in	TG15/S	01/1409
V-Notch Cut	4 - 12 mm 0.16 - 0.47 in	TG15/R12	01/1390

Specification

Maximum Capacity	5 kN	1124 lbf
Minimum Loadcell	100 N	22.5 lbf
Gripping Length	50 mm	1.97 in
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	10 mm	0.39 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1.5 Kg	3.3 lb
Length Each	125 mm	4.92 in
Temperature Limits	Ambient	

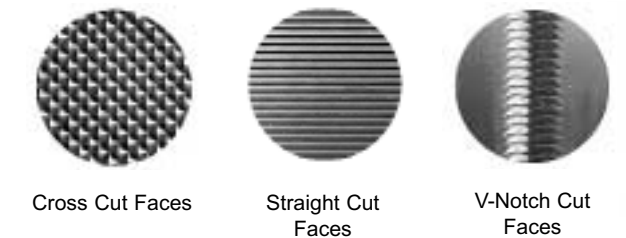
Ordering Information

Model	Part No.	Description
TG15	01/1388	Self-Tightening Sliding Wedge Grip - 5kN (1124 lbf)



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Jaw Face Options



TG270

Capstan Action Wedge Grip

This capstan action, parallel wedge grip is supplied with straight cut faces. It is ideal for flat or round samples. The capstan action holds samples securely in the jaws prior to the test. Optional jaw faces are available and may also be used with the TG280 capstan action grip.

Capacity

30 kN, 6744 lbf

Packaging

Includes upper and lower grips with standard straight cut faces. The TG270 is not included when ordering optional jaw faces.

Applications

Used for tensile testing in general metallurgical and composite applications.

Optional Jaw Faces for TG270

Face Type	Dimension	Model No.	Part No.
Cross Cut	25 x 50 mm 0.98 x 1.97 in	TG270/C1	01/2404
Straight Cut	25 x 50 mm 0.98 x 1.97 in	TG270/S	01/2340
V-Notch Cut	4.0 – 15 mm 0.16 – 0.59 in	TG270/V15	01/2105
V-Notch Cut	15 – 20 mm 0.59 – 0.79 in	TG270/V20	01/2287

Jaw Face Options



Cross Cut Faces Straight Cut Faces V-Notch Cut Faces

Ordering Information

Model	Part No.	Description
TG270	01/2399	Capstan Action Parallel Wedge Grips - 30kN (6744 lbf)



Specification

Maximum Capacity	30 kN	6744 lbf
Minimum Loadcell	500 N	112.5 lbf
Gripping Length	50 mm	1.97 in
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	11.5 mm	0.45 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	4.5 Kg	1.0 lb
Length Each	195 mm	7.68 in
Temperature Limits	-70°C to 200°C	-94°F to 392°F

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

TG280

Capstan Action Wedge Grip

This capstan action, parallel wedge grip is supplied with straight cut faces as standard. It is ideal for flat or round samples. The capstan action holds samples securely in the jaws prior to test. Optional jaw faces are available and may also be used with the TG270 capstan action grip.

Capacity

50 kN, 11240 lbf

Packaging

Includes upper and lower grips with standard straight cut faces. The TG280 is not included when ordering optional jaw faces.

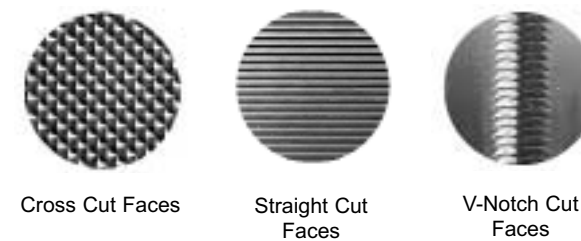
Applications

Used on tensile testing in general metallurgical and composite applications.

Optional Jaw Faces for TG280

Face Type	Dimension	Model No.	Part No.
Cross Cut	25 x 50 mm 0.98 x 1.97 in	TG270/C1	01/2404
Straight Cut	25 x 50 mm 0.98 x 1.97 in	TG270/S	01/2340
V-Notch Cut	4 – 15 mm 0.16 – 0.59 in	TG270/V15	01/2105
V-Notch Cut	15 – 20 mm 0.59 – 0.79 in	TG270/V20	01/2287

Jaw Face Options



Cross Cut Faces Straight Cut Faces V-Notch Cut Faces

Ordering Information

Model	Part No.	Description
TG280	01/2405	Capstan Action Parallel Wedge Grips - 50 kN, (11240 lbf)



Specification

Maximum Capacity	50 kN	11240 lb
Minimum Loadcell	500 N	112.5 lb
Gripping Length	50 mm	1.97 in
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	16.5 mm	0.65 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	4.5 Kg	10 lb
Length Each	195 mm	7.68 in
Temperature Limits	-70°C to 200°C	-94°F to 392°F

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

TG295

Heavy Duty Capstan Action Wedge Grip

This capstan action wedge grip is supplied with one set of cross cut jaw faces. Ideal for flat samples up to 28 mm thick (1.10 in) or round samples up to 36 mm (1.42 in) in diameter. Optional jaw faces are available.

Capacity

100 kN, 22480 lbf

Packaging

Includes upper and lower grips with standard cross cut faces. The TG295 is not included when ordering optional jaw faces.

Applications

Used for tensile testing in general metallurgical and composite applications.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Optional Jaw Faces for TG295

Face Type	Diameters	Model No.	Part No.
V-Notch Cut	6 – 12 mm 0.24 – 0.47 in	TG295/V12	01/2965
V-Notch Cut	12 – 24 mm 0.47 – 0.94 in	TG295/V24	01/2966
V-Notch Cut	24 – 36 mm 0.94 – 1.42 in	TG295/V36	01/2967

Specification

Maximum Capacity	100 kN	22480 lbf
Minimum Loadcell	5 kN	1124 lbf
With standard		
Cross Cut Faces:		
Maximum Sample Width	50 mm	1.97 in
Maximum Sample Thickness	28 mm	1.10 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	13.5 Kg	29.76 lb
Length Each	293 mm	11.54 in
Temperature Limits	-70°C to 200°C -94°F to 392°F	

Jaw Face Options



V-Notch Cut
Faces

Ordering Information

Model	Part No.	Description
TG295	01/2951	Capstan Action Parallel Wedge Grips - 100 kN (22480 lbf)

TG352

Heavy Duty Capstan Action Wedge Grip

This heavy duty capstan action, parallel wedge grip helps ensure the sample is held securely prior to the test. Optional jaw faces are available.

Capacity

300 kN, 67442 lbf

Packaging

The TG352 is not included when ordering optional jaw faces.

Applications

Used on tensile testing in general metallurgical and composite applications.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Optional Jaw Faces for TG352

Face Type	Diameters	Model No.	Part No.
Straight Cut	0 – 20 mm	TG352/F1	01/2782
	0 – 0.79 in		
Straight Cut	20 – 40 mm	TG352/F2	01/2783
	0.79 – 1.57 in		
V-Notch Cut	10 – 20 mm 0.39 – 0.79 in	TG352/V10	01/2784
V-Notch Cut	15 – 30 mm 0.59 – 1.18 in	TG352/V15	01/2785
V-Notch Cut	26 – 40 mm 1.02 – 1.57 in	TG352/V26	01/2786

Jaw Face Options



Straight Cut
Faces



V-Notch Cut
Faces

Ordering Information

Model	Part No.	Description
TG352	01/2781	Heavy Duty Parallel Wedge Grips - 300 kN (67442 lbf)

Specification

Maximum Capacity	300 kN	67442 lbf
Minimum Loadcell	5 kN	1124 lbf
Gripping Length	100 mm	3.94 in
Maximum Sample Width	50 mm	1.97 in
Maximum Sample Thickness	12 mm	0.47 in
Eye End Diameter	50 mm	1.97 in
Weight Each	30 Kg	66 lb
Length Each	195 mm	7.68 in
Temperature Limits	-70°C to 100°C -94°F to 212°F	

Grips & Fixture Selection Guide

	Model Number	Capacity		Maximum Sample Width	Sample Thickness	Part Number	Packaging	Mounting Size
		N	lbf					
Vice Action Grips								
Miniature Tensile Grip	GF-53	125 N	28 lbf	5 mm (0.2 in)		GF-53	Upper & Lower	#10-32 Female
Miniature Component Grip	GF-12	150 N	34 lbf			GF-12	Single Grip	#10-32 Female
Manually Tightened Tensile Grip	GF-1	1 kN	225 lbf	30 mm (1.18 in)		GF-1	Upper & Lower	3/8-16 Female
Quick Release Grip	TG26	1 kN	225 lbf	100 mm (3.94 in)	12 mm (1/2 in)	01/1502	Upper & Lower	15.85 mm (5/8 in) Eye End
Thick Film Grip	TG34	500 N	112.5 lbf	25 mm (0.98 in)	3 mm (0.12 in)	01/0671	Upper & Lower	15.85 mm (5/8 in) Eye End
Adjustable Rear Face Grip	TG74	5 kN	1124 lbf	50 mm (1.97 in)	20 mm (0.79 in)	01/1590	Upper & Lower	15.85 mm (5/8 in) Eye End
Extra Pressure Grip (5 kN)	TG300	5 kN	1124 lbf	50 mm (1.97 in)	12 mm (1/2 in)	01/2243	Upper & Lower	15.85 mm (5/8 in) Eye End
Extra Pressure Grip (10 kN)	TG310	10 kN	2248 lbf	55 mm (2.17 in)	12 mm (1/2 in)	01/2244	Upper & Lower	15.85 mm (5/8 in) Eye End
Heavy Duty Grip	TG25	20 kN	4496 lbf	100 mm (3.94 in)	12 mm (1/2 in)	01/1501	Upper & Lower	31.7 mm (1 1/4 in) Eye End
Spring Loaded Tension Grip	TG33	5 N	1.12 lbf	25 mm (0.98 in)	2 mm (0.08 in)	01/1052	Upper & Lower	15.85 mm (5/8 in) Eye End

GF-53

Miniature Tensile Grip

This general purpose tensile grip features jaw faces that are manually tightened to secure miniature specimens. The opening between the faces is 5 mm (0.2 in). The throat depth is 12 mm (1/2 in). A ball socket mounting screw in the upper grip assures proper alignment with lower grip.

Capacity

125 N, 28 lbf

Packaging

Includes upper and lower grips.

Applications

Used for tensile testing on small components and miniature parts.

Note: The GF-53 is supplied with the 1/4-28 x #10-32 adapter (part number: 17039) for mounting to some force gauges, loadcells and test stands.

See pages 93-113 for additional adapters required.



Ordering Information

Model	Part No.	Description
GF-53	GF-53	Miniature Tensile Grip - 125 N (28 lbf)

GF-12

Vice Action Grip for Miniature Components

This general purpose, vice action grip is designed to tighten using movable jaws. The jaw features a tapered nose, which is ideal for very small components or where space is limited. A front thumbscrew ensures quick installation and release of the specimen. Grip is supplied with a #10-32 mounting hole.

Capacity

150 N, 34 lbf

Packaging

Single grip only.

Applications

Used for tensile testing on small components and miniature parts.

Note: The GF-12 is supplied with the 1/4-28 x #10-32 adapter (part number: 17039) for mounting to some force gauges, loadcells and test stands.

See pages 93-113 for additional adapters required.



Ordering Information

Model	Part No.	Description
GF-12	GF-12	Miniature Component Grip - 150 N (34 lbf)

GF-1

Manually Tightened Tensile Grip

This general purpose tensile grip features jaw faces that are manually tightened to secure specimens 30 mm (1.18 in) to 6 mm (1/4 in) in diameter. The throat depth is 45 mm (1.77 in). A ball socket mounting screw in the upper grip assures proper alignment with lower grip. Grips have hardened steel serrated faces.

Capacity

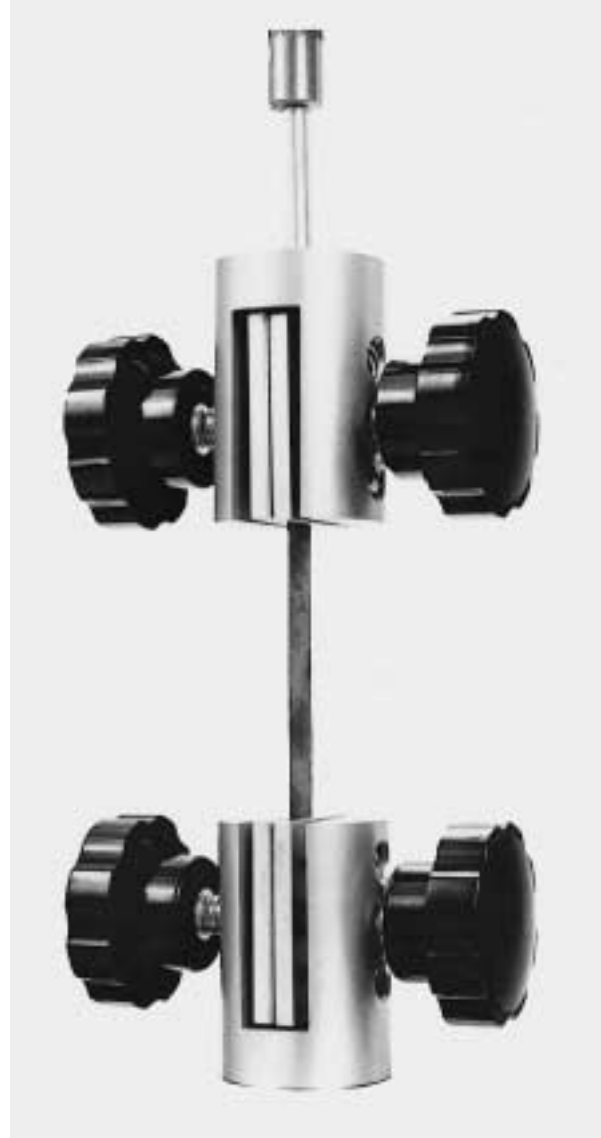
1 kN, 225 lbf

Packaging

Includes upper and lower grips.

Applications

Used for tensile testing on small components, wire, yarn, thread, cord and miniature parts.



Note: The GF-1 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-1	GF-1	Manually Tighten Tensile Grip - 1 kN (225 lbf)

TG26

Quick Release Vice Action Grip

This quick release vice action grip features interchangeable jaw faces. It is an ideal general purpose grip for small samples. Maximum sample width is 100 mm (3.94 in) as standard, with optional 150 mm (5.91 in) faces available. Maximum sample thickness is 12 mm (1/2 in).

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grips.

Applications

Used for tensile testing of paper, rubber, thin plastic film, woven and non-woven textiles.

Optional Jaw Faces for TG26

Face Type	Dimension	Model No.	Part No.
Cross Cut	50 x 100 mm 1.97 x 3.94 in	TG25/C	01/1504
Corrugated	50 x 100 mm 1.97 x 3.94 in	TG25/CN	01/1505
Wide Corrugated	50 x 150 mm 1.97 x 5.91 in	TG25/CW	01/1978
Plain	50 x 100 mm 1.97 x 3.94 in	TG25/P	01/1503
Rubber	50 x 100 mm 1.97 x 3.94 in	TG25/R	01/1683

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

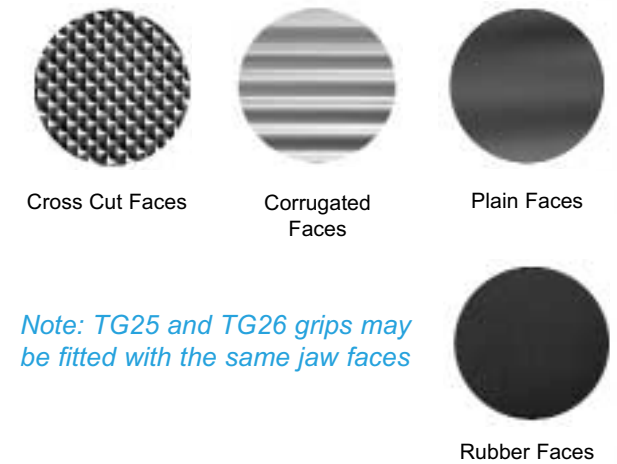
Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	50 N	11.25 lbf
Maximum Sample Width	150 mm	5.91 in
Maximum Sample Thickness	12 mm	0.47 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1 Kg	2.2 lb
Length Each	150 mm	5.91 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG26	01/1502	Quick Release Vice Action Grip - 1 kN (225 lbf)



Jaw Face Options



Note: TG25 and TG26 grips may be fitted with the same jaw faces

TG34

Vice Action Grip for Thin Film

This general purpose, vice action grip is ideal for thin film samples. They feature an easy to use screw action and are fitted with flat, rubber-coated jaw faces.

Capacity

500 N, 112.5 lbf

Packaging

Includes upper and lower grips.

Applications

Used for tensile testing of paper, rubber, thin plastic film, woven and non-woven textiles.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Load Cell	10 N	2.25 lbf
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	3 mm	0.12 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.5 Kg	1.1 lb
Length Each	75 mm	2.95 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG34	01/0671	General Purpose Thin Film Vice Grips - 500 N (112.5 lbf)

TG74

Adjustable, Rear Face Vice Grip

This vice action grip has fully adjustable faces that helps with alignment. The grip is supplied with 25 x 25 mm (0.98 x 0.98 in) standard plain face jaws. Optional jaw faces are available. The TG74 vice grip is not supplied when ordering optional jaw faces.

Capacity

5 kN, 1124 lbf

Packaging

Includes upper and lower grips with plain faces. The upper and lower grips are not included when ordering optional jaw faces.

Applications

Used for tensile testing of paper, rubber, thin plastic film, woven and non-woven textiles and foils.

Optional Jaw Faces for TG74

Face Type	Dimension	Model No.	Part No.
Cross Cut	25 x 25mm 0.98 x 0.98 in	TG74/C1	01/1592
Cross Cut	25 x 50mm 0.98 x 1.97 in	TG74/C2	01/1593
Plain	25 x 50mm 0.98 x 1.97 in	TG74/P	01/1591
Rubber	25 x 25mm 0.98 x 0.98 in	TG74/R1	01/1594
Rubber	25 x 50mm 0.98 x 1.97 in	TG74/R2	01/1595

Jaw Face Options



Ordering Information

Model	Part No.	Description
TG74	01/1590	Adjustable Rear Face Wedge Grip - 5 kN (1124 lbf)



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	5 kN	1124 lbf
Minimum Loadcell	50 N	11.25 lbf
Maximum Sample Width	50 mm	1.97 in
Maximum Sample Thickness	20 mm	0.79 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1.0 Kg	2.2 lb
Length Each	50 mm	1.97 in
Temperature Limits	Ambient	

TG300

Extra Pressure Vice Grip

This vice action grip is supplied with an independent tightening tool for applying extra pressure. One grip face is corrugated, the other is serrated to prevent the sample from slipping during the test. Maximum sample width is 55 mm (2.17 in). Maximum sample thickness is 12 mm (1/2 in).

Capacity

5 kN, 1124 lbf

Packaging

Includes upper and lower grips.

Applications

Used for tensile testing of textiles and leather.

Specification

Maximum Capacity	5 kN	1124 lbf
Minimum Load Cell	100 N	22.5 lbf
Maximum Sample Width	55 mm	2.17 in
Maximum Sample Thickness	12 mm	1/2 in
Gripping Length	35 mm	1.38 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1.5 Kg	3.3 lb
Length Each	65 mm	2.56 in
Temperature Limits	-70°C to 200°C	
	-94°F to 392°F	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG300	01/2243	Extra Pressure Vice Grip with Independent Tightening Tool - 5 kN (1124 lbf)

TG310

Extra Pressure Vice Grip

This vice action grip is supplied with an independent tightening tool for applying extra pressure. Both grip faces are serrated to prevent the sample from slipping during the test. Maximum sample width is 55 mm (2.17 in). Maximum sample thickness is 12 mm (1/2 in).

Capacity

10 kN, 2248 lbf

Packaging

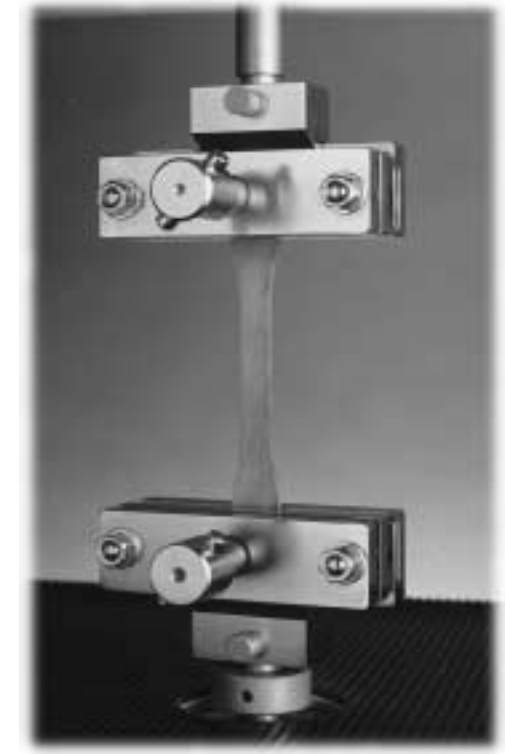
Includes upper and lower grips.

Applications

Used for tensile testing of textiles and leather.

Specification

Maximum Capacity	10 kN	2248 lbf
Minimum Loadcell	100 N	22.5 lbf
Maximum Sample Width	55 mm	2.17 in
Maximum Sample Thickness	12 mm	1/2 in
Gripping Length	25 mm	1.0 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1.6 Kg	3.5 lb
Length Each	65 mm	2.56 in
Temperature Limits	-70°C to 200°C	
	-94°F to 392°F	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG310	01/2244	Extra Pressure Vice Grip with Tightening Tool - 10 kN (2248 lbf)

TG25

Heavy Duty Vice Grip

This vice action grip is ideal for heavy duty applications up to 20 kN (4496 lbf). This grip is supplied with 50 x 100 mm (1.97 x 3.94 in) cross cut faces. Optional jaw faces are available.

Capacity

20 kN, 4496 lbf

Packaging

Includes upper and lower grips with 50 mm x 100 mm (1.97 x 3.94 in) cross cut faces. The TG25 is not included when ordering optional jaw faces.

Applications

Used for tensile testing on heavy duty textiles, harnesses, webbing, belts, sheeting, paper and cardboard stocks, rubber, plastics, metal and wood products.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

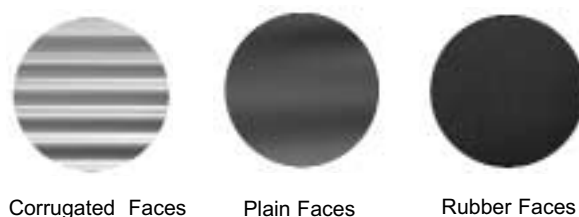
Optional Jaw Faces for TG25

Face Type	Dimension	Model No.	Part No.
Cross Cut	50 x 100 mm 1.97 x 3.94 in	TG25/C	01/1504
Corrugated	50 x 100 mm 1.97 x 3.94 in	TG25/CN	01/1505
Wide Corrugated	50 x 150 mm 1.97 x 5.91 in	TG25/CW	01/1978
Plain	50 x 100 mm 1.97 x 3.94 in	TG25/P	01/1503
Rubber	50 x 100 mm 1.97 x 3.94 in	TG25/R	01/1683

Specification

Maximum Capacity	20 kN	4496 lbf
Minimum Loadcell	100 N	22.5 lbf
Maximum Sample Width	150 mm	5.91 in
Maximum Sample Thickness	12 mm	1/2 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight Each	2.3 Kg	5.1 lb
Length Each	130 mm	5.12 in
Temperature Limits	Ambient	

Jaw Face Options



Corrugated Faces

Plain Faces

Rubber Faces

Note: TG25 and TG26 grips may be fitted with the same jaw faces

TG25 comes with plain and corrugated jaw faces as standard.

Ordering Information

Model	Part No.	Description
TG25	01/1501	Heavy Duty Vice Action Grip - 20 kN (4496 lbf max)

TG33

Spring Loaded Tension Grip

Lightweight, spring loaded, rubber faced clamp grips for very light loads. Ideal for paper, thin plastic film, foils, etc.

Capacity

5 N, 1.12 lbf

Packaging

Includes upper and lower grip.

Applications

Lightweight grip for tensile testing of paper, thin plastic film and foils, etc by stretching the sample to fracture and recording the relationship between force and extension.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	5 N	1.12 lbf
Minimum Loadcell	5 N	1.12 lbf
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	2 mm	0.08 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.1 Kg	0.2 lb
Length Each	100 mm	3.94 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG33	01/1052	Spring Loaded Tension Grip - 5 N (1.12 lbf)

Grips & Fixture Selection Guide

	Model Number	Capacity		Maximum Sample Width	Sample Thickness	Part Number	Packaging	Mounting Size
		N	lbf					
Self-Tightening Grips								
Eccentric Roller Grip (25 mm wide)	TG10	1 kN	225 lbf	25 mm (0.98 in)	5 mm (0.2 in)	01/2902	Upper & Lower	15.85 mm (5/8 in) Eye End
Eccentric Roller Grip (50 mm wide)	TG22	1 kN	225 lbf	50 mm (1.97 in)	5 mm (0.2 in)	01/2091	Upper & Lower	15.85 mm (5/8 in) Eye End
Sliding Roller Grip	TG14	2 kN	450 lbf	25 mm (0.98 in)	5 mm (0.2 in)	GPS/0002/00	Upper & Lower	15.85 mm (5/8 in) Eye End
Bollard Grip	TG20	1 kN	225 lbf	50 mm (1.97 in)	4 mm (0.16 in)	01/1453	Upper & Lower	15.85 mm (5/8 in) Eye End
Rubber Grip	GF-6	1 kN	225 lbf	25 mm (0.98 in)	6 mm (0.24 in)	GF-6	Upper & Lower	#10-32 Female
Fabric Grip	GF-7	1 kN	225 lbf	75 mm (2.95 in)	6 mm (0.24 in)	GF-7	Upper & Lower	#10-32 Female
Foam Testing Grip	GF-22	1 kN	225 lbf			GF-22	Upper & Lower	
Scissors Grip	TG210	10 kN	2248 lbf	100 mm (3.94 in)	35 mm (1.38 in)	01/2098	Upper & Lower	15.85 mm (5/8 in) Eye End

TG10

Eccentric Roller Grip

General purpose, self-tightening grips feature an eccentric roller design ideal for dumbbell and flat specimens. The roller operates using a basic cam jamming principle. The rollers have a cross-hatched, serrated finish that helps prevent slipping. Clamps hold the sample securely against the horizontally-grooved back face. Maximum sample width is 25 mm (0.98 in). Maximum sample thickness is 5 mm (0.2 in).

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Ideal for tensile testing sheet materials including polymers and rubbers.

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample Width	25 mm	0.98 in
Maximum Sample Thickness	5 mm	0.2 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.25 Kg	0.6 lb
Length Each	83 mm	3.27 in
Temperature Limits	Ambient	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG10	01/2092	Self-Tightening Eccentric Roller Grip - 1kN (225 lbf)

TG22

Eccentric Roller Grip

General purpose, self-tightening grips feature an eccentric roller design ideal for dumbbell and flat specimens. The roller operates using a basic cam jamming principle. The rollers have a cross-hatched, serrated finish that help prevent slipping. Clamps hold the sample securely against the horizontally-grooved back panel. Maximum sample width is 50 mm (1.97 in). Maximum sample thickness is 5 mm (0.2 in).

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Ideal for tensile testing sheet materials including polymers and rubbers.

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample Width	50 mm	1.97 in
Maximum Sample Thickness	5 mm	0.2 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.5 Kg	1.1 lb
Length Each	85 mm	3.35 in



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG22	01/2091	Self-Tightening Eccentric Roller Grip - 1 kN (225 lbf)

TG14

Self-Tightening Roller Grip

This grip incorporates a sliding, self-tightening roller ideal for flat, ductile specimens. The rollers have a cross-hatched, serrated finish that helps prevent slipping. Maximum sample width is 50 mm (1.97 in). Maximum sample thickness is 5 mm (0.2 in).

Capacity

2 kN, 450 lbf

Packaging

Includes upper and lower grip.

Applications

Ideal for tensile testing flat, ductile or rigid specimens.

Specification

Maximum Capacity	2 kN	450 lbf
Minimum Loadcell	20 N	4.5 lbf
Max Sample Width	25 mm	0.98 in
Max Sample Thickness	5 mm	0.2 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.25 Kg	0.6 lb
Length Each	85 mm	3.35 in
Temperature Limits	-70°C to 200°C	
	-94°F to 392°F	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

TG20

Self Tightening Bollard Grip

The sample is mounted over the bollard and positioned between the bollard and the grip shank. Maximum sample width is 50 mm (1.97 in). Maximum sample thickness is 4 mm (0.16 in).

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Ideal for tensile testing of textiles.

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	20 N	4.5 lbf
Maximum Sample Width	50 mm	1.97 in
Maximum Sample Thickness	4 mm	0.16 in
Eye End Diameter	15.85mm	5/8 in
Weight Each	0.4 Kg	0.88 lb
Length Each	85 mm	3.35 in
Temperature Limits	Ambient	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG14	GPS/0002/00	Self-Tightening Roller Grip - 2 kN (450 lbf)

Ordering Information

Model	Part No.	Description
TG20	01/1453	Self-Tightening Bollard Grip - 1 kN (225 lbf)

GF-6

Rubber Testing Grip

Ideally suited for rubber or other flat specimens that are 25mm (0.98 in) wide and up to 6 mm (0.24 in) thick. Eccentrically mounted serrated roller grips are self-tightening when the load is applied. A ball socket mounting screw in upper grip helps ensure proper grip alignment.

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Rubber or flat specimens.



Note: The GF-6 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-6	GF-6	Rubber Testing Grip - 1 kN (225 lbf)

GF-7

Fabric Testing Grip

The GF-7 is ideal for handling fabric specimens up to 75 mm (2.95 in) wide and 6 mm (1/4 in) thick. Eccentrically mounted, serrated roller grips are self-tightening when load is applied. A ball socket mounting screw in upper grip assures proper alignment.

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Fabrics and textile testing.



Note: The GF-7 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-7	GF-7	Textile & Fabric Testing Grip - 1 kN (225 lbf)

GF-22

Foam Testing Fixture

Ideally suited for rubber or other flat specimens that are 25 mm (0.98 in) wide and up to 6 mm (1/4 in) thick. Eccentrically mounted serrated roller grips are self-tightening when the load is applied. A ball socket mounting screw in upper grip helps ensure proper grip alignment.

Capacity

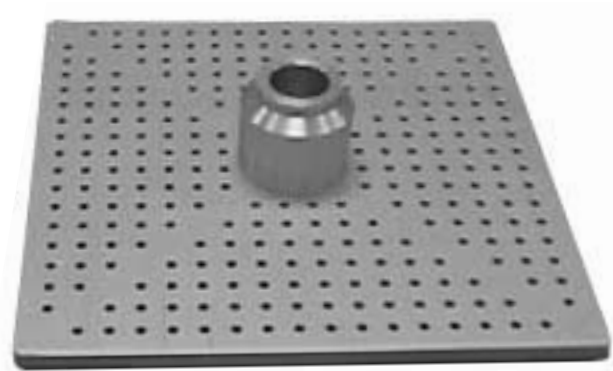
1 kN, 225 lbf

Packaging

Includes upper and lower grip.

Applications

Foam testing.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
GF-22	GF-22	Foam Testing Fixture - 1 kN (225 lbf)

TG210

Self-Tightening Scissor Grips

These general purpose, self-tightening grips are ideal for dumbbell and flat specimens. Jaw faces have cross-hatched, serrated surface with a pitch of 1.5 mm (0.06 in). Maximum sample width is 100 mm (3.94 in). Maximum sample thickness is 35 mm (1.38 in).

Capacity

10 kN, 2248 lbf

Packaging

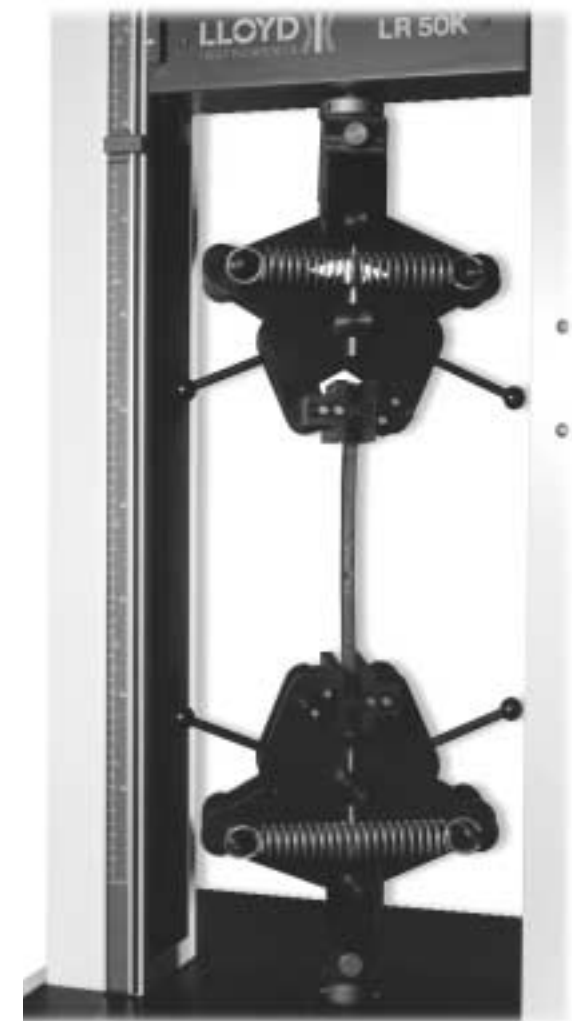
Includes upper and lower grip.

Applications

Used for tensile testing on rigid, flat materials including metals and composites.

Specification

Maximum Capacity	10 kN	2248 lbf
Minimum Load Cell	50 N	11.25 lbf
Max Sample Width	100 mm	3.94 in
Max Sample Thickness	35 mm	1.38 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	1.5 Kg	3.3 lb
Temperature Limits	0°C to 200°C	32°F to 392 °F



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG210	01/2098	Self-Tightening Scissor Grip - 10 kN (2248 lbf)

Grips & Fixture Selection Guide

Flexural Grips	Model Number	Capacity		Maximum Sample Width	Span Adjustment	Part Number	Packaging	Mounting Size
		N	lbf					
3-Point Bend (250 N)	GF-54	250 N	56.25 lbf	19 mm (3/4 in)	25 - 75 mm (0.98 - 2.95 in)	GF-54	Complete Fixture	#10-32 Female
3-Point Bend (5 kN)	TG18	5 kN	1124 lbf	50 mm (1.97 in)	10 - 400 mm (0.39 - 15.75 in)	01/1511	Complete Fixture	
3-Point Bend (30 kN)	TG29	30 kN	6744 lbf	100 mm (3.94 in)	20 - 550 mm (0.79 - 21.65 in)	01/1894	Complete Fixture	
3-Point Bend (100 kN)	TG62	100 kN	22480 lbf	150 mm (5.91 in)	20 - 300 mm (0.79 - 11.81 in)	01/1112	Complete Fixture	
3-Point Bend (300 kN)	TG362	300 kN	67442 lbf	100 mm (3.94 in)	25 - 550 mm (0.98 - 21.65 in)	01/2544	Complete Fixture	
3- and 4-Point Bend	TG180	10 kN	2248 lbf	30 mm (1.18 in)	10 - 150 mm (0.39 - 5.91 in)	01/1894	Complete Fixture	

GF-54

3-Point Bend Jig

Designed for compressive, 3-point bending applications, this fixture supports uni-directional bending on rigid and semi-rigid materials. Mounts using a #10-32 thread.

Capacity

250 N, 56.25 lbf

Packaging

Complete fixture.

Applications

Uni-directional 3-point bending on rigid and semi-rigid materials.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
GF-54	GF-54	Three-Point Bending Jig - 250 N (56.25 lbf)

TG18

3-Point Bend Jig

This jig operates in compression only. Specimen supports are supplied in the following diameters: 1 mm, 4 mm and 10 mm (0.01, 0.16 and 0.39 in).

Capacity

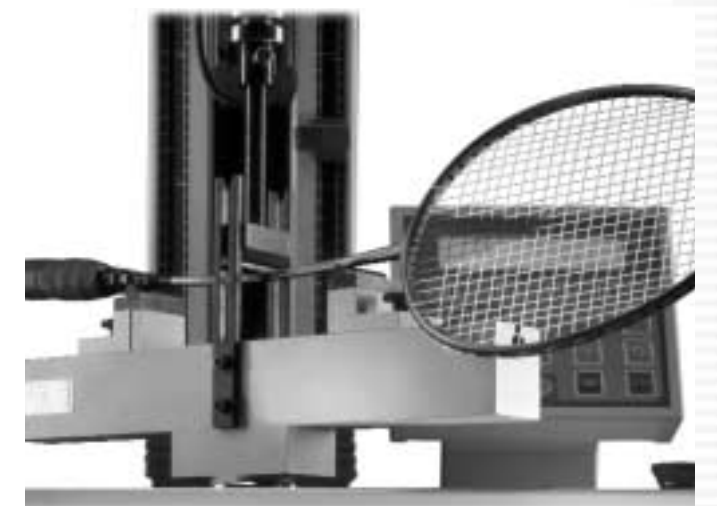
5 kN at 400 mm (1124 lbf at 15.75 in)

Packaging

Complete jig with multiple sample supports.

Applications

Used to determine the flexural properties of rigid and semi-rigid materials including glass, ceramics, composites, wood and plastics.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	5 kN at 400 mm	1124 lbf at 15.75 in
Minimum Loadcell	50 N	11.25 lbf
Max Sample Width	50 mm	1.97 in
Eye End Diameter	15.85 mm	5/8 in
Weight	5 Kg	11 lb
Temperature Limits	Ambient	
Span Adjustment	10 - 400 mm	0.39 - 15.75 in
Span Support Diameter	1,4,10 mm	0.01, 0.16, 0.39 in

Ordering Information

Model	Part No.	Description
TG18	01/1511	Three Point Bend Flexural Jig - 5 kN (1124 lbf max)

TG29

3-Point Bend Jig

This jig operates in compression only. Specimen supports are supplied in the following diameters: 10 mm, 15 mm and 20 mm (0.39, 0.59 and 0.79 in).

Capacity

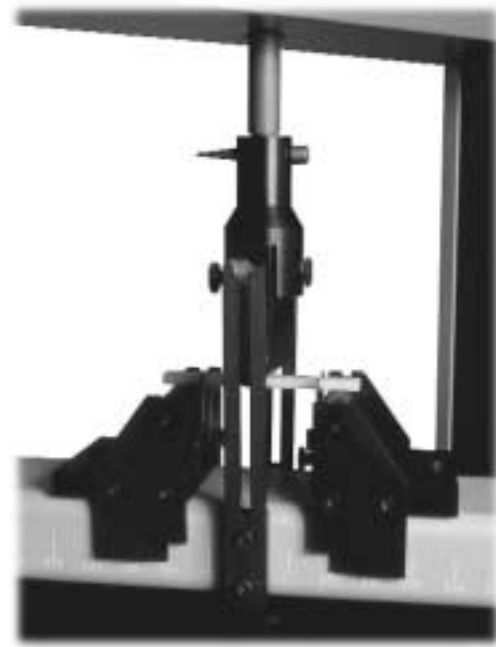
30 kN at 200 mm (6744 lbf at 7.87 in)

Packaging

Complete jig with multiple sample supports.

Applications

Used to determine the flexural properties of rigid and semi-rigid materials including glass, ceramics, composites, wood and plastics.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	30 kN at 200 mm	6744 lbf at 7.87 in
Minimum Loadcell	100 N	22.5 lbf
Max Sample Width	100 mm	3.94 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight	11 Kg	24.3 lb
Temperature Limits	Ambient	
Span Adjustment	20 - 550 mm	0.79 - 21.65 in
Span Support Diameter	10, 15, 20, 25 mm	0.39, 0.59, 0.79, 0.98 in

Ordering Information

Model	Part No.	Description
TG29	01/1894	Three Point Bend Flexural Jig - 30 kN (6744 lbf)

TG62

Heavy Duty 3-Point Bend Jig

This jig operates in compression only. Used for performing uni-directional bending tests on rigid and semi-rigid materials. Supplied with 10 mm (0.39 in) specimen supports. A four point bend jig conversion kit is also available.

Capacity

100 kN, 22480 lbf

Packaging

Complete jig with 10 mm specimen supports.

Applications

Used to determine the flexural properties of rigid and semi-rigid materials including glass, ceramics, composites, wood and plastics.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	100 kN	22480 lbf
Minimum Loadcell	500 N	112.5 lbf
Max Sample Width	150 mm	5.91 in
Span Adjustment	20 - 300 mm	0.79 - 11.81 in
Eye End Diameter	31.7 mm	1 1/4 in
Weight of Blade	4.5 Kg	10 lb
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG62	01/1112	Heavy Duty Three Point Bend - 100 kN (22480 lbf)
TG62/4	01/1677	Four Point Conversion Kit for TG62

TG362

Heavy Duty 3-Point Bend Jig

This jig operates in compression only. Used for performing uni-directional bending tests on rigid and semi-rigid materials.

Capacity

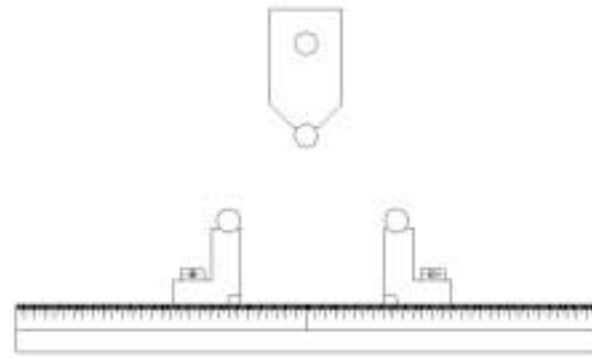
300 kN, 67442 lbf

Packaging

Complete jig.

Applications

Used to determine the flexural properties of rigid and semi-rigid materials including glass, ceramics, composites, wood and plastics.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	300 kN	67442 lbf
Minimum Loadcell	1 kN	225 lbf
Max Sample Width	100 mm	3.94 in
Eye End Diameter	50 mm	1.97 in
Temperature Limits	Ambient	
Span Adjustment	25 - 550 mm	0.98 - 21.65 in

Ordering Information

Model	Part No.	Description
TG362	01/2544	Heavy Duty Three Point Bend - 300 kN (67442 lbf)

TG180

3- and 4-Point Bend Jig

This jig operates in compression only with a single screw span adjustment. Used for performing uni-directional bending tests on rigid and semi-rigid materials. Supplied with 6.35 mm (1/4 in) sample supports.

Displacement measurement may be achieved by using a high precision LVDT device.

Capacity

10 kN, 2248 lbf

Packaging

Complete jig. LVDT device not included.

Applications

Used to determine the flexural properties of rigid and semi-rigid materials including glass, ceramics, composites, wood and plastics.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	10 kN	2248 lbs
Minimum Loadcell	500 N	112.5 lbs
Max Sample Width	30 mm	1.18 in
Eye End Diameter	15.85 mm	5/8 in
Weight	8 Kg	17.6 lb
Temperature Limits	Ambient	
Span Adjustment	10 - 150 mm	0.39 - 5.91 in

Ordering Information

Model	Part No.	Description
TG180	01/1953	Three and Four Point Bend Flexural Jig - 10 kN (2248 lbf)

Grips & Fixture Selection Guide

Pneumatic Grips	Model Number	Capacity N	Capacity lbf	Sample Thickness	Part Number	Packaging	Mounting Size
Vice Grip with Hand Switch	TG420/H	500 N	112.5 lbf	6 mm (1/4 in)	01/1437	Upper & Lower	15.85 mm (5/8 in) Eye End
Vice Grip with Foot Switch	TG420/F	500 N	112.5 lbf	6 mm (1/4 in)	01/1452	Upper & Lower	15.85 mm (5/8 in) Eye End
Vice Grip with Hand Switch	TG412/H	5 kN	1124 lbf	6 mm (1/4 in)	01/2296	Upper & Lower	15.85 mm (5/8 in) Eye End
Vice Grip with Foot Switch	TG412/F	5 kN	1124 lbf	6 mm (1/4 in)	01/2295	Upper & Lower	15.85 mm (5/8 in) Eye End

TG420

Pneumatically Actuated Vice Grip

This pneumatically actuated vice action grip is operated with a foot pedal (TG420/F) or can be specified for hand operation (TG420/H). Both grip types are supplied with standard plain 25 x 25 mm (0.98 x 0.98 in) metal faces. Optional jaw faces are available.

Capacity

500 N, 112.5 lbf

Packaging

Includes upper and lower grips with standard plain metal faces. The TG420 is not included when ordering optional jaw faces.

Applications

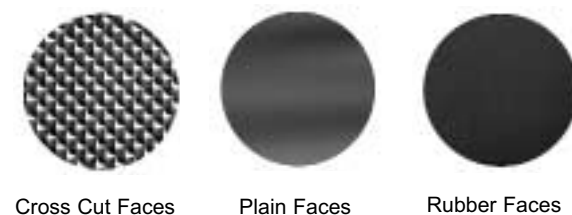
General purpose tensile testing for rubber, plastic, textiles and other materials where self-tightening is required.



Optional Jaw Faces for TG420

Face Type	Dimension	Model No.	Part No.
Cross Cut	25 x 25 mm 0.98 x 0.98 in	TG420/C1	01/1440
Cross Cut	25 x 50 mm 0.98 x 1.97 in	TG420/C4	01/1566
Plain	25 x 25 mm 0.98 x 0.98 in	TG420/P1	01/1438
Plain	50 x 50 mm 1.97 x 1.97 in	TG420/P4	01/1559
Rubber	25 x 25 mm 0.98 x 0.98 in	TG420/R1	01/1439
Rubber	25 x 50 mm 0.98 x 1.97 in	TG420/R2	01/1521
Rubber	50 x 50 mm 1.97 x 1.97 in	TG420/R4	01/1558

Jaw Face Options



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG420/F	01/1437	Foot Switch Operated Pneumatic Vice Grips - 500 N (112.5 lbf)
TG420/H	01/1452	Hand Switch Operated Pneumatic Vice Grips - 500 N (112.5 lbf)

TG412

Pneumatically Actuated Vice Grip

This pneumatically actuated vice action grip is operated with a foot pedal (TG412/F) or can be specified for hand operation (TG412/H). Both grip types are supplied with standard plain 38 x 30 mm (1.5 x 1.81 in) metal faces. Optional jaw faces are available.

Capacity

5 kN, 1124 lbf

Packaging

Includes upper and lower grips with standard plain metal faces. The TG412 is not included when ordering optional jaw faces.

Applications

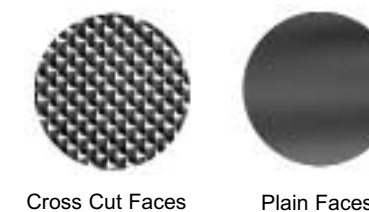
General purpose tensile testing for rubber, plastics, textiles and other materials where self-tightening is required.



Optional Jaw Faces for TG412

Face Type	Dimension	Model No.	Part No.
Cross Cut	38 x 30mm 1.5 x 1.81 in	TG412/C3	01/2333
Cross Cut	50 x 50mm 1.97 x 1.97 in	TG412/C4	01/2327
Plain	25 x 25mm 0.98 x 0.98 in	TG412/P1	01/2330
Plain	25 x 50mm 0.98 x 1.97 in	TG412/P2	01/2326
Plain	38 x 30mm 1.5 x 1.81 in	TG412/P3	01/2331
Plain	50 x 50mm 1.97 x 1.97 in	TG412/P4	

Jaw Face Options



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG412/F	01/2296	Foot Switch Operated Pneumatic Vice Grips - 5 kN (1124 lbf)
TG412/H	01/2295	Hand Switch Operated Pneumatic Vice Grips - 5 kN (1124 lbf)

Grips & Fixture Selection Guide

	Model Number	Capacity N	Capacity lbf	Maximum Sample Width	Part Number	Packaging	Mounting Size
Coefficient of Friction Fixtures							
Coefficient of Friction Fixture	TG35	100 N	22.5 lbf	100 mm (3.94 in) (Sled Width)	01/1173	Complete Fixture	15.85 mm (5/8 in) Eye End
Peel & Adhesion Fixtures							
90° Peel Fixture	TG38	200 N	45 lbf	85 mm (3.35 in)	01/1907	Complete Fixture	15.85 mm (5/8 in) Eye End
Climbing Drum Peel Fixture	TG580	2.5 kN	562.5 lbf	100 mm (3.94 in)	01/1818	Complete Fixture	15.85 mm (5/8 in) Eye End
Circular Adhesion Grips	GF-8	2.5 kN	562 lbf	76 mm (2.99 in)	GF-8	Upper & Lower	5/16 -18 Female
Shouldered Grip	TG136	5 kN	1124 lbf	50 mm (1.97 in)	01/1584	Complete Fixture	15.85 mm (5/8 in) Eye End

TG35

Coefficient of Sliding Friction Fixture

This fixture consists of a horizontal flat bed incorporating a suitable clamping device and a sled. The underside of the sled has a layer of smooth-faced foam rubber.

Capacity

100 N, 22.5 lbf

Packaging

Includes fixture, clamping device and sled.

Applications

Used to determine the static and kinetic coefficients of friction of plastic film and paper when sliding the specimen over itself under controlled test conditions. A sheet of the specimen is clamped securely to the horizontal bed and another sample of the specimen is clamped to the underside of the sled.

This measures the force required to overcome the frictional resistance between the two imposed surfaces, when one surface is moved relative to the other along their plane of contact. The static coefficient of friction is determined by the force required to overcome the initial resistance between the two surfaces. The kinetic coefficient of friction is determined from the subsequent force when continuous sliding at a constant rate of



Standards Applicable

NEXYGEN™ MT Software is required to measure coefficients of friction to conform to the following standards: ASTM D1894, BS2782.

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG35	01/1173	Coefficient of Sliding Friction Jig
NEXYGEN™ MT	40/0658	NEXYGEN MT Applications Software.

TG38

90° Peel Strength Fixture

This fixture features a self-adjusting sliding bed for 90° peel tests. The test plate moves freely in a horizontal position when the pressure sensitive material is removed in order to maintain a 90° peel angle.

Note: The test plate must be supplied by the customer. The FINAT standard states that plate glass should be used. If stainless steel or aluminum is used as a substitute, it should be stated with the recorded results.

Capacity

200 N, 45 lbf

Packaging

Includes fixture and sliding bed. Does not include test plate.

Applications

Used for peel tests on a wide range of materials including sealing tape, labels, laminated coatings, etc.

Measuring peel adhesion at 90° normally gives a lower recorded value than at 180° and allows values to be measured for materials normally giving paper tear. Peel adhesion is defined as the force required to remove pressure sensitive coated material, which has been applied to a standard test plate, under specified conditions, from the plate at a specified angle and speed. This fixture is ideal for use in tests complying with BS5350: Part C10 and FINAT test method No. 2 (FTM 2) – Peel Adhesion, 90° at 300 mm/min (11.81 in/min).

Ordering Information

Model	Part No.	Description
TG38	01/1907	90° Peel Strength Jig - 200 N (45 lbf)



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

TG580

Climbing Drum Peel Test Fixture

This peel test fixture consists of a flanged drum and flexible loading straps or cables. A drum clamp is used to securely hold the adherent against the drum face. The drum is balanced about the axis using counter weights placed diametrically opposed to the drum clamp to compensate for the clamp mass.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes fixture and loading straps.

Applications

Used to determine the resistance of joints to perpendicular peel stresses on an adhesive layer. Applicable to the testing of joints between an outer metal sheet and the core of sandwiched assemblies, e.g. honeycomb or other forms of composites. The adherents are separated steadily by the action of a revolving drum which rotates by the application of a tensile force from the associated testing machine.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	2.5 kN	562.5 lbf
Minimum Load Cell	1 kN	225 lbf
Maximum Sample Width	100 mm	3.94 in
Eye End Diameter	15.85 mm	5/8 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG580	01/1818	Climbing Drum Peel Test Jig - 2.5 kN (562.5 lbf)

GF-8

Circular Adhesion Grips

These grips come with a detachable upper and lower circular plate made of hardened steel. Ball socket mounting screws keep the top plate and bottom plates parallel and perpendicular to the applied force.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes upper and lower grip.

Applications

Used for general purpose adhesion testing.

Note: The GF-8 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.



TG136

Shouldered Grip for Adhesive Tests

This grip consists of 2 bobbin holders with a slot in the shoulder to allow the bobbins to be easily inserted. The adhesive to be tested is applied to the square surface of the bobbins then the bobbins are held together until the adhesive has set. The assembly is then slid into the slots of each holder and the tensile test performed. The grip is supplied complete with 6 bobbins so 3 tests can be performed. After each test, the adhesive has to be removed ready for the next test. The bobbins are also suitable for sealants and mastics.

Capacity

5 kN, 1124 lbf

Packaging

Includes upper and lower bobbin holders and includes six bobbins.

Applications

Determining the adhesion of adhesives, sealants and mastics by measuring the minimum tensile stress necessary to detach or rupture the coating.

Ordering Information

Model	Part No.	Description
GF-8	GF-8	Circular Adhesion Testing Grips - 2.5 kN (562.5 lbf)
TG136	01/1584	Shouldered Grip for Adhesive Tests - 5 kN (1124 lbf)



Standards Applicable

Designed to meet ISO4624-1978 and BS3900:Part E10:1979 (pull off test for adhesion).

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Grips & Fixture Selection Guide

	Part Number	Capacity N	Capacity lbf	Maximum Width	Sample Sample Thickness	Part Number	Packaging	Mounting Size
Clevis Grips								
Clevis Grip	GF-2	2.5 kN	562.5 lbf	10 mm (0.39 in)		GF-2	Upper & Lower	5/16-18 Female
Paper Analysis Applications								
Finch Device for Tensile Testing Wet Paper	TG72	500 N	112.5 lbf	25 mm (0.98 in)	N/A	01/1507	Upper & Lower	15.85 mm (5/8 in) Eye End
Puncture Test Fixtures								
Puncture Test Fixture (50 mm)	TG73/50	500 N	112.5 lbf	50 mm (1.97 in) Ø		01/1903	Complete Fixture	15.85 mm (5/8 in) Eye End
Puncture Test Fixture (80 mm)	TG73/80	500 N	112.5 lbf	80 mm (3.15 in) Ø		01/1782	Complete Fixture	15.85 mm (5/8 in) Eye End

GF-2

Clevis Grip

The GF-2 comes with an upper and lower assembly. The grip has a concave diameter that centers the sample and secures the pins while under load. The throat clearance with pin installed is 12 mm (0.47 in) at the centerline.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes upper and lower grip.

Applications

Spring testing or general applications where tensile tests are required.

Note: The GF-9 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.



Ordering Information

Model	Part No.	Description
GF-2	GF-2	Clevis Grip - 2.5 kN (562.5 lbf)

TG72

Wet Paper Testing per TAPPI T456 om-87

This specialised fixture complies with tensile testing on wet paper in accordance with TAPPI T456 om-87, ASTM D829, ISO 3781 and BS2922 Part 2. Used in conjunction with a top grip (TG34 or TG10 - order separately).

Capacity

500 N, 112.5 lbf

Packaging

Bottom fixture only. Use with TG34 or TG10 (order separately).

Applications

Loop tensile testing of wet paper.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Load Cell	100 N	22.5 lbf
Maximum Sample Width	25 mm	0.98 in
Eye End Diameter	15.85 mm	5/8 in
Weight	2 Kg	4.4 lb
Length	115 mm	4.53 in
Temperature Limits		Ambient

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG72	01/1507	Finch Device for Wet Paper Testing - 500 N (112.5 lbf)



TG72 Finch Device shown with TG10 upper grip

TG73

Puncture Test Fixtures

The puncture test jig consists of a circular frame 50 mm (1.97 in) diameter, with three equidistant clamps around the circumference, and a metal probe 20 mm (0.79 in) diameter which punctures the film. TG73/80 has an 80 mm (3.15 in) diameter frame and a 12.5 mm (0.49 in) diameter probe.

Applications

Puncture testing of thin plastic film.

Specification (TG73/50)

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	20 N	4.5 lbf
Aperture Diameter	50 mm	1.97 in
Probe Diameter	20 mm	0.79 in
Temperature Limits	Ambient	Ambient

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification (TG73/80)

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	20 N	4.5 lbf
Aperture Diameter	80 mm	3.15 in
Probe Diameter	12.5 mm	0.49 in
Temperature Limits	Ambient	Ambient



Ordering Information

Model	Part No.	Description
TG73/50	01/1903	50 mm (0.97 in) Puncture Test Jig - 500 N (112.5 lbf)
TG73/80	01/1782	80 mm (3.15 in) Puncture Test Jig - 500 N (112.5 lbf)

Grips & Fixture Selection Guide

Food Texture Analysis Applications	Model Number	Capacity N	lbf	Maximum Sample Width	Part Number	Packaging	Mounting Size
Base Table	FG/Base				01/2757		
Ball Probe - 1/4 in diameter	FG/BA1	500 N	112.5 lbf		01/2679	Complete Probe	M6 Screw Fit
Ball Probe - 1/2 in diameter	FG/BA3	500 N	112.5 lbf		01/2680	Complete Probe	M6 Screw Fit
Ball Probe - 3/4 in diameter	FG/BA5	500 N	112.5 lbf		01/2681	Complete Probe	M6 Screw Fit
Ball Probe - 1 in diameter	FG/BA7	500 N	112.5 lbf		01/2682	Complete Probe	M6 Screw Fit
Ball Probe - 2 mm diameter	FG/BA2	500 N	112.5 lbf		01/2679	Complete Probe	M6 Screw Fit
Ball Probe - 4 mm diameter	FG/BA4	500 N	112.5 lbf		01/2684	Complete Probe	M6 Screw Fit
Ball Probe - 6 mm diameter	FG/BA6	500 N	112.5 lbf		01/2685	Complete Probe	M6 Screw Fit
Ball Probe - 8 mm diameter	FG/BA8	500 N	112.5 lbf		01/2686	Complete Probe	M6 Screw Fit
Ball Probe - 10 mm diameter	FG/BA10	500 N	112.5 lbf		01/2687	Complete Probe	M6 Screw Fit
Cone Probe - 15°	FG/CO15	500 N	112.5 lbf		01/2688	Complete Probe	M6 Screw Fit
Cone Probe - 30°	FG/CO30	500 N	112.5 lbf		01/2689	Complete Probe	M6 Screw Fit
Cone Probe - 45°	FG/CO45	500 N	112.5 lbf		01/2690	Complete Probe	M6 Screw Fit
Cone Probe - 60°	FG/CO60	500 N	112.5 lbf		01/2691	Complete Probe	M6 Screw Fit
Cone Probe - 90°	FG/CO90	500 N	112.5 lbf		01/2692	Complete Probe	M6 Screw Fit
Cylinder Probe - 1/4 in diameter	FG/CY1	500 N	112.5 lbf		01/2666	Complete Probe	M6 Screw Fit
Cylinder Probe - 1/2 in diameter	FG/CY3	500 N	112.5 lbf		01/2667	Complete Probe	M6 Screw Fit
Cylinder Probe - 3/4 in diameter	FG/CY5	500 N	112.5 lbf		01/2668	Complete Probe	M6 Screw Fit
Cylinder Probe - 1 in diameter	FG/CY7	500 N	112.5 lbf		01/2669	Complete Probe	M6 Screw Fit
Cylinder Probe - 1.5 in diameter	FG/CY9	500 N	112.5 lbf		01/2670	Complete Probe	M6 Screw Fit
Cylinder Probe - 2 in diameter	FG/CY11	500 N	112.5 lbf		01/2671	Complete Probe	M6 Screw Fit
Cylinder Probe - 3 in diameter	FG/CY13	500 N	112.5 lbf		01/2672	Complete Probe	M6 Screw Fit
Cylinder Probe - 4 in diameter	FG/CY15	500 N	112.5 lbf		01/2673	Complete Probe	M6 Screw Fit
Cylinder Probe - 2 mm diameter	FG/CY2	500 N	112.5 lbf		01/2674	Complete Probe	M6 Screw Fit
Cylinder Probe - 4 mm diameter	FG/CY4	500 N	112.5 lbf		01/2675	Complete Probe	M6 Screw Fit
Cylinder Probe - 6 mm diameter	FG/CY6	500 N	112.5 lbf		01/2676	Complete Probe	M6 Screw Fit
Cylinder Probe - 8 mm diameter	FG/CY8	500 N	112.5 lbf		01/2677	Complete Probe	M6 Screw Fit
Cylinder Probe - 10 mm diameter	FG/CY10	500 N	112.5 lbf		01/2678	Complete Probe	M6 Screw Fit
Butter Cutting Jig	FG/BCJ	500 N	112.5 lbf	95 mm (3.7 in)	01/2664	Complete Fixture	15.85 mm (5/8 in) Eye End
Kramer-Type Shear Cell	FG/KSC	1 kN	225 lbf		01/2754	Complete Fixture	15.85 mm (5/8 in) Eye End
Ottawa Forward Extrusion Testing Cell	FG/FEC	1 kN	225 lbf		01/2758	Complete Fixture	15.85 mm (5/8 in) Eye End
Warner Bratzler Shear Blade Set	FG/SBS	1 kN	225 lbf		01/2767	Complete Fixture	15.85 mm (5/8 in) Eye End
Spaghetti Noodle Testing Fixture	FG/SPAG	500 N	112.5 lbf		01/2659	Complete Fixture	15.85 mm (5/8 in) Eye End
Back Extrusion Food Cell	FG/BEC	500 N	112.5 lbf		01/2760	Complete Fixture	M6 Screw Fit
Food 3-Point Bend Jig	FG/TPB	1 kN	225 lbf	40-80 mm (1.6 - 3.1 in) span	01/2756	Complete Fixture	15.85 mm (5/8 in) Eye End
Volodkevitch Bite Set	FG/VBS	500 N	112.5 lbf		01/2663	Complete Fixture	15.85 mm (5/8 in) Eye End
Magnus Taylor Puncture Probe Set	FG/MTP	2 kN	450 lbf		01/3108	Two sets of two probes	M6 Screw Fit
Comparative Dough Stickiness Jig	FG/DSJ	500 N	112.5 lbf		01/2657	Complete Fixture	M6 Screw Fit/Base Table
Dough Preparation Set	FG/DPS	500 N	112.5 lbf		01/2656	Complete Fixture	M6 Screw Fit/Base Table
Gluten Dough Extensibility Jig	FG/DEK	500 N	112.5 lbf		01/2759	Complete Fixture	M6 Screw Fit/Base Table
Crisp Fracture Support Jig	FG/CRISP	500 N	112.5 lbf		01/2658	Complete Fixture	M6 Screw Fit/Base Table
Knife Edge Probe Set	FG/KN1	500 N	112.5 lbf		01/2693	Complete Fixture	M6 Screw Fit

Food Texture Analysis Grips

Food Texture Analysis Grips

TAPlus Food Base Table

The base table is supplied with two inserts, one blank and one with a central locator hole. The blank insert provides a flat and solid base for positioning samples for testing. The holed plate provides location for a number of test fixtures such as the back extrusion cell and Volodkevitch Bite Set. Other fixtures such as the Kramer Shear Cell, Ottawa Cell and Warner Bratzler are located in the cut-out section (without an insert plate) and are secured using the two thumb screws. This helps ensure accurate central positioning.



Ordering Information

Model	Part No.	Description
FG/BASE	01/2757	Texture Analysis Base Table

Ball Probes

Two fundamental criteria for a good test are repeatability and resolution for comparison between results. In many cases where sample hardness/softness is required, a ball probe can provide both repeatability and resolution. The principle of the ball probe is that uniform compression force is distributed at a normal angle to the surface area of the ball. This gives an averaging effect over the local area being tested.

Applications

Ball probes are invaluable for performing a wide variety of texture analysis tests. They are ideal for fruit, vegetables, and confectionary products. For specimens where the application requires the material to flow, for example cream cheese being squeezed from a tube, it is possible to contain a sample in a small purpose built container and penetrate the sample with a ball probe.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Probe No.	Ball Diameter	Max Load	Screw Fitting	Part No.
FG/BA1	1/4 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2679
FG/BA3	1/2 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2680
FG/BA5	3/4 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2681
FG/BA7	1 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2682
FG/BA2	2 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2683
FG/BA4	4 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2684
FG/BA6	6 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2685
FG/BA8	8 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2686
FG/BA10	10 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2687

Cone Probes

Cone probes are supplied with a range of angles, from 15° to 90°. The selection of the appropriate cone is, in some cases, dependent upon the testing standard, or alternatively can be selected appropriately for the consistency of the material being tested.

Applications

Cone probes have been used for many years, particularly on penetrometers, for testing building industry products such as sealants and mastics, and the cosmetics and pharmaceutical industries for testing creams and pastes. Cone probes are useful for determining the spreadability of dairy products such as margarine, butter and spreads.



Cone probe shown with TG/BEC back extrusion cell (not included)

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

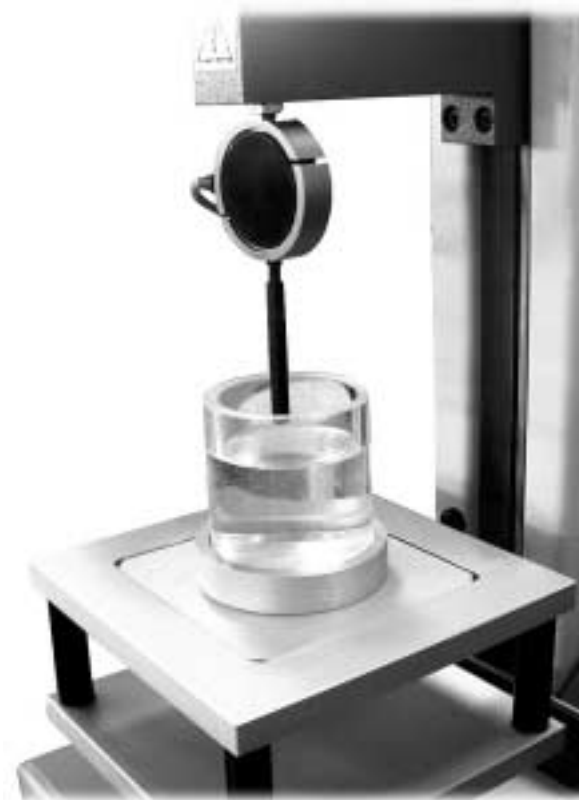
Probe No.	Cone Angle	Max Load	Screw Fitting	Part No.
FG/CO15	15°	500 N (112.5 lbf)	6 mm (1/4 in)	01/2688
FG/CO30	30°	500 N (112.5 lbf)	6 mm (1/4 in)	01/2689
FG/CO45	45°	500 N (112.5 lbf)	6 mm (1/4 in)	01/2690
FG/CO60	60°	500 N (112.5 lbf)	6 mm (1/4 in)	01/2691
FG/CO90	90°	500 N (112.5 lbf)	6 mm (1/4 in)	01/2692

Cylinder Probes

The principle of the cylindrical probe is that as the probe is forced into the sample, a shearing force acts which causes the sample to deform or rupture. This produces a curve showing load resulting from deformation.

Applications

Cylindrical probes have traditionally been used as general purpose compression probes for a wide range of applications, primarily for applying a deformation to a gel structure to determine the gel strength and elasticity. They are also useful for applying a shearing force to a gel to determine its breaking strength and elasticity. Many standards quote cylindrical probes for gel testing. The Bloom value is a recognised standard for quoting the strength of a gel structure, particularly gelatine.



Cylinder probe shown with TG/BEC back extrusion cell (not included)

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Probe No.	Cylinder Diameter	Max Load	Screw Fitting	Part No
FG/CY1	1/4 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2666
FG/CY3	1/2 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2667
FG/CY5	3/4 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2668
FG/CY7	1.0 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2669
FG/CY9	1 1/2 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2670
FG/CY11	2.0 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2671
FG/CY13	3.0 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2672
FG/CY15	4.0 in	500 N (112.5 lbf)	6 mm (1/4 in)	01/2673
FG/CY2	2 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2674
FG/CY4	4 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2675
FG/CY6	6 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2676
FG/CY8	8 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2677
FG/CY10	10 mm	500 N (112.5 lbf)	6 mm (1/4 in)	01/2678

FG/BCJ

Butter Cutting Jig

The frame of the butter cutter supports a standard size cutting wire.

Capacity

500 N, 112.5 lbf

Packaging

Complete jig.

Applications

Used to determine force required to slice food products including butter and cheese.

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	100 N	22.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Width	95 mm	3.74 in
Height	65 mm	2.56 in
Weight	0.25 Kg	0.6 lbs
Temperature Limits	-10°C to 100°C	14°F to 212°F

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.



Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/BCJ	01/2664	Butter Cutting Jig - 500 N (112.5 lbf)

FG/KSC

Kramer-Type Shear Cell Jig

The Kramer Type Shear Cell comprises ten parallel steel blades which are driven down through guide slots into a rectangular container with corresponding slots in the base. The sample is sheared, compressed and extruded through the bottom openings.

Capacity

1 kN, 225 lbf

Packaging

Complete jig.

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	100 N	22.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight	1 Kg	2.2 lbs
Temperature Limits	-10°C to 100°C	14°F to 212°F

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.



Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/KSC	01/2754	Kramer Shear Cell - 1 kN (225 lbf)

FG/FEC

Ottawa Forward Extrusion Testing Cell

The Ottawa Test jig consists of a square test cell with solid walls and an open base which can be fitted with one of a variety of plates which are included in the kit. A square plunger is fitted to the machine crosshead and provides the compression.

The test method involves weighing a suitable quantity of sample which is placed in the cell with either a slotted or a perforated plate fitted. In either case the result is determined by measuring the resulting force required to extrude the sample.

Capacity

1 kN, 225 lbf

Packaging

Complete jig.

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Load Cell	100 N	22.5 lbf
Extrusion Plates	4 mm Ø holes	0.16 in
	3 mm Ø holes	0.12 in
Eye End Diameter	15.85 mm	5/8 in
Temperature Limits	Ambient to 100°C (212°F)	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.



Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/FEC	01/2758	Ottawa Forward Extrusion Cell - 1 kN (225 lbf)

FG/SBS

Warner Bratzler Shear Blade Set

The jig consists of a rigid frame supporting a shear bar. Interchangeable shear blades fit into the frame. The kit is supplied with three blades: A square cut blade, a 'V' blade, and a 'V' blade with a hole in the apex.

Capacity

500 N, 112.5 lbf

Packaging

Complete jig.



Note: Requires base table FG/BASE

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	100 N	22.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight	0.25 Kg	0.6 lbs
Temperature Limits	-10°C to 100°C 14°F to 212°F	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
FG/SBS	01/2767	Warner Bratzler Shear Blade Set - 500 N (112.5 lbf)

FG/SPAG

Spaghetti Noodle Testing Fixture

The set consists of two roller grips, designed for tensile testing of food products such as spaghetti and noodles.

Capacity

500 N, 112.5 lbf

Packaging

Complete jig.



Specification

Maximum Capacity	500 N	112.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight	0.25 Kg	0.6 lbs
Temperature Limits	-10°C to 100°C 14°F to 212°F	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
FG/SPA	01/2659	Spaghetti Noodle Testing Fixture - 500 N (112.5 lbf)

FG/BEC

Back Extrusion Food Cell

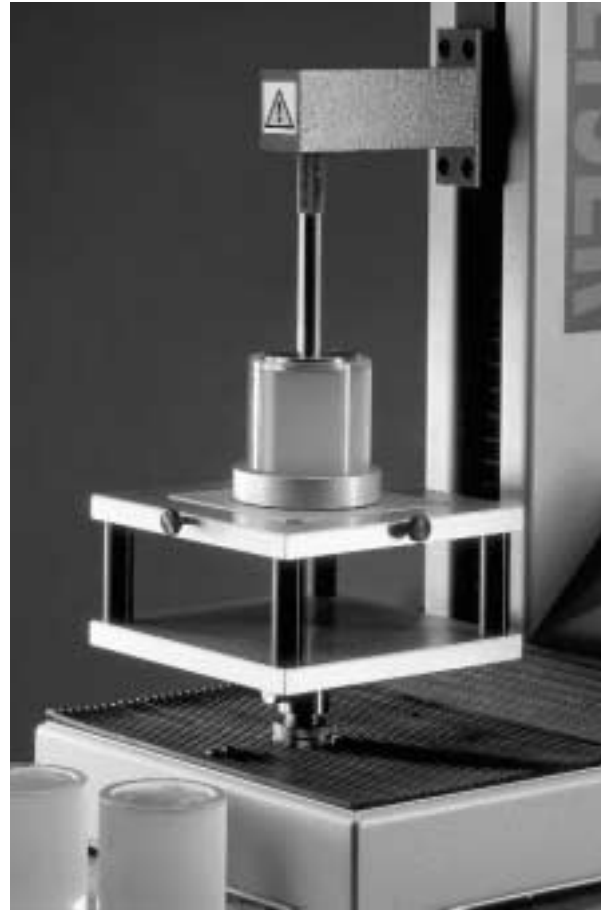
The Back Extrusion Food Cell consists of a circular plunger which is driven into a larger cylinder to compress the food sample and force it through the gap between the plunger and the container. This results in a peak compression force and then a fluctuating compression force. The kit is supplied with three different diameter plungers.

Capacity

500 N, 112.5 lbf

Packaging

Complete jig.



Note: Requires base table FG/BASE

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Load Cell	100 N	22.5 lbf
Cylinder Length	125 mm	4.92 in
Disc Diameters	35 mm	1.38 in
	40 mm	1.57 in
	45 mm	1.77 in
Weight	0.25 kg	0.6 lbs
Temperature Limits	Ambient or Food Temperature	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
FG/BEC	01/2760	Back Extrusion Food Cell - 500 N (112.5 lbf)

FG/TPB

3-Point Bend Test for Food

Three point bend jig for general purpose food sample fracture testing.

Capacity

1 kN, 225 lbf

Packaging

Complete jig.



Note: Requires base table FG/BASE

Specification

Maximum Capacity	1 kN	225 lbf
Minimum Loadcell	50 N	11.25 lbf
Span Range	40-80 mm	1.57 - 3.15 in
Eye End Diameter	15.85 mm	5/8 in
Weight	0.25 Kg	0.6 lbs
Temperature Limits	-10°C to 100°C 14°F to 212°F	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
FG/TPB	01/2756	3-Point Bend Jig for Food - 1 kN (225 lbf)

FG/VBS

Volodkevitch Bite Set

Designed to imitate incisor teeth shearing through a food sample. The set comprises upper and lower 'teeth' which, during the test, are brought together until nearly touching. The sample is positioned on the lower 'tooth' and the result is measured as the peak force required to bite through the sample.

Capacity

500 N, 112.5 lbf

Packaging

Complete jig.



Note: Requires base table FG/BASE

Specification

Maximum Capacity	500 N	112.5 lbf
Minimum Loadcell	50 N	11.25 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight	0.25 Kg	0.6 lbs
Temperature Limits	-10°C to 100°C	
	14°F to 212°F	

Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
FG/VBS	01/2663	Volodkevitch Bite Set - 500 N (112.5 lbf)

Texture Analysis Accessory Kits

A range of texture analysis accessories kits are available. Each kit consists of specially selected jigs and probes for analysis of specific food types.

Application of a texture analysis system in an organisation can highlight numerous quality improvement opportunities and other benefits through operations, typically research and development, production/process control, and quality assurance/control.

Bakery Accessories Kit

A Bakery Kit containing the following items:-

- TPB - 3-point bend jig
- DPS - Dough firmness testing set
- DSJ - Comparative dough stickiness measurements jig
- CRISP - Crisp fracture support jig
- CY7 - 25.4 mm (1.0 in) diameter cylinder probe

Confectionery Accessories Kit

A Confectionery Kit containing the following items:-

- TPB - 3 point bend jig
- CY2 - 2 mm (0.08 in) diameter cylinder probe
- CY7 - 25.4 mm (1.0 in) diameter cylinder probe
- BA2 - 2 mm (0.08 in) diameter ball probe
- BA3 - 1/2 in (12.7 mm) diameter ball probe

Dairy Accessories Kit

A Dairy Kit consisting of the following items:-

- BCJ - Butter cutting jig
- CY11 - 50.8 mm (2.0 in) diameter cylinder probe
- CY2 - 2 mm (0.08 in) diameter cylinder probe
- CY4 - 4 mm (0.16 in) diameter cylinder probe

General Food Probe Kit

This probe set contains the following items:-

- CY1 - 6.35 mm (1/4 in) diameter cylinder probe
- CY7 - 25.4 mm (1.0 in) diameter cylinder probe
- BA3 - 12.7 mm (1/2 in) diameter ball probe
- BA7 - 25.4 mm (1.0 in) diameter ball probe

Ordering Information

Model	Part No.	Description
FG/BAKERY	01/2696	Bakery Accessories Kit
FG/CONFECT	01/2698	Confectionery Accessories Kit
FG/DAIRY	01/2697	Dairy Accessories Kit
FG/GENERAL	01/2695	General Food Probe Kit



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

FG/MTP

Magnus Taylor Puncture Probe Set

This jig consists of two sets of cylindrical probes of different sizes. Each pair has one flat end and one half round domed end.

Capacity

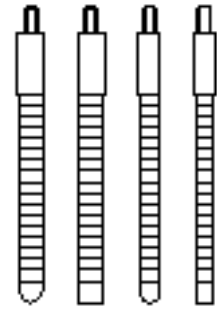
2 kN, 450 lbf, 200 kg

Packaging

Includes probe set.

Applications

Puncture/penetration tests on fruit, vegetables and food products.



Specification

Maximum Capacity	2 kN	450 lbf - 204 kg
Minimum Loadcell	50 N	11.25 lbf
Probe Diameters	7.94 mm	0.31 in
	11.11 mm	0.44 in
Temperature Limits	Food temperature	

Ordering Information

Model	Part No.	Description
FG/MTP	01/3108	Magnus Taylor Puncture Probe Set - 2 kN (450 lbf, 200 kg)

FG/DSJ

Comparative Dough Stickiness Jig

The jig consists of a test cell with an internal chamber, an extrusion lid and perspex cap. An internal screw fitted to the base of the chamber is rotated to move the internal piston up or down to increase or decrease the space within the chamber and extrude the dough. The perspex cap is used to reduce moisture loss when the sample is 'resting'. The cylinder probe is used to test the adhesiveness/stickiness of the dough.

Capacity

500 N, 112.5 lbf, 50 kg

Packaging

This jig includes an extrusion cell with lid, perspex cover and a probe.

Applications

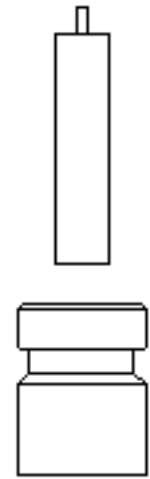
Measurement of dough stickiness.

Specification

Maximum Capacity	500 N	112.5 lbf 50 kg
Minimum Loadcell	50 N	11.25 lbf 5 kg
Probe Diameters	25.4 mm	1.0 in
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
FG/DSJ	01/2657	Comparative Dough Stickiness Jig - 500 N (112.5 lbf, 50 kg)



FG/DPS

Dough Preparation Set

This jig is designed for dough firmness testing. It comprises a container and a flattening plunger used to flatten the sample and a spiked plunger to aerate the sample before testing with the 6 mm (0.24 in) diameter flat ended probe.

Capacity

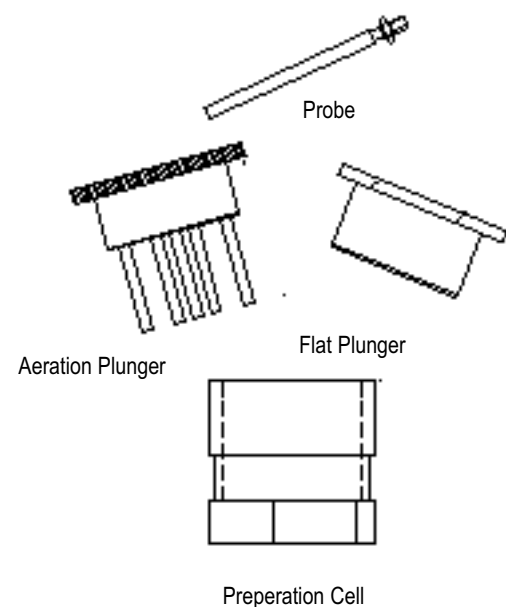
2 kN, 450 lbf, 200 kg

Packaging

Complete fixture supplied with test cell, sample flattening plunger, aeration plunger and flat ended probe.

Applications

To measure the characteristics of dough, eg biscuit dough.



Specification

Maximum Capacity	500 N	112.5 lbf - 50 kg
Minimum Loadcell	10 N	2.25 lbf
Probe Diameters	6 mm	1/4 in
Temperature Limits	Ambient	

Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/DPS	01/2656	Dough Preparation Set - 500 N (112.5 lbf, 50 kg)

FG/DEK

Gluten Dough Extensibility Jig

This jig consists of a probe with a side hook to pull the dough sample in an upwards movement held in position by a specially designed clamping fixture. It is complete with a sample preparation press.

Capacity

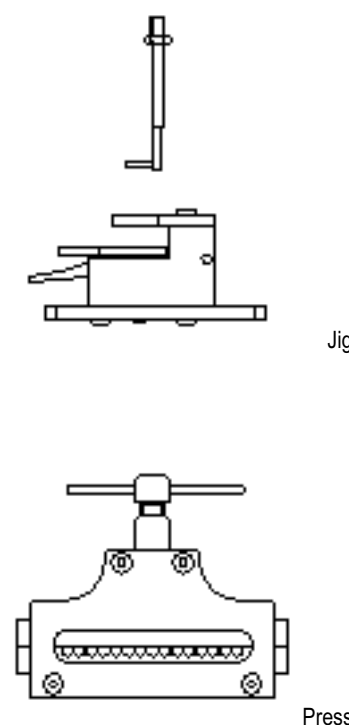
500 N, 112.5 lbf, 50 kg

Packaging

Supplied complete with a sample preparation press to cut the dough in the required shape for the test.

Applications

Dough extensibility tests.



Specification

Maximum Capacity	500 N	112.5 lbf - 50 kg
Minimum Loadcell	10 N	2.25 lbf
Probe Diameters	6 mm	1/4 in
Temperature Limits	-10 to 100°C	

Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/DEK	01/2759	Gluten Dough Extensibility Jig - 500 N (112.5 lbf, 50 kg)

FG/CRISP

Crisp Fracture Support Jig

This jig consists of a ball probe and a round hollow support mounted to the base table. The ball probe is driven down to apply a bending force to the sample, such as a crisp (also known as 'chip' in other countries).

Capacity

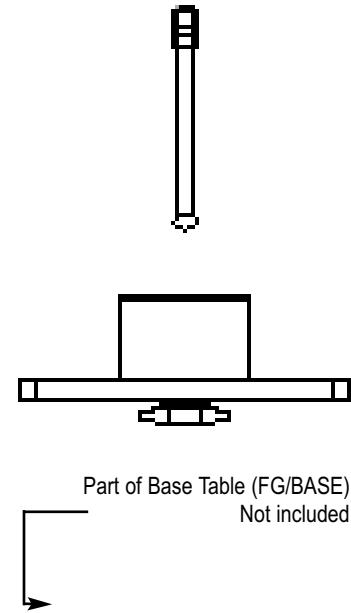
500 N, 112.5 lbf, 50 kg

Packaging

Complete fixture.

Applications

Measurement of the crispiness and fracturability of snack foods such as crisps (chips) by means of a penetration test.



Specification

Maximum Capacity	500 N	112.5 lbf	50 kg
Minimum Loadcell	10 N	2.25 lbf	
Probe Diameters	6 mm	1/4 in	
Temperature Limits	-10 to 100°C		

Note: Requires base table FG/BASE

Ordering Information

Model	Part No.	Description
FG/CRISP	01/2658	Crisp Fracture Support Jig - 500 N (112.5 lbf, 50 kg)

FG/KN1

Knife Edge Probe Set

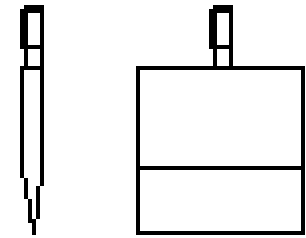
A 25 mm (0.98 in) wide knife edge blade.

Capacity

500 N, 112.5 lbf, 50 kg

Packaging

Single knife probe.



Specification

Maximum Capacity	500 N	112.5 lbf	50 kg
Minimum Loadcell	10 N	2.25 lbf	
Probe Diameters	25 mm	0.98 in	
Temperature Limits	Food Temperature		

Ordering Information

Model	Part No.	Description
FG/KN1	01/2693	Knife Edge Probe Set - 500 N (112.5 lbf, 50 kg)

Wire Analysis Grips

Grips & Fixture Selection Guide

Wire Analysis Grips	Part Number	Capacity N	lbf	Maximum Sample Dimensions	Sample Part Diameter	Number	Packaging	Mounting Size
Spring Loaded Clamp Grip	TG32	5 N	1.12 lbf	N/A	1 mm (0.04 in)	01/0887	Upper & Lower	15.85 mm (5/8 in) Eye End
Wrapped Wire Connector Grip	ML4244	130 N	30 lbf	N/A	N/A	ML4244	Single Grip	#10-32 Female
Cam Operated Smooth Faced Grip	ML1821	130 N	30 lbf			ML1821	Upper & Lower	#10-32 Femal
Terminal Testing Turret	ML1785	2.5 kN	562.5 lbf	N/A	14 to 4 Gauge Wire	ML1785	Single Grip	5/16-18 Female
Grooved Snubber 1/32 in	GF-4	250 N	56.25 lbf	N/A	0.8 mm (0.31 in)	GF-4	Upper & Lower	3/8-16 Female
Wire & Terminal Grip	GF-10	500 N	112.5 lbf			GF-10	Upper & Lower	#10-32 Female
Grooved Snubber 1/16 in	GF-3	1 kN	225 lbf	N/A		GF-3	Upper & Lower	#10-32 Female
Vice Action Grip	TG11	2 kN	450 lbf	N/A	1.6 mm (0.06 in)	01/1608	Upper & Lower	15.85 mm (5/8 in) Eye End
Bollard Grip	TG12	2 kN	450 lbf	N/A	5 mm (0.2 in)	01/1829	Upper & Lower	15.85 mm (5/8 in) Eye End
Figure 8 Grip	GF-5	2.5 kN	562.5 lbf	N/A	9.5 mm (0.37 in)	GF-5	Upper & Lower	3/8-16 Female
Double Bollard Grip - 20 kN	TG23	20 kN	4496 lbf	N/A	6 mm (0.24 in)	GPS/0014/00	Upper & Lower	15.85 mm (5/8 in) Eye End
Double Bollard Grip - 30 kN	TG65	30 kN	6744 lbf	60 x 5 mm (2.36 x 0.2 in)	N/A	01/1139	Upper & Lower	31.7 mm (1 1/4 in) Eye End

TG32

Spring Loaded Clamp Grip

Lightweight, spring loaded, rubber faced clamp grips for very light loads (mechanical testing of steel wire).

Capacity

5 N, 1.12 lbf

Packaging

Includes upper and lower grip.

Specification

Maximum Capacity	5 N	1.12 lbf
Minimum Loadcell	5 N	1.12 lbf
Maximum Sample Width	5 mm	0.2 in
Maximum Sample Thickness	1 mm	0.04 in
Eye End Diameter	15.85 mm	5/8 in
Weight Each	0.1 Kg	0.2 lb
Length Each	100 mm	3.94 in
Temperature Limits	Ambient	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG32	01/0887	Spring Loaded Clamp Grip for Wire - 5 N (1.12 lbf)

ML-1785

Terminal Testing Turret

This turret assembly is used to test the strength of wire terminals, connectors and other end fittings. The standard rotating turret has nine grooves to accept wire sizes from 14 ga. to 4 ga. (blank turrets are available for custom sizes). A ring stud is provided behind the wheel for use with ring-type terminals.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes upper and lower grip.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
ML1785	ML1785	Terminal Testing Turret - 2.5 kN (562.5 lbf)

ML-4244

Wrapped Wire Connector Grip

Designed to facilitate the testing of wrapped wire connections and terminations. The grip is formed in an "L" shape that can be notched by the user to any desired dimension to accommodate a connection post. During a test, the fixture is slipped over the terminal post below the wire wrap. When a tension load is applied, the grip engages the wrap and pulls it off the post.

Capacity

130 N, 30 lbf

Packaging

Includes upper and lower grip.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

ML-1821

Cam Operated Smooth Faced Grip

This 6mm (1/4 in) wide aluminum fixture has a 130 N (30 lbf) capacity. The specimen is inserted between the holding blocks and secured by the cam by its hand lever. This grip is used for testing wire tensile strength or filament, magnetic tape, film, foils and adhesives. Cam and tensing block may be removed for cleaning.

Capacity

130 N, 30 lbf

Packaging

Includes upper and lower grip.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
ML4244	ML4244	Wrapped Wire Connector Grip - 130 N (30 lbf)

Ordering Information

Model	Part No.	Description
ML1821	ML1821	Cam Operated Smooth Faced Grip - 130 N (30 lbf)

GF-4

Miniature Filament Fixture

Ideal for testing filament or extremely fine, flexible wire up to 0.8 mm (0.03 in) diameter. Grip includes a 11 mm (0.43 in) diameter snubber which is part of a precision machined swiveling fixture that ensures specimen alignment with the force when load is applied.

Capacity

250 N, 56.25 lbf

Packaging

Includes upper and lower grip.



Note: The GF-4 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-4	GF-4	Miniature Filament Fixture - 250 N (56.25 lbf)

GF-10

Wire Terminal Testing Fixture

Specifically designed to test the ultimate strength of wire/terminal connections. Upper grip consists of a self-aligning wheel with nine equally spaced slots to accept standard terminal shank sizes. Ring terminals are secured with a pin, in line with the largest slot. Bottom grip has an eccentrically mounted, self-tightening knurled roller which will accept wire up to 3.2 mm (0.13 in) in diameter.

Capacity

500 N, 112.5 lbf

Packaging

Includes upper and lower grip.

Lower grip is also optionally available as single unit.

Specification

Grip Slot Sizes	0.8 mm	0.03 in
	1.2 mm	0.05 in
	1.6 mm	0.06 in
	2.0 mm	0.08 in
	2.4 mm	0.09 in
	3.2 mm	0.13 in
	4.0 mm	0.16 in
	4.8 mm	0.19 in
	6.4 mm	1/4 in



Note: The GF-10 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-10	GF-10	Wire Terminal Tester Fixture - 500 N (112.5 lbf)
16020-A	16020-A	Eccentrically Mounted Self-Tightening Knurled Roller Grip

GF-3

Wire Grips

Grooved snubber and post design ensures center break of flexible wire up to 1.6 mm (0.06 in) diameter. May also be used for testing cord, rubber or filaments. 25 mm (0.98 in) diameter snubber is mounted on swiveling plate so that the specimen will align with the force when load is applied. A ball socket mounting screw in upper grip helps ensure proper alignment with lower grip.

Capacity

1 kN, 225 lbf

Packaging

Includes upper and lower grip.



Note: The GF-3 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-3	GF-3	Wire Grip - 1 kN (225 lbf)

TG11

Vice Action Grip

This vice-action grip is used primarily on soft wire, cords and fibers.

Capacity

2 kN, 450 lbf

Packaging

Includes upper and lower grip.

Specification

Maximum Capacity	2 kN	450 lbf
Minimum Load Cell	20 N	4.5 lbf
Eye End Diameter	15.85 mm	5/8 in
Weight (Each)	0.1 Kg	0.2 lb
Temperature Limits	-70°C to 100°C	
	-94°F to 212°F	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG11	01/1608	Fine Wire Grip with Circular Clamp - 2 kN (450 lbf)

TG12

Bollard Grip

Bollard grip for wire, yarns and threads. The sample is wrapped around the bollard and the free end clamped firmly in place. Grip stresses in the specimen are distributed in the material in contact with the bollard circumference.

Capacity

2 kN, 450 lbf

Packaging

Includes upper and lower grip.

Specification

Maximum Capacity	2 kN	450 lbf
Minimum Loadcell	20 N	4.5 lbf
Bollard Diameter	32 mm	1.26 in
Max. Sample Diameter	5 mm	0.2 in
Eye End Diameter	15.85 mm	5/8 in
Weight (Each)	0.25 Kg	0.6 lb
Temperature Limits	Ambient	



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Ordering Information

Model	Part No.	Description
TG12	01/1829	Bollard Grip with Vise Clamp for Wire - 2 kN (450 lbf)

GF-5

Cord & Twine Grips

Three non-locking pin design for "Figure 8" wrap of samples ensures center break. Designed for fast installation and release of the test specimen. Throat clearance with pins installed and clearance between pins is 9.5 mm (0.37 in). Throat width is 12 mm (1/2 in). Ball socket mounting screw in upper grip helps ensure proper alignment with lower grip.

Capacity

2.5 kN, 562.5 lbf

Packaging

Includes upper and lower grip.



Note: The GF-5 is supplied with the following adapters for mounting to some force gauges, loadcells and test stands.

	Part Number
Coupling, 1/4-20F x 5/16-18F	17056
Coupling, 1/4-20F x #10-32F	17057
Adapter, 1/4-28 x 3/8-16	21046-1
Adapter, #10-32 x 3/8-16	21046-2

See pages 93-113 for additional adapters required.

Ordering Information

Model	Part No.	Description
GF-5	GF-5	Figure 8 Cord & Twine Grip - 2.5 kN (562.5 lbf)

TG23

Double Bollard Grip - 20 kN

Double bollard grip for wire, yarns and threads. The sample is secured in a clamp and run around the two bollards. Grip stresses in the specimen are distributed uniformly around the bollard circumferences.

Capacity

20 kN, 4496 lbf

Packaging

Includes upper and lower grip.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	20 kN	4496 lbf
Minimum Loadcell	500 N	112.5 lbf
Max. Sample Width	60 mm	2.36 in
Max. Sample Thickness	5 mm	0.2 in
Eye End Diameter	31.7 mm	1.25 in
Weight (each)	2.5 Kg	5.5 lb
Temperature Limits	Ambient	

TG65

Double Bollard Grip - 30 kN

Double bollard tensile grip for tensile testing of safety harness, seat belt webbing and similar materials until break.

Capacity

30 kN, 6744 lbf

Packaging

Includes upper and lower grip.



Note: See pages 93-113 for adapters required to fit grips to force gauges, loadcells, and test stands.

Specification

Maximum Capacity	30 kN	6744 lbf
Minimum Loadcell	500 N	112.5 lbf
Bollard Diameter	12 mm	0.47 in
Maximum Sample Width	60 mm	2.36 in
Maximum Sample Thickness	5 mm	0.2 in
Eye End Diameter	31.7 mm	1.25 in
Weight Each	2.5 Kg	5.5 lb
Temperature Limits	Ambient	

Ordering Information

Model	Part No.	Description
TG23	GPS/0014/00	Bollard Grip with Vise Clamp for Wire - 20 kN (4496 lbf)

Ordering Information

Model	Part No.	Description
TG65	01/1139	Double Bollard for Webbing and Strapping - 30 kN (6744 lbf)

Remote Series Loadcell Adapters

Model	Capacity		Part No.	Mounting Type	Mounting Fitting Size	Remote-2	Remote-10	Remote-50	Remote-100	Remote-200	Remote-500	Remote-1000	Remote-2000	Remote-5000	Remote-10000
	Newton	lbf													
GF-3	1 kN	225 lbf	GF-3	Threaded	1/4-20M	Direct Connect	Direct Connect	17056	17056	17056	17057	17057	17057	17057	
GF-4	250 N	56 lbf	GF-4	Threaded	1/4-20M	Direct Connect	Direct Connect	17056	17056	17056	17057	17057	17057	17057	
GF-5	2.5 kN	562 lbf	GF-5	Threaded	5/16-18F	P-10020	NC000296	NC000296	NC000296	NC000296	17162	17162	17162	17162	
GF-51	100 N	20 lbf	GF-51	Threaded	#10-32M	17160	17160	17160	17160	17160	17039	17160	17039	17160	
GF-52	100 N	20 lbf	GF-52	Threaded	#10-32M	17160	17160	17160	17160	17160	17039	17160	17039	17160	
GF-53	125 N	28 lbf	GF-53	Threaded	#10-32F	Direct Connect	Direct Connect	17039	17039	17039					
GF-54	250 N	56 lbf	GF-54	Threaded	#10-32F	Direct Connect	Direct Connect	17039	17039	17039					
GF-6	1 kN	225 lbf	GF-6	Threaded	1/4-20M	Direct Connect	Direct Connect	17056	17056	17056	17057	17057	17057	17057	
GF-7	1 kN	225 lbf	GF-7	Threaded	1/4-20M	Direct Connect	Direct Connect	17056	17056	17056	17057	17057	17057	17057	
GF-8	2.5 kN	562 lbf	GF-8	Threaded	5/16-18F	Direct Connect	Direct Connect	NC000296	NC000296	NC000296	17162	17162	17162	17162	
GF-9	2.5 kN	562 lbf	GF-9	Threaded	1/4-20M	Direct Connect	Direct Connect	17056	17056	17056	17057	17057	17057	17057	
ML-1700	2 kN	450 lbf	ML-1700	Threaded	5/16-18F			NC000296	NC000296	NC000296	17162	17162	17162	17162	
ML-1785	2 kN	562 lbf	ML-1785	Threaded	5/16-18F			NC000296	NC000296	NC000296	17162	17162	17162	17162	
ML-1821	130 N	29 lbf	ML-1821	Threaded	#10-32F	Direct Connect	Direct Connect	17039	17039	17039					
ML-4244	130 N	29 lbf	ML-4244	Threaded	#10-32F	Direct Connect	Direct Connect	17039	17039	17039					
TG10	01/2092	1 kN	TG10	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG11	01/1608	2 kN	TG11	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG12	01/1629	2 kN	TG12	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG13	01/1584	5 kN	TG13	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG14	GPS000200	2 kN	TG14	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG15	01/1388	5 kN	TG15	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG153	01/1555	10 kN	TG153	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG161B	01/1392	20 kN	TG161B	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG161C	01/1520	20 kN	TG161C	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG162	01/1664	2.5 kN	TG162	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG1624	01/1677	100 kN	TG1624	Grip Pin	1-1/4" Eye End										
TG166	01/1383	30 kN	TG166	Grip Pin	1-1/4" Eye End										
TG167	01/1607	100 kN	TG167	Grip Pin	1-1/4" Eye End										
TG18	01/1511	5 kN	TG18	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG180	01/1953	10 kN	TG180	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG20	01/1453	1 kN	TG20	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG210	01/2098	10 kN	TG210	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG22	01/2091	1 kN	TG22	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG23	GPS001400	20 kN	TG23	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG24	GPS001500	20 kN	TG24	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG25	01/1501	20 kN	TG25	Grip Pin	1-1/4" Eye End										
TG26	01/1502	1 kN	TG26	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG270	01/2399	30 kN	TG270	Grip Pin	1-1/4" Eye End										
TG280	01/2405	50 kN	TG280	Grip Pin	1-1/4" Eye End										
TG29	01/1894	30 kN	TG29	Grip Pin	6744 lbf										
TG295	01/2951	100 kN	TG295	Grip Pin	1-1/4" Eye End										
TG300	01/2243	5 kN	TG300	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG310	01/2244	10 kN	TG310	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					

Model	Capacity		Part No.	Mounting Type	Mounting Fitting Size	Remote-2	Remote-10	Remote-50	Remote-100	Remote-200	Remote-500	Remote-1000	Remote-2000	Remote-5000	Remote-10000
	Newton	lbf													
TG32	01/0887	5 N	TG32	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG33	01/1052	5 N	TG33	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG34	01/0671	500 N	TG34	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG35	01/1173	100 N	TG35	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG352	01/2781	300 kN	TG352	Grip Pin	50mm Eye End										
TG36	01/1136	5 kN	TG36	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG362	01/2544	300 kN	TG362	Grip Pin	50mm Eye End										
TG364	01/2353	300 kN	TG364	Grip Pin	50mm Eye End										
TG37	01/2749	500 N	TG37	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG38	01/1907	200 N	TG38	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG412F	01/1437	5 kN	TG412F	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG412H	01/1432	5 kN	TG412H	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG420F	01/2296	500 N	TG420F	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG420H	01/2295	500 N	TG420H	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG580	01/1818	2.5 kN	TG580	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG61	01/1109	10 kN	TG61	Grip Pin	1-1/4" Eye End										
TG62	01/1112	100 kN	TG62	Grip Pin	1-1/4" Eye End										
TG63	01/1100	100 kN	TG63	Grip Pin	1-1/4" Eye End										
TG64	01/1101	100 kN	TG64	Grip Pin	1-1/4" Eye End										
TG65	01/1139	30 kN	TG65	Grip Pin	1-1/4" Eye End										
TG67	01/2014	20 kN	TG67	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG72	01/1507	10 kN	TG72	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG73/50	01/1903	500 N	TG73/50	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG73/80	01/1782	500 N	TG73/80	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG74	01/1590	5 kN	TG74	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG86	01/1143	500 N	TG86	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					
TG87	01/1144	50 N	TG87	Grip Pin	5/8" Eye End	ADT/011400	ADT/011400	ADT/011300	ADT/011300	ADT/011300					

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