

# WIRE, YARN & THREAD GRIPS



**SPECIFICATION**  
SS-FM-3422-0101  
January 2001

**INTERNET**  
[www.force-gauge.net](http://www.force-gauge.net)

AMETEK, CHATILLON and NEXYGEN are registered trademarks of AMETEK, Inc.  
LLOYD INSTRUMENTS is a trademark of AMETEK, Inc.

Copyright 2000, by AMETEK, Inc.

**Chatillon**<sup>®</sup>  
A registered trademark of AMETEK, Inc.

## TG11: Vice Action Grip for Wire, Yarns & Threads

---

### Description

Vice action wire grip with renewable aluminium facing disks, which may be replaced with leather or hard rubber disks for delicate fibres. Test method is similar to that described in BS4545:1970 (mechanical testing of steel wire)

### Specification

Maximum Capacity	2 kN	450 lbf
Minimum Load Cell	20 N	4.5 lbf
Maximum Sample Diameter	2 mm	0.1 in
Eye End Diameter	15.85 mm	0.62 in
Weight Each	0.15 Kg	0.3 lb
Length Each	80 mm	3.1 in
Temperature Limits	Ambient	

### Applications (TG11 & TG12)

Tensile testing of soft wires, cords and fibre, etc. By straining a sample, generally to break, and recording the relationship between force and extension, for the purpose of determining one or more of the following mechanical properties:

Elongation	Maximum Force
Percentage elongation	Stress
Extension	Tensile Strength
Percentage yield point extension	Yield Stress
Percentage reduction of area	Proof Stress



## TG12: 2kN Bollard Grip for Wire, Yarns & Threads

---

### Description

Bollard grip for wire, yarns and threads. The specimen 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.

Test method is similar to that described in BS4545:1970 (mechanical testing of steel wire)

### Specification

Maximum Capacity	2 kN	450 lbf
Minimum Load Cell	20 N	4.5 lbf
Bollard Diameter	32 mm	1.3 in
Maximum Sample Diameter	5 mm	0.2 in
Eye End Diameter	15.85 mm	0.62 in
Weight Each	0.25 Kg	0.6 lb
Length Each	83 mm	3.3 in
Temperature Limits	Ambient	



## GF-4: Fine Flexible Wire & Filament Grip

### Description

The model GF-4 grips are supplied in pairs and have an 11 mm 7/16 in diameter snubber in a precision machined swiveling fixture that accurately aligns the specimen with force.

### Specification

Maximum Capacity	250 N	50 lbf
Maximum Sample Diameter	0.8 mm	1/32 in
Upper Grip Weight	0.04 Kg	0.09 lb
Combined Grip Length	130 mm	5.0 in
Temperature Limits	Ambient	

### Applications

Tensile testing of soft wires, cords and fibre, etc. By straining a sample, generally to break, and recording the relationship between force and extension, for the purpose of determining one or more of the following mechanical properties:

Elongation	Maximum Force
Percentage elongation	Stress
Extension	Tensile Strength
Percentage yield point extension	Yield Stress
Percentage reduction of area	Proof Stress

## GF-5: Cord & Twine Grip

### Description

The model GF-5 grips are supplied in pairs and is designed for reliable centre breaks, quick installation and easy release of materials. The grips have three non-locking pins for wrapping the specimen in a 'figure 8' pattern. A ball socket mounting screw in the upper grip maintains alignment of the upper and lower grips.

### Specification

Maximum Capacity	2.5 kN	500 lbf
Clearance Between Pins	9.0 mm	3/8 in
Throat Clearance	9.0 mm	3/8 in
Throat Width	13 mm	1/2 in
Combined Grip Length	127 mm	5.0 in
Upper Grip Weight	0.17 Kg	0.4 lb

### Applications

Tensile testing of soft wires, cords and fibre, etc. By straining a sample, generally to break, and recording the relationship between force and extension, for the purpose of determining one or more of the following mechanical properties:

Elongation	Maximum Force
Percentage elongation	Stress
Extension	Tensile Strength
Percentage yield point extension	Yield Stress
Percentage reduction of area	Proof Stress



## GF-3: Wire & Filament Grip

### Description

The model GF-3 grips are supplied in pairs and have a grooved snubber and post design that ensures a center break on the specimen. A swivel-plate mounted 25 mm - 1 inch snubber maintains proper alignment of specimen to force. A ball socket mounting screw in the upper grip maintains accurate alignment of upper and lower grips.

### Specification

Maximum Capacity	1 KN	200 lbf
Maximum Specimen	0.8 mm	1/32 in
Upper Grip Weight	0.04 Kg	0.09 lb
Combined Grip Length	130 mm	5.0 in
Temperature Limits	Ambient	

### Applications

Tensile testing of soft wires, cords and fibre, etc. By straining a sample, generally to break, and recording the relationship between force and extension, for the purpose of determining one or more of the following mechanical properties:

Elongation	Maximum Force
Percentage elongation	Stress
Extension	Tensile Strength
Percentage yield point extension	Yield Stress
Percentage reduction of area	Proof Stress



## TG32: Lightweight, Spring loaded Clamp Grip

### Description

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

### Specification

Maximum Capacity	5 N	1.1 lbf
Minimum Load Cell	5 N	1.1 lbf
Maximum Sample Width	5 mm	0.2 in
Maximum Sample Thickness	1 mm	0.04 in
Eye End Diameter	15.85 mm	0.62 in
Weight Each	0.1 Kg	0.2 lb
Length Each	100 mm	4.0 in
Temperature Limits	Ambient	

### Applications

Tensile testing of fine wires, threads and fibres by straining a sample, generally to break, and recording the relationship between force and extension to determine one or more of the following mechanical properties:

Elongation	Stress
Percentage Elongation	Tensile Strength
Extension	Yield Strength
Percentage yield point extension	Yield Stress
Percentage reduction of area	Proof Stress
Maximum force	Youngs Modulus



## GF-10: Wire & Terminal Connection Grips

### Description

The model GF-10 grips come in pairs. The circular upper grip has 9 slots to hold standard terminal shank sizes. Ring terminals secure to a pin. The bottom grip has an eccentrically mounted, self tightening knurled roller which accepts wire up to 3.2 mm - 1/8 inches in diameter.

### Specification

Maximum Capacity	500 N	100 lbf
Maximum Sample Diameter	3.2 mm	1/8 in
Upper Grip Weight	0.72 Kg	1.6 lb
Combined Grip Length	178 mm	7.0 in
Grip Slot Sizes	0.8 mm	1/32 in
	1.2 mm	3/64 in
	1.6 mm	1/6 in
	2.0 mm	5/64 in
	2.4 mm	3/34 in
	3.2 mm	1/8 in
	4.0 mm	5/32 in
	4.8 mm	3/16 in
	6.4 mm	1/4 in



### ORDERING INFORMATION

Model	Part No.	Description
TG11	01/1608	Vice Action Wire Grip 2kN Max
TG12	01/1829	Single Bollard Wire Grip 2kN Max
GF4	Chatillon GF4	Miniature Filament Grip
GF-5	Chatillon GF5	Cord and Twin Grip
GF-3	Chatillon GF3	Wire Grip
TG32	01/0887	Lightweight, Spring loaded, Clamp Grips
GF-10	Chatillon GF10	Wire Terminal Grip

**AMETEK**

TEST AND CALIBRATION INSTRUMENTS