

GRIP
LOCK

S Y S T E M S

GRIPLOCK® SYSTEMS

Griplock designs, engineers, manufactures and distributes adjustable and fixed steel cable suspension systems for use in HVAC, lighting, electrical, retail display, art, suspended ceilings, trade shows, and rigging.

Since 1992, Griplock has provided manufacturers and contractors with the broadest selection of the highest quality, most reliable cable suspension products in the world.



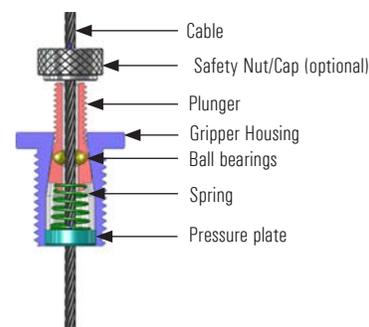
Before use or installation of Griplock® suspension systems, PLEASE READ THE FOLLOWING INFORMATION CAREFULLY. Do not use these products in a manner that is inconsistent with the printed information. Ensure that all employees have been properly trained before use or installation of this product.

GRIPLOCK® GRIPPERS

The cable gripper is a fully adjustable cable suspension device for use with 7x7 and 7x19 aircraft cable only. It automatically locks anywhere on the cable and can be moved up or down at the touch of a button. As shown in the drawings, the three ball bearings sit in three of the six grooves on the circumference of the cable so the pressure on the cable is evenly distributed.

This makes the gripper the fastest, strongest and simplest way for suspension. During the last 30+ years, the aircraft cable / gripper combination has become the preferred suspension system by manufacturers and installers worldwide.

The Griplock Gripper is precision built to our own specifications. We closely monitor quality, and batch-test every shipment received. We continually refine the gripping mechanism to produce better results.



HOW TO USE A GRIPPER

Feed the correct size cable through the spring-loaded plunger into the gripper mechanism. If the gripper has an optional safety nut or cap, this must be loosened before the cable can pass through.

The 3- or 6-ball gripping mechanism allows the gripper to move freely UP the cable but it cannot move DOWN the cable unless the plunger is depressed and the mechanism released.

To adjust the gripper position, take the weight off the gripper mechanism, depress the plunger and move the gripper to a new position. Release the plunger to lock. Tighten the safety nut or cap (if applicable) to lock the gripper off in BOTH directions. Hand tighten only! Ensure gripper is engaged with cable before applying load.

HOW TO USE A LOOPING GRIPPER

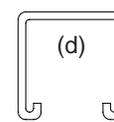
The looping grippers have grippers at each end (b & e) and is used to make an adjustable loop.

Feed the cable (a) through the plunger (b) into the mechanism. The cable will exit at (c).

Pass the cable around the structure (d) (strut, pipe, purlin, eyebolt etc.) and feed into the plunger (e). The cable exits at (f).

To raise the suspended fixture, push the cable up through the lower plunger (b) to increase the loop size. Pull down on the excess cable (g) to decrease the loop size and raise the fixture.

To lower the fixture, reverse the procedure by depressing the plunger (e) and feeding the cable (g) back through the mechanism, then depressing the plunger (b) and feeding the cable back through the mechanism. The plungers cannot be depressed while there is weight on the mechanisms. Ensure gripper is engaged with cable before applying load.



(d)

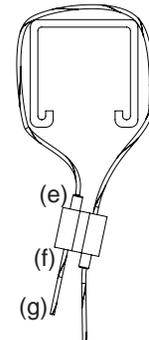


Fig. 2

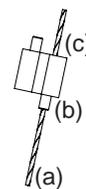


Fig. 1

QUALITY & SAFETY

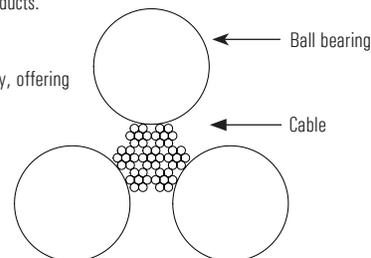
Griplock's highest priority is safety. Improper installation and/or the wrong choice of components can have devastating consequences.

Griplock's reputation is built on safety, quality, customer service and 30 years of experience. Our customers know that we stand squarely behind our products.

Griplock's quality control system is modeled after ISO 9001. Prior to assembly, all individual Griplock Gripper components are tested randomly to meet Griplock's high QC standards. Griplock products are the safest, strongest, simplest and most versatile system of its kind on the market today, offering thousands of precision-made parts to fit almost every conceivable application.

TESTING AND VERIFICATION

Griplock cable suspension systems for HVAC are tested to the highest standards.



CAUTION

The information is not applicable to any other cable gripping product. Use of Griplock supplied cables is assumed. Weight load guidelines and other specifications are for illustration purposes only. They should not be construed as a warranty that the product or system will conform. Each purchaser is solely responsible for determining (1) that the product and/or system is suitable for the intended application and (2) that the product and/or system complies with all federal, state and local safety and trade laws and regulations. End-users are cautioned that the integrity of the structures to which these components are attached and the fasteners used to attach them are critical to the integrity of the overall system and should therefore be evaluated by a qualified engineer or installer.

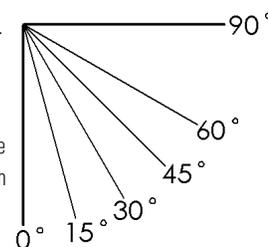
- Use only 7x7 or 7x19 uncoated galvanized or stainless steel aircraft cable.
- When feeding cable through a gripper always allow cable to pass 2" beyond the gripper mechanism. When cutting excess cable always leave 2" of cable showing. Cable should be cut using purpose-built cutters as shown to the right.
- Cable will not fray when cut unless passed repeatedly through the gripper mechanism or otherwise overworked. In this case trim the cable and apply a drop of super-glue.
- DO NOT ATTEMPT TO RUN AN ELECTRICAL CURRENT THROUGH THESE CABLES. Use a separate power cord.
- Adhere strictly to the Weight Load Guidelines. Use only gripper / cable combinations for which a static working load limit (WLL) has been specified. When calculating loads include full weight of duct with contents, controls and all accessories.
- The Griplock system is generally not recommended for permanent outdoor installations. It should not be exposed to wind or water or allowed to oscillate continuously. Avoid using in chemical-laden environments such as indoor swimming pools (for more information on these applications please call our office).



TL-CUTTER-AS

ANGLED APPLICATIONS

- Cables should not enter or exit grippers at more than a 5° angle (see illustration at right). For angled applications use the X2 Looping grippers.
- A object load exerts greater force on angled / non-vertical cables than it would on vertical cables.
- To determine the working load limit on an angled cable supporting a load, take the working load limit for the gripper / cable combination and multiply it by the factor from the chart below. For example, for a 3/32" galvanized cable with ZF-25X2-HG looping gripper at a 45° angle, take the 160 lbs safe working load and multiply it by 0.70 from below: 160 lbs x 0.70 = 112 lbs. So 112 lbs will be the working load limit for each suspension at a 45° angle instead of 160 lbs for a vertical suspension.
- Angles beyond 60° are not recommended. **For more information about this please call our office.**



5° max. deviation from center line

ANGLE FROM VERT.	0°	15°	30°	45°	60°
FACTOR	1	0.96	0.86	0.70	0.50

LOOPING GRIPPER



USE:

Recommended for suspending HVAC, lighting, electrical and mechanical indoor static loads or from structure.

Material Specification:

Housing & Plungers: Nickel Plated Brass

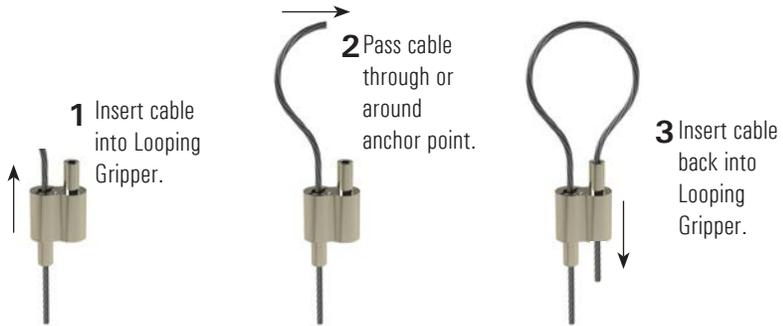
Springs: Steel

Ball Bearings: Brass

Wire Rope: Galvanized steel 1/16" - 3/32" 7x7. 1/8" 7x19.

Note: Griplock Systems cannot guarantee working loads with cable that has not been supplied by Griplock Systems.

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Notes: Minimum 2" cable to exit bottom of gripper when done. Remove load before adjusting.

ZF-15X2-HG

for use with 1/16" cable

ZF-25X2-HG

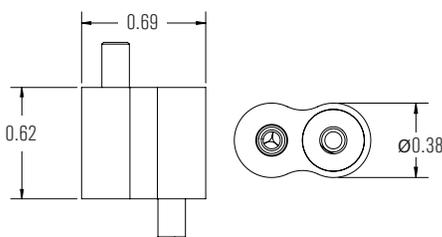
for use with 5/64" - 3/32"

ZF-30X2-HG

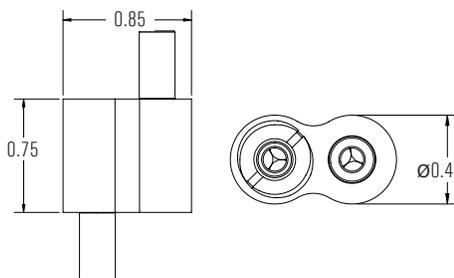
for use with 1/8" cable

Working Load Limit (WLL) 5:1 Safety Factor	1/16"	5/64"	3/32"	1/8"
	75 lbs	100 lbs	160 lbs	250 lbs

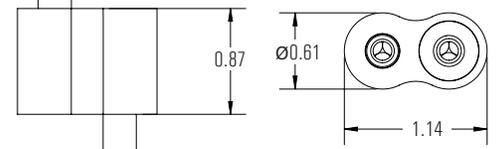
STATIC LOADS ONLY. NOT FOR LIFTING.



ZF-15X2-HG



ZF-25X2-HG



ZF-30X2-HG



USE:

Recommended for suspending rectangular HVAC indoor duct.
Use with #10 self-tapping screws (not included).

Material Specification:

Housing & Plungers: Nickel Plated Brass

Springs: Steel

Ball Bearings: Brass

HX-HV-CLIP (mounting bracket): Zinc Plated Steel

Rubber pads: Neoprene

Wire Rope: Galvanized steel 5/64" - 3/32" 7x7. 1/8" 7x19.

Note: Griplock Systems cannot guarantee working loads with cable that has not been supplied by Griplock Systems.



Notes: Minimum 2" cable to exit bottom of gripper when done.
Remove load before adjusting.

- Boot connects directly to rectangular duct
- Pre-attached rubber pads reduce vibration
- Bottom cable exit

ZF-25-SDC

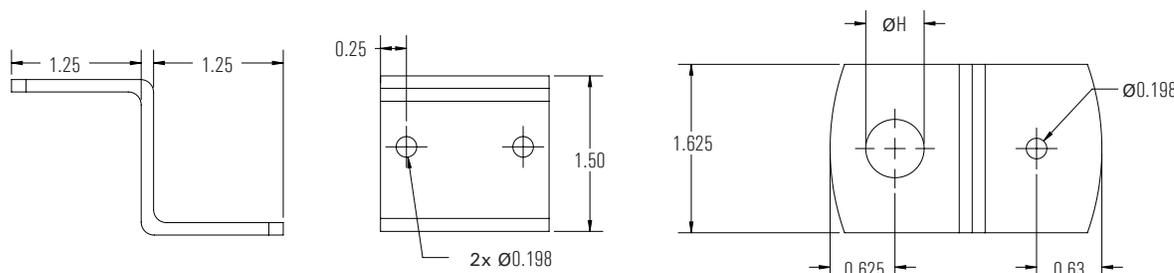
for use with 5/64" - 3/32" cable

ZF-30-SDC

for use with 1/8" cable

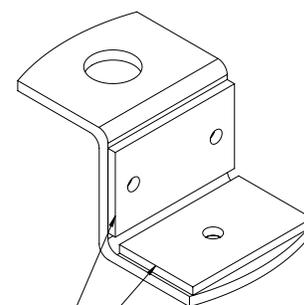
Working Load Limit (WLL) 5:1 Safety Factor	5/64"	3/32"	1/8"
	75 lbs	100 lbs	200 lbs

STATIC LOADS ONLY. NOT FOR LIFTING.



HX-HV-CLIP

(for gripper dimensions, see downward facing strut gripper)



Neoprene with Adhesive Backing
1/16" - 1/8" Thickness.

STRUT GRIPPER (downward facing)



USE:

Recommended for suspending HVAC, lighting, electrical and mechanical indoor with strut.

Material Specification:

Housing & Plungers: Nickel Plated Brass

Springs: Steel

Ball Bearings: Brass

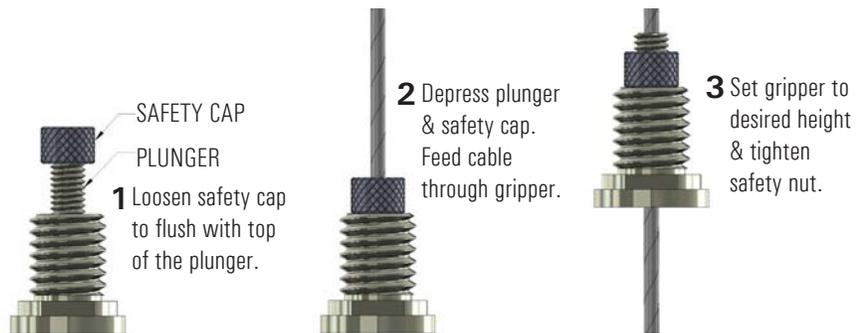
Thread Sizes: ZF-25-1213-KFB-S: 1/2-13 UNC

ZF-30-STRUT-KFB-S: 3/8-18 NPSM (IPS Straight Pipe Thread)

Wire Rope: Galvanized steel 5/64" - 3/32" 7x7. 1/8" 7x19.

Note: Griplock Systems cannot guarantee working loads with cable that has not been supplied by Griplock Systems.

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Notes: Minimum 2" cable to exit bottom of gripper when done. Remove load before adjusting.

- For attaching to downward facing strut
- Bottom cable exit
- Ability to connect multiple grippers to multiple ducts with a single cable

ZF-25-1213-KFB

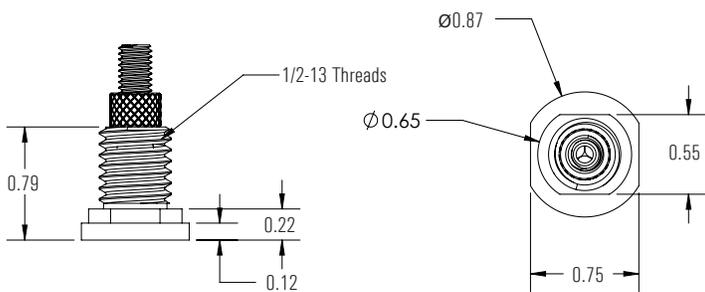
for use with 5/64" - 3/32" cable

ZF-30-STRUT-KFB

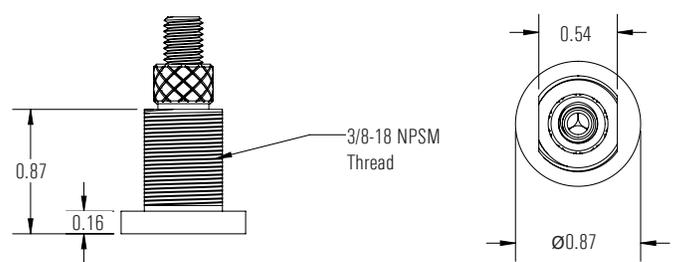
for use with 1/8" cable

Working Load Limit (WLL) 5:1 Safety Factor	5/64"	3/32"	1/8"
	75 lbs	100 lbs	200 lbs

STATIC LOADS ONLY. NOT FOR LIFTING.



ZF-25-1213-KFB



ZF-30-STRUT-KFB

STRUT GRIPPER (upward facing)



USE:

Recommended for suspending HVAC, lighting, electrical and mechanical indoor with strut. May also be used with clevis/loop hangers.

Material Specification:

Housing, Plungers & Threaded Studs: Nickel Plated Brass

Springs: Steel

Ball Bearings: Brass

Thread Sizes: 3/8-16 UNC

Wire Rope: Galvanized steel 5/64" - 3/32" 7x7. 1/8" 7x19.

Note: Griplock Systems cannot guarantee working loads with cable that has not been supplied by Griplock Systems.

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Notes: Minimum 2" cable to exit bottom of gripper when done. Remove load before adjusting.

- For attaching to upward facing strut
- Bottom cable exit
- Ability to connect multiple grippers to multiple ducts with a single cable
- Channel nuts required. *Can be purchased from Griplock Systems*

ZF-25-3816-S

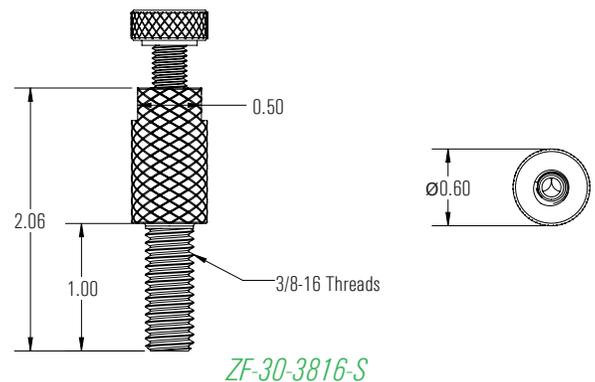
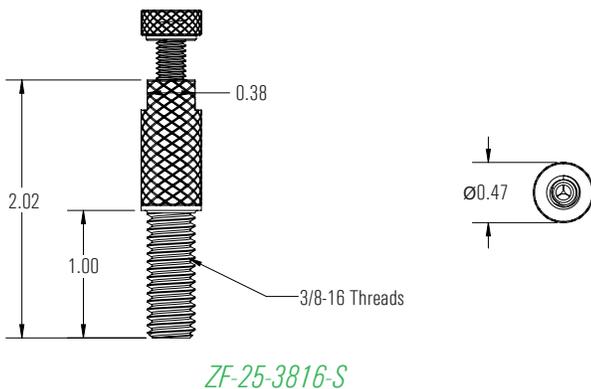
for use with 5/64" - 3/32" cable

ZF-30-3816-S

for use with 1/8" cable

Working Load Limit (WLL) 5:1 Safety Factor	5/64"	3/32"	1/8"
	75 lbs	100 lbs	200 lbs

STATIC LOADS ONLY. NOT FOR LIFTING.



Spiral Duct Weight Charts

Spiral Duct - Gripper & Cable Chart				
5' Span				
Diameter (inches)	Single Wall Spiral Duct Weight. Lbs per 5' Span			
	22 gauge	20 gauge	18 gauge	16 gauge
4	8.24	9.97	12.84	16.29
6	12.65	14.95	19.55	24.15
8	17.06	19.93	26.26	32.01
10	21.47	24.92	32.39	39.87
12	25.30	29.90	39.10	48.30
14	29.71	34.88	45.81	56.16
16	34.12	39.87	51.94	64.02
18	37.95	44.85	58.65	71.88
20	42.36	49.83	64.78	80.31
22	46.77	54.82	71.49	88.17
24	51.18	59.80	78.20	96.03
26	55.01	64.78	84.33	103.88
28	59.42	69.77	91.04	112.32
30	63.83	74.75	97.75	120.18
32	67.66	79.73	103.88	128.03
34	72.07	84.72	110.59	135.89
36	76.48	89.70	117.30	144.33

Spiral Duct - Gripper & Cable Chart				
6' Span				
Diameter (inches)	Single Wall Spiral Duct Weight. Lbs per 6' Span			
	22 gauge	20 gauge	18 gauge	16 gauge
4	9.89	11.96	15.41	19.55
6	15.18	17.94	23.46	28.98
8	20.47	23.92	31.51	38.41
10	25.76	29.9	38.87	47.84
12	30.36	35.88	46.92	57.96
14	35.65	41.86	54.97	67.39
16	40.94	47.84	62.33	76.82
18	45.54	53.82	70.38	86.25
20	50.83	59.8	77.74	96.37
22	56.12	65.78	85.79	105.8
24	61.41	71.76	93.84	115.23
26	66.01	77.74	101.2	124.66
28	71.3	83.72	109.25	134.78
30	76.59	89.7	117.3	144.21
32	81.19	95.68	124.66	153.64
34	86.48	101.66	132.71	163.07
36	91.77	107.64	140.76	173.19

Spiral Duct - Gripper & Cable Chart				
8' Span				
Diameter (inches)	Single Wall Spiral Duct Weight. Lbs per 8' Span			
	22 gauge	20 gauge	18 gauge	16 gauge
4	13.19	15.95	20.55	26.07
6	20.24	23.92	31.28	38.64
8	27.29	31.89	42.01	51.21
10	34.35	39.87	51.83	63.79
12	40.48	47.84	62.56	77.28
14	47.53	55.81	73.29	89.85
16	54.59	63.79	83.11	102.43
18	60.72	71.76	93.84	115.00
20	67.77	79.73	103.65	128.49
22	74.83	87.71	114.39	141.07
24	81.88	95.68	125.12	153.64
26	88.01	103.65	134.93	166.21
28	95.07	111.63	145.67	179.71
30	102.12	119.60	156.40	192.28
32	108.25	127.57	166.21	204.85
34	115.31	135.55	176.95	217.43
36	122.36	143.52	187.68	230.92

Spiral Duct - Gripper & Cable Chart				
10' Span				
Diameter (inches)	Single Wall Spiral Duct Weight. Lbs per 10' Span			
	22 gauge	20 gauge	18 gauge	16 gauge
4	16.48	19.93	25.68	32.58
6	25.30	29.90	39.10	48.30
8	34.12	39.87	52.52	64.02
10	42.93	49.83	64.78	79.73
12	50.60	59.80	78.20	96.60
14	59.42	69.77	91.62	112.32
16	68.23	79.73	103.88	128.03
18	75.90	89.70	117.30	143.75
20	84.72	99.67	129.57	160.62
22	93.53	109.63	142.98	176.33
24	102.35	119.60	156.40	192.05
26	110.02	129.57	168.67	207.77
28	118.83	139.53	182.08	224.63
30	127.65	149.50	195.50	240.35
32	135.32	159.47	207.77	256.07
34	144.13	169.43	221.18	271.78
36	152.95	179.40	234.60	288.65

3/32" Galvanized Aircraft Cable with ZF-25X2-HG LOOPING GRIPPER

1/8" Galvanized Aircraft Cable with ZF-30X2-HG LOOPING GRIPPER

Weights are based on SMACNA HVAC Duct Construction Standards Metal and Flexible - Fourth Edition. Weight Values include 15% increase to allow for potential variations and basic connectors. Assumes equal distribution of weight on grippers and cables. All other recommendations in instructions and specification sheets apply.