



1029 Cindy Lane  
Carpinteria, CA 93013

793 Duncan Reidville Rd.  
Duncan, SC 29334

P:805.566.0064 | F:805.566.0065  
info@griplocksystems.com

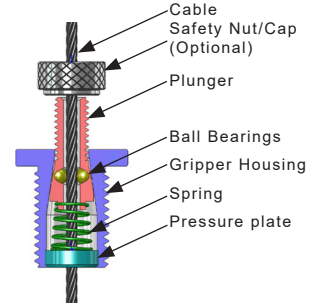
# THE GRIPLOCK® SYSTEM

## 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!



## HOW TO USE A PUSHMEPULLYU (ZF-15ZZ / ZF-30ZZ)

The Pushmepullyu has 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.

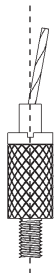
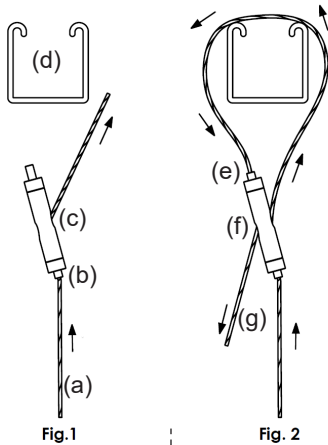


Fig. 3

5° max. deviation from center line

## INSTALLATION RECOMMENDATIONS

- When feeding cable into a gripper, allow it to pass at least 1" beyond the body of the gripper. When cutting off excess cable, leave at least 1" of cable showing. Cables may be cut using purpose-built cutters, such as Felco. Cable will not fray unless passed repeatedly through the gripper mechanism. To prevent fraying of freshly cut ends, re-solder or apply a drop of super-glue.
- DO NOT feed excess cable into a fixture housing or junction box containing electrical wiring.
- Use only 7x7 or 7x19 uncoated stainless or galvanized steel aircraft cable.
- Grippers and couplers work best when cables follow their center line. Avoid angled pulls in excess of 5° (See Fig. 3). For angled applications use Griplock's jointed grippers or sloped ceiling couplers.
- Adhere strictly to the Weight Load Guidelines printed on the reverse. Only use cable diameter and grippers combinations (eg. 1/16" cable with Type 15 gripper) for which a Safe Working Load has been specified. Weight Load Guidelines refer to STATIC LOADS ONLY.
- The Griplock® system is not recommended for permanent outdoor installations. It should not be exposed to wind or water or allowed to oscillate continuously. Avoid placing fixtures in chemical-laden environments such as indoor swimming pools (for more information on these applications, please call our office). Do not place unbraced fixtures close to HVAC vents where they may be exposed to continual air currents.
- If in any doubt consult a Griplock® engineer or sales representative.

General Information					
Thread and Knock Out (KO) Sizes					
Thread Size	Thread Diameter	Fixture KO Sizes	Thread Size	Thread Diameter	Fixture KO Size
1/8IPS = 1/8-27 NPSM	3/8"	7/16"	M4	5/32"	3/16"
1/4IPS = 1/4-18 NPSM	1/2"	9/16"	M6	4/32"	1/4"
3/8IPS = 3/8-18 NPSM	5/8"	11/16"	M8	5/16"	3/8"
1/2IPS = 1/2-14 NPSM	13/16"	7/8"	M10	3/8"	7/16"
10-32	3/16"	1/4"	M13	1/2"	9/16"
1/4-20	1/4"	5/16"	M16	5/8"	11/16"
3/8-16	3/8"	7/16"	M20	25/32"	13/16"

Weight load charts 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 that (1) the product and/or system is suitable for the intended application and (2) it complies with all federal, state and local safety and trade laws and regulations. Griplock® guarantees individual Griplock® Premium and ZF Standard components (factory-cut and swaged or molded cable, ceiling attachments & grippers) when professionally installed in non-corrosive indoor environments according to our weight load guidelines and those mandated by federal, state and local ordinance. Installers are cautioned that the integrity of structures to which these components are attached & the fasteners used to attach them should be evaluated by a qualified engineer. Griplock®, its employees, agents & assigns waive all liability for accidents due to failure to adhere to the preceding guidelines and accidents caused by field or non-factory-installed cable crimps and/or modifications to the system using non-Griplock® parts.

## Weightloads and Guidelines

### STATIC SAFE WORKING LOADS (SWL) FOR GRIPLOCK® PREMIUM GRIPPERS

The first value is for galvanized cable. The second value (in bold) is for stainless steel cable.

CABLE DIAMETER		PREMIUM GRIPPER TYPE						
Inches	mm	Type 10	Type 12	Type 15	Type 18	Type 25	Type 30	Type 30
		3-Ball	3-Ball	3-Ball	3-Ball	3-Ball	3-Ball	6-Ball
<i>Safe Working Load in Pounds - 7x7 or 7x19 Galvanized &amp; Stainless Steel Cable</i>								
1/32"		15 / <b>13</b>	15 / <b>13</b>					
	1.0mm	22 / <b>20</b>	22 / <b>20</b>					
3/64"	1.2mm		33 / <b>28</b>	33 / <b>28</b>	33 / <b>28</b>			
1/16"	1.6mm			60 / <b>50</b>	60 / <b>50</b>	60 / <b>50</b>		
5/64"	2.0mm				80 / <b>70</b>	80 / <b>70</b>		
3/32"	2.4mm					126 / <b>110</b>	126 / <b>110</b>	126 / <b>110</b>
	2.5mm					134 / <b>N/A</b>	134 / <b>N/A</b>	134 / <b>N/A</b>
1/8"	3.2mm						200 / <b>180</b>	
1/8"	3.2mm							225 / <b>200</b>

### STATIC SAFE WORKING LOADS (SWL) FOR GRIPLOCK® ZF STANDARD GRIPPERS

The first value is for galvanized cable. The second value (in bold) is for stainless steel cable.

CABLE DIAMETER		ZF STANDARD GRIPPER TYPE						
Inches	mm	Pushmepullyu*	Type 12	Type 15	Type 18	Type 25	Type 30	Pushmepullyu/30X2*
		Type 15	3-Ball	3-Ball	3-Ball	3-Ball	3-Ball	Type 30
<i>Safe Working Load in Pounds - 7x7 or 7x19 Galvanized &amp; Stainless Steel Cable</i>								
	1.0mm		19 / <b>17</b>					
3/64"	1.2mm		25 / <b>22</b>	25 / <b>22</b>				
1/16"	1.6mm			50 / <b>45</b>	50 / <b>45</b>			
1/16"	1.6mm	75* / <b>65*</b>						
5/64"	2.0mm				75 / <b>65</b>	75 / <b>65</b>		
3/32"	2.4mm					95 / <b>87</b>	95 / <b>87</b>	
3/32"	2.4mm							160* / <b>150*</b>
	2.5mm					100 / <b>90</b>	100 / <b>90</b>	
	2.5mm							170* / <b>NA</b>
1/8"	3.2mm						200 / <b>180</b>	
1/8"	3.2mm							250* / <b>225*</b>

\*Figures in these two columns denote Pushmepullyu Grippers and the ZF-30X2 looping gripper when used in a looped configuration.

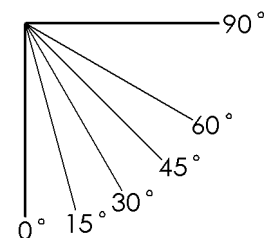
For all other configurations see regular ZF Standard weightload figures.

- Safe working loads are 20% of the minimum break strength of the gripper / cable combination
- USE CORRECT WEIGHTLOAD CHART. Griplock's ZF Standard Grippers (see 2nd chart) can be identified by the CF marking on the gripper. They have a lower SWL than Griplock Premium Grippers (see 1st chart).
- The 5:1 SWL reflects the US Lighting Industry standard. Where no SWL is shown, grippers and cables are not compatible.
- Charts indicate the SWL for gripper / cable combinations when used with 7x7 or 7x19 steel core, uncoated galvanized or stainless steel aircraft cable. Do not use plastic coated cable.
- Charts apply to Griplock Premium or ZF Standard Grippers only. They are not applicable to any other cable gripping product.

## Angled Applications

An angled cable will reduce the weight a suspension system can hold. Angles over 60° are not recommended.

- Cables should not enter or exit couplers, grippers or tensioners at more than a 5° angle
- A pendant fixture exerts greater force on angled / non-vertical cables than it would on vertical cables. To determine the force exerted on an angled cable, take the fixture weight and divide by the number of cables. Multiply the result by the factor beneath the angle from the vertical in the chart below. If the weight per cable is 20 lbs. and the angle is 60°, the force on the cable = 20 / 0.50 = 40 lbs. Angles over 60° from the vertical are not recommended. For help with this please call our office.



Angle from vert.	0°	15°	30°	45°	60°
Factor	1	0.96	0.86	0.70	0.50