



Earthquake Safety Fastening Products



All About Earthquake Safety Fastening Products



The development of earthquake fastening products began shortly after the California Whittier Narrows Earthquake in October of 1987. Today these products are being used throughout the United States, Japan, Canada, Mexico, Iceland, Australia, and New Zealand.

This catalog represents the most complete line of earthquake fastening products designed for home, office, and laboratory use. They are manufactured in California.

The first earthquake safety fastener developed was a flexible bookcase fastener. This product has been refined into today's Q-Furniture Strap™.

Soon after, computer braces using industrial VELCRO® brand hook and loop fasteners were incorporated into the line. As needs became apparent, flexible fasteners were developed using straps and nylon tethers to secure items ranging from bookshelf contents to monitors. The VersaGRIP™ office fastener line made earthquake fastening affordable by pricing most kits under \$10.00, and subsequently received an award as one of the Top Five Hardware Products of 1992 by Micro Times magazine.

With VersaGRIP in place and used by corporations throughout California, requests were made by laboratory managers to develop heavier-duty fasteners for specialty lab equipment. This led to the introduction of the StrapTRAC™ line, the first to utilize both quick release and powerful 3M® VHB® (Very High Bond) adhesives. StrapTRAC was the first fastener designed to secure equipment weighing over 100 pounds.

The quick-release aspects of StrapTRAC paved the way for introduction of the VersaBUCKLE™, giving users the most flexible fastener available for office equipment. VersaBUCKLE offers easy removal and reattachment of equipment, and is the backbone of the popular TV Fastening Kit™ and many other fastening products found in this catalog.

Needs beyond desktop fastening became apparent as seismic activity increased in Southern California. The June 1992 Landers/Big Bear Earthquakes toppled file cabinets in many Southern California locations. This underscored the problems presented in an earthquake by file cabinets and other heavy office furniture.

To this point, file cabinets were secured by bolting them to the floor, resulting in bolt holes through the carpeting. Office Managers largely rejected this method as being too expensive and problematic for future moves. To remedy this problem the FileSTRAP™ was created. The FileSTRAP simply prevents the cabinet from tipping over by securing it to the wall, eliminating the problem of damaging carpets and allowing for easy relocation.

Other products developed for furniture include the Q-Furniture Strap for bookcases and china cabinets, the BoingBAR™ book restraint system, the Refrigerator Strap™, and the Q-Lock Cabinet Door Locking System™. The Northridge Earthquake of 1994 reinforced the importance of non-structural fastening. Customer requests incited the development of the Big Screen TV Strap™, the DON'T WALK Motion Resistant Mat™, and the Washer/Dryer Strap™.

Your comments and suggestions on making the home and workplace safer are welcome. It is our goal to provide reliable, affordable fasteners that help protect homes and workplaces against earthquake damage.

Web Access Instructions

This **i** symbol in the catalog means there is additional information available on the internet at www.quake411.com

To access this information, do the following:

- 1) Log onto www.quake411.com
- 2) Enter the web reference number into the search box.
- 3) Click the GO button.

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Desktop Fastening - Home and Office

The VersaBUCKLE™ is the most popular fastener for equipment such as computers, monitors, printers, TVs, and stereos. The VersaBLOCK™ provides increased strength and fastens equipment directly to the desktop. The StrapTRAC™ is the strongest fastener with its steel components. Also available are straps with industrial VELCRO brand hook and loop fastener, DON'T WALK Motion Resistant Mat™, and QuakeHold™ Putty. The desktop fastening line offers a variety of styles and colors. All fasteners are easy to install and remove for relocation. **Pages 4, 5, 6, 10 & 11**



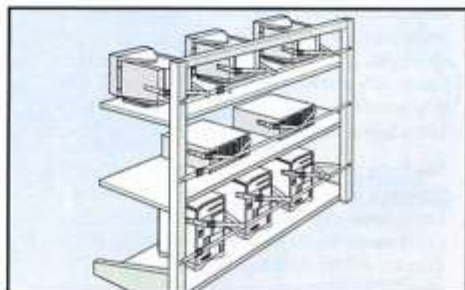
Furniture & Appliance Fastening

Fasten bookcases, filing cabinets, refrigerators, washer/dryers, entertainment centers, storage cabinets, pictures, and mirrors. Secure tall furniture to wall studs to prevent them from falling in an earthquake. Most fasteners have a quick-disconnect feature so that items can be moved and refastened as necessary. Books and shelf contents can be secured with bungee-style cords, straps, or metal bars. Two types of cabinet door locks are available, as well as fasteners for pictures and mirrors. These fasteners are available in a variety of styles and colors. **Pages 8 - 13**



LAN Equipment

Special attention needs to be paid to LAN (Local Area Network) servers and related equipment because it is frequently moved, replaced, and new equipment added. The LanGRIP™ Universal Fastening System was designed in a way that allows moving and swapping equipment to be as simple as buckling a belt. A back strap is anchored horizontally to the vertical sides of each shelf. Each piece of equipment is then secured on two sides with industrial VELCRO hook and loop. The equipment strap, which is adjustable in length, is wrapped around the horizontal back strap and adjusted with a buckle. **Page 7**



Laboratories/Hospitals

Hospitals, medical clinics, universities, pharmaceutical laboratories, water treatment plants, and medical research facilities have special needs for earthquake safety. The vital equipment used in these facilities is expensive and often critical to saving lives in emergencies. Fasteners are available covering a wide range of needs, from small microscopes to refrigerators. Methods of fastening include wall mounting, and a variety of countertop fastening systems. **Page 7**



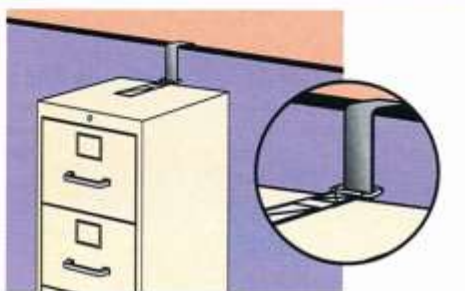
Shelf Content Restraints

The contents of shelves can become missiles during an earthquake resulting in blocked exits and added confusion. The BoingBAR™ is an economical solution for lightweight shelf content restraint. The Book-KEEPER™ Bar is designed to restrain heavier items. For small, odd-sized items, the QuakeNET™ provides a desirable solution. For the garage and other storage areas, consider the D-Ring ShelfSTRAP. The DON'T WALK Motion Resistant Mat™ is a practical way to line shelves and help prevent items from sliding off. Refer to page 11 for other specialty solutions. **Page 11, 12, & 13**



Open-Office Environments

Open-office systems were designed to give companies the ability to quickly reconfigure an office to meet changing work conditions. The traditional method of securing furniture to the floor does not accommodate the flexibility desired in the open-office concept. However, toppled file cabinets, storage cabinets, and other furniture can cause injuries and block exit paths. Working in conjunction with the structural integrity of the cubical walls, the Partition WallGRIP™ provides a solution to this safety problem where drilling holes through the carpet into the concrete floor is unacceptable. **Page 9**



VersaBUCKLE Fastening System

VersaBUCKLE™

The VersaBUCKLE fastening system is ideal for protecting computer equipment. Each kit is rated to hold an item weighing up to 50 pounds. If the item weighs between 50 and 80 pounds, use 2 kits. Installation instructions are included in each kit. The adhesive is 3M® VHB® (Very High Bond) foam adhesive tape. Installation is a simple process of preparing the surfaces using isopropyl alcohol and firmly pressing the adhesive pad onto the equipment and desktop.

Relocation

To relocate a fastened item, simply remove the VersaBUCKLE from the desktop by opening the buckle and twisting it off. Put new 3M Relocation Tape Pads (Part #5720) on the VersaBUCKLE and reapply at the new location.

Height-to-Base Area Ratios

It is important to consider the height-to-base area ratio of equipment to be fastened. The taller the equipment is relative to the area of its base, the higher the center of gravity and the more likely it will topple in an earthquake. In this case, use more and/or stronger fasteners (such as VersaBLOCK or StrapTRAC) than you would for an item with the same base area but a lower center of gravity.

Stacking one piece of equipment upon another creates a similar situation. VersaBUCKLE - Long Strap can be effectively used in some of these cases by fastening the top item of a stack directly to the desktop, bypassing the bottom item. The bottom item is fastened separately to the desktop.

i Product information on this fastening method, search web reference number 4001. See page 3 for web access instructions.

Fastening Methods



Two-Point Fastening System

For most items weighing under 50 pounds, fasteners are placed in opposing corners.



Four-Point Fastening System

For most items weighing 50 to 80 pounds, fasteners are placed in all four corners. For items weighing over 80 pounds, see VersaBLOCK on page 5 and StrapTRAC™ on pages 6 and 7.



Installation



Surface Preparation



Peel



Stick

Removal



Unbuckle



Remove

What is desktop fastening?

Desktop fastening is the process of securing equipment to a desktop to prevent injury to the operator and damage to the equipment in the event of an earthquake.

What kind of adhesives are used?

Two different adhesive tapes are used - one from VELCRO USA, the other from 3M Inc. Both adhesives are acrylic based. They do not harden or crystallize and can be removed by peeling them away from the desktop and equipment.

Are the fasteners difficult to install?

No. Both the VELCRO brand hook and loop fastener and the 3M VHB foam adhesive based fasteners have a release paper covering the adhesive. Complete instructions are included in each kit.

How do I temporarily remove the equipment?

When using VELCRO hook and loop fasteners, simply peel the loop away from the hook and remove the equipment. After replacing the equipment, reapply the fastener by embedding the loop into the hook.

When using 3M adhesive fasteners, disengage the strap from the buckle to remove the equipment. After replacing the equipment, put the strap through the buckle and press into locked position.

Why can't I use Quake Tape on computers and electronic equipment?

Most electronic items have four feet for balance and air circulation. The thickness of the Quake Tape is 1/8". Most feet are 1/4" to 1/2" high. The thickness of the fastener must be greater than the height of the feet.

VersaBLOCKs

These blocks fasten equipment directly to the desktop. This system is ideal for items that are seldom removed for service. VersaBLOCKs are extremely stable and strong, as four blocks per application are used. Each block has VELCRO on both sides. The 2" x 2" blocks have a rated strength of 100 pounds per kit; the 1" x 2" blocks have a rated strength of 60 pounds per kit; and the 1" x 1" blocks have a rated strength of 30 pounds per kit. Refer to the article on Height-to-Base Area Ratios, page 4. The tolerable temperature range is 0° to 225° Fahrenheit.

Since the blocks are out of sight, they also act as a theft deterrent. To remove the equipment, it must be known to pull up only on one corner.



VersaBUCKLE™ - Computer Equipment < 50 lbs.

Shown above is a VersaBUCKLE securing a CPU using the Two-Point Fastening System.

4000	VersaBUCKLE	Gray
4560	VersaBUCKLE	Black
4021	VersaBUCKLE	Grape

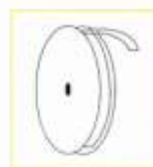
For items over 50 lbs., see StrapTRAC on page 6, center, right.



Each Kit Contains:
4 buckles with 3M adhesive
2 (8") Quake Straps™
2 surface prep pads
Instructions



Each 4926 & 4939 Kit Contains:
2 buckles with 3M adhesive
2 surface prep pads
Instructions



Each 4933 - 4948 Kit Contains:
1 (4") Quake Strap
Instructions

VersaBUCKLE™ Spare Parts

Customized fastening requires extra buckles or extra lengths of strap. Listed below are various components that make up the VersaBUCKLE.

4926	Spare VersaBUCKLES	Gray
4939	Spare VersaBUCKLES	Black
4933	Spare Quake Strap 4"	Gray
4946	Spare Quake Strap 4"	Black
4948	Spare Quake Strap 4"	Grape



Each Kit Contains:
2 buckles with 3M adhesive
2 (11") straps with VELCRO
2 surface prep pads
Instructions

ContourGRIP™ - Computer Equipment < 50 lbs.

ContourGRIP combines VersaBUCKLE and VELCRO to create a fastener that conforms to any contoured surface such as the iMac and many other contoured computers. To complement iMac's vibrant colors, Grape is now available in addition to our gray and black colors.

4151	ContourGRIP	Gray
4152	ContourGRIP	Black
4153	ContourGRIP	Grape

i Contoured equipment >50 lbs., search web reference number 4320. See page 3 for web access instructions.



Each Kit Contains:
2 buckles with 3M adhesive
2 (20") straps
2 furniture screws
2 washers
2 surface prep pads
Instructions

GrommetGRIP™

GrommetGRIP is used to secure a CPU to the underside of a desk by screwing the strap ends into the desk beneath. Straps are crisscrossed for additional stability.

4030	GrommetGRIP	Gray
4031	GrommetGRIP	Black
4032	GrommetGRIP	Grape

i Contoured CPUs under desks, search web reference number 2856. See page 3 for web access instructions.



Each Kit Contains:
4 blocks with VELCRO on both sides
2 surface prep pads
Instructions

VersaBLOCK™

VersaBLOCKs provide an out-of-sight, strong bond between the equipment and desktop. The 1" x 1" VersaBLOCKs work well for monitors and small peripherals like switchboxes weighing up to 30 pounds. The 1" x 2" VersaBLOCKs are better for items weighing up to 60 pounds. The 2" x 2" VersaBLOCKs are best for items weighing up to 100 pounds.

2150	VersaBLOCK 1" x 1" x 3/8"	Black
2200	VersaBLOCK 1" x 2" x 5/8"	Gray
2300	VersaBLOCK 2" x 2" x 5/8"	Gray



Each Kit Contains:
2 (8" L x 1-3/4" H) stainless steel braces with VELCRO
2 surface prep pads
Instructions

Stainless Steel Braces™

Use one kit to secure a keyboard cabinet, as shown above. This is a very strong fastener as it wedges the item between two steel braces with industrial VELCRO. This support is critical for keyboard cabinets as they often hold a CPU and a monitor.

2110	Stainless Steel Braces	Silver
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Monitor and Office Equipment Fasteners

Monitors and Ergonomics

Perhaps the greatest threat to the safety of the computer operator is the monitor. MonitorPULL™ fasteners help prevent the monitor from coming forward in an earthquake. Monitors are usually positioned at eye level and are largely made of glass. A graphic monitor can weigh in excess of 80 pounds. Application of the MonitorPULL does not interfere with the monitor's ergonomics. The monitor can be adjusted laterally, horizontally, and back-and-forth without the risk of disconnecting the earthquake fastener.

What is the difference between regular and industrial strength VELCRO brand hook and loop fasteners?

The hook side of regular VELCRO is a series of thin nylon hooks. When disengaged from the loop, the hook bends and releases. After the hook has released from the loop, its memory returns it to its original shape. It is rated for 10,000 release cycles.



Industrial strength VELCRO employs a rigid, injection-molded nylon hook shaped like a "T" which makes it much stronger than regular VELCRO. During disengagement, the rigid "T" tears some of the loop. This gives it a low release-cycle life. It should be considered a semi-permanent fastener.



All VELCRO referenced herein is industrial strength VELCRO brand hook and loop fastener except the Refrigerator Door Strap and Fire Extinguisher Straps. They use regular VELCRO.

What the experts say about VELCRO brand hook and loop fasteners and desktop fastening.

In an article that appeared on the front page of the New York Times on July 13, 1992, Dr. Lucy Jones of the U.S. Geological Survey at CalTech in Pasadena said, "We have bolted down bookcases, [and] put Velcro on computer equipment...". In the Los Angeles Times, of December 31, 1992, this quote appeared: "Some earthquake experts at CalTech bolt their houses to the foundation, tether refrigerators, putty down crystal, nail bookcases to the wall, strap in water heaters, latch cabinet doors, cover windows with a plastic wrap type sheet and fasten televisions and computers with Velcro strips."



Each Kit Contains:
1 (25") monitor strap with VELCRO at each end
1 (24") connecting strap
1 buckle with 3M adhesive
2 surface prep pads
Instructions

MonitorPULL™ - Data < 50 lbs.

For data monitors under 50 pounds with a wall or partition behind. This fastener allows for ergonomic adjustment of a monitor while fastened. It holds the monitor from behind.

2760	MonitorPULL - Data	Gray
2761	MonitorPULL - Data	Black
2764	MonitorPULL - Data	Gray



Each Kit Contains:
1 (25") monitor strap with VELCRO at each end
1 (24") connecting strap with quick-disconnect buckle
1 (3") strap with steel plate
2 surface prep pads
Instructions

MonitorPULL™ - Graphic > 50 lbs.

For graphic monitors over 50 pounds with a wall or partition behind. This fastener works the same way as the MonitorPULL - Data except it has greater holding power. If there is doubt about the weight of your monitor, use this fastener.

2755	MonitorPULL - Graphic	Gray
2756	MonitorPULL - Graphic	Black
2757	MonitorPULL - Graphic	Gray



Each Kit Contains:
4 buckles with 3M adhesive
2 (8") Quick Straps
2 surface prep pads
Instructions

VersaBUCKLE™ - Data < 50 lbs.

Freestanding monitors can travel unobstructed, both forward and backward, in an earthquake. Shown above is a monitor (weighing less than 50 pounds) secured with a VersaBUCKLE fastening kit.

4000	VersaBUCKLE	Gray
4560	VersaBUCKLE	Black
4021	VersaBUCKLE	Gray



Each Kit Contains:
2 (21") straps using 2 steel plates with 3M adhesive
2 steel buckles
2 surface prep pads
Instructions

StrapTRAC™ - Graphic > 50 lbs.

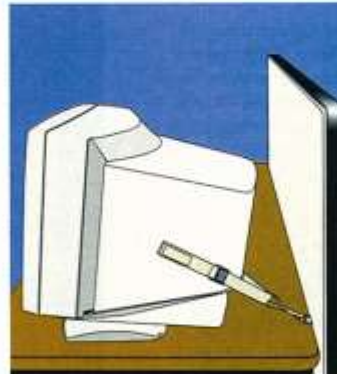
For freestanding graphic monitors over 50 pounds. This fastener works the same way as the VersaBUCKLE - Data except it has greater holding power. If there is doubt about the weight of your monitor, use this fastener.

4220	StrapTRAC	Gray
4310	StrapTRAC	Black
4311	StrapTRAC	Gray

DeskHOOK™ Fastening System

For the partitioned office, DeskHOOK assists in creating a seismically safe and ergonomically adjustable work environment. This unique fastening system is designed to keep equipment on the desk and away from the operator in the event of an earthquake. A stainless steel hook is attached to the back edge of the desktop. The equipment can be moved from side-to-side or up-and-down by sliding the DeskHOOK or adjusting the straps with the buckle. It is fully adjustable to suit different operators. Installation is fast and simple. Once the equipment has been fastened, it is very easy to relocate.

5030	DeskHOOK Fastener <50 lbs.	Gray
5031	DeskHOOK Fastener <50 lbs.	Black
5032	DeskHOOK Fastener <50 lbs.	Gray
5033	DeskHOOK Fastener >50 lbs.	Gray
5034	DeskHOOK Fastener >50 lbs.	Black
5035	DeskHOOK Fastener >50 lbs.	Gray



Each 5030 - 5032 Kit Contains:
1 (36") strap with VELCRO
1 (7") strap with buckle and VELCRO
1 steel DeskHOOK w/loop strap
1 adjusting screw
2 surface prep pads
Instructions

Each 5033 - 5035 Kit Contains:
Same as above except buckle is steel

1 Secure to different table thicknesses, search web reference number 2889. See page 3 for web access instructions.

1 Use with stacked equipment and purchase components separately, search web reference number 5027.

Lab/Hospital and LAN/Comm Rack Fasteners

StrapTRAC™

This fastening system was designed for heavy countertop equipment used in laboratories. It is not uncommon for such lab equipment to weigh up to 150 pounds. Equipment such as centrifuges have heavy spinning masses inside that can go out of control during an earthquake, posing a potential physical and biological threat to personnel.

The StrapTRAC line was designed to meet the rigid standards for lab fastening on items weighing over 50 pounds.

StrapTRAC is designed to keep equipment from falling off counters during seismic shaking. If there is a wall or backplash behind the item to be fastened, use one kit of StrapTRAC, as shown in Picture A. If there is no wall or backplash, use two kits of StrapTRAC installed in a crisscross pattern, as shown in Picture B. This will help restrain the equipment in both forward and backward motion.



A



Each Kit Contains:
2 (21") straps using 2 steel plates with 3M adhesive
2 steel buckles
2 surface prep pads
Instructions



B

Picture A
Shown using 1 kit
(2 fasteners)
1 fastener attached to each side

Picture B
Shown using 2 kits
(4 fasteners)
2 fasteners attached to each side in a crisscross pattern

StrapTRAC™

4220	StrapTRAC	Gray
4310	StrapTRAC	Black
4311	StrapTRAC	Grape

StrapTRAC™ Contour

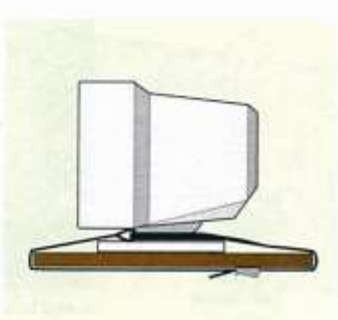
i Contoured fasteners, search web reference number 4320.

Microscope Restraint System™

i Microscope restraints, search web reference number 4503.

Servers On Open Shelving

Servers located in data centers, network rooms, colocation facilities, telecom rooms, and offices are often sitting on open shelves. This makes them extremely susceptible to toppling during an earthquake. The QuakeGRIP™ Open Shelf Server Straps are easy to install and an inexpensive solution to this problem. The straps come in two lengths, 5 feet and 10 feet, and are available in three colors with two different buckles - a plastic buckle for servers weighing under 50 pounds and a metal buckle for servers weighing over 50 pounds.



Each Kit Contains:
1 (38") strap with buckle
1 (30") strap
Instructions



Each Kit Contains:
1 (5') strap with buckle
Instructions

QuakeGRIP™ Open Shelf Monitor Strap

To secure monitors on open shelving in computer/network rooms, use this product where attachment from behind is not available. Use on monitors weighing under 50 pounds. The success of this fastener is determined by the strength of the joint between the monitor base and the monitor.

2877	Open Shelf Monitor Strap	Gray
2878	Open Shelf Monitor Strap	Black
2879	Open Shelf Monitor Strap	Grape

QuakeGRIP™ Open Shelf Server Strap

To secure servers, CPUs, pizza boxes, modems, and other computer/network room peripherals, use this product where attachment from behind is not available.

2880	Server Strap 5' <50 lbs.	Gray
2881	Server Strap 5' <50 lbs.	Black
2882	Server Strap 5' <50 lbs.	Grape

i Straps for equipment weighing over 50 lbs., search web reference number 5554. See page 3 for web access instructions.

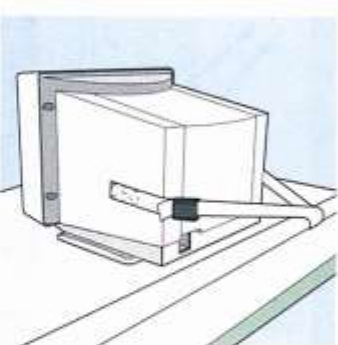
LanGRIP™ Universal Fastening System

LAN (Local Area Network) servers, peripherals, and monitors are often kept on special racks like the one shown to the far right. This equipment is often moved and reconfigured. New equipment is often added. Because of this constant change, using traditional fastening methods can become time-consuming.

The LanGRIP™ Fastening line was designed in a way that allows moving and swapping of equipment to be as simple as buckling a belt. Once the equipment has been installed, adhesive application and removal is no longer necessary to reconfigure the system. A strap (LanGRIP™ Back Strap) is anchored to the vertical supports and stretched horizontally across the back of each shelf. This keeps the items from moving out through the back of the shelf during an earthquake. Each piece of equipment is secured on two sides with (LanGRIP™ Universal Strap) industrial Velcro hook and loop. The equipment strap, which is adjustable in length, is wrapped around the back strap and adjusted with a buckle.

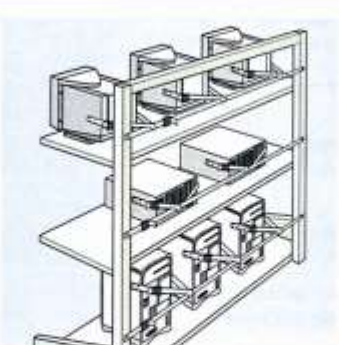
There is a slot at each end of the back strap to hold each end item from falling off the side of the shelf.

i Illustration of slot detail, search web reference number 2891. See page 3 for web access instructions.



Each 5003 - 5005 Kit Contains:
1 (36") strap with VELCRO
1 (7") strap with VELCRO and buckle
2 surface prep pads
Instructions

Each 5006 - 5008 Kit Contains:
Same as above except buckle is steel



Each Kit Contains:
1 (7.5") strap
1 (9") strap with steel buckle
4 mounting screws
2 washers
Instructions

LanGRIP™ Universal Strap

For use on equipment secured from behind. Use in conjunction with LanGRIP Back Strap.

5003	Universal Strap <50 lbs.	Gray
5004	Universal Strap <50 lbs.	Black
5005	Universal Strap <50 lbs.	Grape
5006	Universal Strap >50 lbs.	Gray
5007	Universal Strap >50 lbs.	Black
5008	Universal Strap >50 lbs.	Grape

i More products to secure items on LAN racks, search web reference number 5012. See page 3 for web access instructions.

LanGRIP™ Back Strap

Back strap prevents equipment from falling backward. Strap fits any rack that is between 24" and 72" wide. Mounting screws are provided to attach the strap to slots in the vertical supports. Use in conjunction with LanGRIP Universal Strap.

5009	Back Strap 2' - 6'	Gray
5010	Back Strap 2' - 6'	Black
5011	Back Strap 2' - 6'	Grape

i Various vertical support connection methods on LAN racks, search web reference number 2848.

Wall Mount Fasteners

Why do we use straps for securing furniture items instead of steel brackets?

When a piece of furniture is secured to the wall with a steel bracket, solid contact is made between the wall and the furniture. When the wall shakes, the shaking is transferred to the furniture via the steel bracket. This transference does not take place by making this connection with a strap. The strap allows the furniture to have independent movement.

How to fasten two stacked pieces of furniture together and to the wall.

For dressers, hutch cabinets, and other stacked furniture pieces, do the following. Purchase two steel mending plates from the hardware store. They are about 4" long by 3/4" wide with 4 holes. On the back of the stacked furniture pieces, screw the mending plates to the top of the bottom piece and to the bottom of the top piece. Attach the Furniture Straps according to instructions.

i Illustration of this fastening method, search web reference number 2901. See page 3 for web access instructions.

Extra-Heavy Furniture

Screw one 1/4" (minimum) diameter eye screw into a stud and another one into the furniture frame. Connect the two with a 1/4" (minimum) diameter quick link, available at most hardware stores. Do this in at least two locations on the furniture and in as many other locations as necessary to make it secure.

i Illustration of this fastening method, search web reference number 2846. See page 3 for web access instructions.

It's smart to strap your hot water heater, it's also the law.

Your hot water heater needs to be secured for several reasons.

- Most hot water heaters in California are connected to a natural gas line that, if broken in an earthquake, can cause fire or explosion.
- Water heaters are a good source of drinking water after an earthquake if water service is disrupted.
- It is now California law that hot water heaters must be secured prior to selling a home (California State Assembly Bill 304).

The Spacemaker® Hot Water Heater is patented and approved by the City of Los Angeles and the Division of the State (California) Architect.

This two-strap system comes with complete installation instructions in both English and Spanish.



Each Kit Contains:
2 (15") straps
2 wood stud screws
4 furniture screws
2 stove bolts, 2 nuts
6 flat washers, 2 lock washers
Instructions

Q-Furniture Straps™

Fastening tall furniture is vital to safety in the home and office. Q-Furniture Straps are extremely strong and easy to use. One end is screwed into a wall stud; the other is fastened to the top of the furniture with provided screws or bolts and nuts. These fasteners are designed to be used on furniture where the top is above eye level. These straps will fasten furniture that is within 8" from the wall. For below-eye-level furniture, use the Out-of-Sight Furniture Strap, shown below. Use more than one kit on heavy furniture.



5799	Q-Furniture Straps	Gray
5800	Q-Furniture Straps	Beige
5801	Q-Furniture Straps	Brown
5802	Q-Furniture Straps	Oak
5803	Q-Furniture Straps	White
5804	Q-Furniture Straps	Black

i Various methods of fastening the Q-Furniture Straps, search web reference number 5455. See page 3 for web access instructions.



Each Kit Contains:
2 (16") straps
2 quick-disconnect buckles
2 footman loops
4 furniture screws
2 wood stud screws
2 washers
Instructions

Out-of-Sight Furniture Straps™

The Out-of-Sight Furniture Strap secures wood furniture such as entertainment centers, TV cabinets, console TV sets, speakers, dressers, tables, bookcases, credenzos, and file cabinets. This unique fastener has quick-disconnect buckles for easy movement of the furniture. The straps are adjustable allowing the furniture to be as close as 3/4" to the wall or as far away as 15".

5812 Out-of-Sight Furniture Straps Gray

i File cabinets and other metal furniture using out-of-sight fastening, search web reference number 2860. See page 3 for web access instructions.



Detail of fastener behind bookcase



Each Kit Contains:
2 metal straps
brackets
hardware
Instructions

Spacemaker® Hot Water Heater Kit

To secure hot water heaters up to 80 gallons, use #4229. For hot water heaters up to 120 gallons, use #4309.

4229	Spacemaker E-25-80	Metal
4309	Spacemaker E-120	Metal



Each Kit Contains:
1 (14") strap with 2 D-rings
1 (10") strap with quick-disconnect buckle
1 wood stud screw
1 washer
Instructions

Cart-to-Wall Strap™

There are many items in the office and home that need to be attached to a wall and are also required to be removed from time to time. The Cart-to-Wall Strap was designed for this purpose. One end secures to a leg or post with a D-ring cinch strap. The other end is screwed into a wall stud. Between the two is a quick-disconnect buckle. The strap slack can be adjusted from 10" to 24". Use on TV carts, audio/visual carts, medical carts, baker racks, tubular items, or any item on wheels.

4641	Cart - to - Wall Strap	Gray
4772	Cart - to - Wall Strap	Black

i Additional colors, search web reference number 4641.

Wall Mount Fasteners

FileSTRAP™ Anti-Tip Fastener

File cabinets have long topped the list of office items that need to be fastened to prevent injury and damage during an earthquake. This was illustrated during the June 29, 1991, 6.0 Sierra Madre Earthquake. The Los Angeles Times reported that a Glendale, California bank employee was injured by a falling file cabinet in what Dr. Lucy Jones of the U.S. Geological Survey referred to as "...a real puny earthquake."

One drawer shaking open during even a mild earthquake can cause the cabinet to tip over.

Earthquakes are not the only cause of file cabinets tipping over. It is human nature to fill the top two drawers to capacity and place smaller volumes of files in the lower drawers. This makes the typical file cabinet top-heavy and can often cause tipping by just opening the top drawers at the same time.

FileSTRAP has a simple design. Industrial VELCRO brand hook and loop fastener is used. It is rated by Velcro USA to have a holding power of 22 pounds per square inch in the shear mode. Each FileSTRAP uses 12 square inches of industrial VELCRO hook and loop. This gives each FileSTRAP a rated shear holding power of 264 pounds.



FileSTRAP™ Anti-Tip Fastener

Each FileSTRAP uses 12 square inches of industrial VELCRO hook and loop. On lateral file cabinets and other cabinets wider than 2 feet, use two or more FileSTRAPs.

S200	FileSTRAP	Gray
S809	FileSTRAP	Black
S220	FileSTRAP - Extra Long	Gray
S810	FileSTRAP - Extra Long	Black



Each Kit Contains:
1 (12" x 2") strap w/VELCRO
1 wood stud screw
1 washer
2 surface prep pads
Instructions

Extra Long Kit Contains:
same as above except strap is (24" x 2")



Each Kit Contains:
2 (14" x 2") strap w/VELCRO
4 surface prep pads
Instructions

FileSTRAP™ - Gang

File cabinets often are placed together in an island configuration. Ganging them together creates a larger base and lowers the center of gravity. Each kit has two straps and each strap has 12 square inches of industrial VELCRO hook and loop fastener on both ends.

S250	FileSTRAP - Gang Kit	Gray
S251	FileSTRAP - Gang Kit	Black

Partition WallGRIP™

Partitioned offices often have file cabinets and storage cabinets both inside and outside the partition walls. Ideally, these cabinets would be bolted to the floor; however, floor mounting is often impractical and expensive. Partition WallGRIP is the next best solution to floor mounting. The Partition Wall Side Bracket is made of 12 gauge stainless steel. It straddles the partition. Cabinets can be secured to it from both sides. The Partition Wall FileSTRAP is the same as the FileSTRAP mentioned above on this page except it has a steel ring to hold it on the Side Bracket.

How to Find a Stud

There are several ways to find a stud. One is with a stud finder. Stud finders can be purchased at most hardware stores for about \$20. They are battery powered and usually have instructions printed on the back of the unit.

After finding the first stud, measure 16" on either side of it. Check to see if the stud finder confirms the presence of a stud in this location.

Another way to locate a stud is with a hammer and small diameter nail. The nail should be about 1-1/2" long. If you are trying to locate studs behind a piece of furniture, this method is practical. Nail into the wall at 1" increments in a horizontal row until you hit a stud. You will know when you have hit a stud as there will be constant pressure on the nail as you hit it. Where there is no stud, the nail will have no pressure once you go beyond the drywall. Once you have found a stud, measure 16" to either side of it and repeat the process.

i More information and illustrations on finding studs, search web reference number 2859. See page 3 for web access instructions.



Each Kit Contains:
1 (12" x 2") FileSTRAP w/VELCRO and steel ring
2 surface prep pads

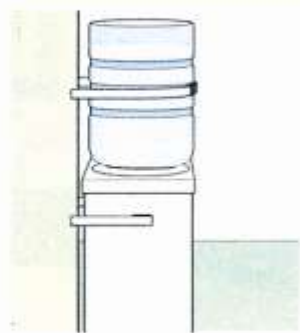
1 (2") stainless steel side bracket
Instructions

Partition WallGRIP™

2770	Partition WallGRIP*	Gray
2771	Partition WallGRIP*	Black

*maximum partition wall thickness is 2-1/4"

i Component parts and other partition wall applications, search web reference number 2722. See page 3 for web access instructions.



Each S600 Kit Contains:
2 bottle straps w/buckle
2 cooler straps w/VELCRO
2 surface prep pads
Instructions/hardware

Each S601 Kit Contains:
2 cooler straps w/VELCRO
2 surface prep pads
Instructions/hardware

Water Cooler Kit

Bottled water is a very valuable commodity for survival after a major earthquake. The Northridge Earthquake proved how water mains can break, making drinking water scarce. Additionally, spilled water poses a slip-and-fall danger during emergency evacuation. The water cooler kit comes complete with all necessary parts to secure the cooler as well as the bottle to the wall. The bottle strap has a buckle for easy bottle changing.

S600	Water Cooler Kit	Gray
S601	Water Cooler Kit (base only)	Gray



Each Kit Contains:
2 (148") straps using a steel plate with 3M adhesive and steel buckle
2 wood stud screws
2 washers
2 surface prep pads
Instructions

StrapTRAC™ Wall

Copiers and other large equipment create potential hazards during an earthquake. The StrapTRAC Wall fastener was designed to restrain such equipment as well as provide easy mobility for servicing. To each side of the equipment, one end of the fastener is attached with a steel buckle using 3M adhesive. The other end is screwed into a wall stud. Between the two is a steel buckle for easy removal. The strap can be adjusted so the equipment can be as far away as 4 feet from the wall.

4221	StrapTRAC Wall	Gray
4314	StrapTRAC Wall	Black



Each Kit Contains:
1 fire extinguisher strap
1 wood stud screw
1 washer
Instructions

Fire Extinguisher Strap

Fire extinguishers can jump from their support brackets during an earthquake. This unique strap will help keep the extinguisher attached to the support bracket. The strap features a red VELCRO brand hook release tab and is clearly marked PULL TAB TO RELEASE.

S300	Fire Ext. Strap 3" dia.	Red/Yellow
S320	Fire Ext. Strap 5" dia.	Red/Yellow
S340	Fire Ext. Strap 7" dia.	Red/Yellow

Confronting the Inevitable

by Lucy Jones, USGS

Everyone who lives in southern California knows that this is earthquake country. We know that the San Andreas fault produces many earthquakes and other faults are also hazardous. However, it is often difficult to understand how to incorporate this information into our lives. Should we only be concerned if we live near the San Andreas fault? Is every place just as dangerous? What can we do about it anyway.

Southern California has had more than 200,000 earthquakes in the last decade—a few were damaging, but most were not even felt. Not one of these earthquakes has been on the San Andreas fault—in fact, the last earthquake on the southern California stretch of this fault was in 1857. It is still storing energy for some future earthquake. Other faults produce most of our earthquakes.

Scientists of the Southern California Earthquake Center have recently completed a major project to summarize what is known about the earthquake hazard from all possible faults. Over 200 other faults in southern California can produce earthquakes above magnitude 6. This hazard is described by how often, on average, each site will experience shaking strong enough to damage some buildings. This level of shaking does not have to damage buildings or their contents if we prepare.

The above article is from the booklet "Putting Down Roots in Earthquake Country" written by Lucile M. Jones, USGS. It is a 32 page, color illustrated, handbook on earthquake safety. This booklet is available at many local libraries in the LA area at no charge. They can be purchased for \$1.00 each (\$0.50 for nonprofit groups) plus postage. Call 213 740. 5843 for ordering information.

The booklet is also available on the internet at:
www.scec.org/outreach/roots/eqcountry.html



VCR/Stereo Buckle™

This is the same VersaBUCKLE kit featured in our computer section, except it is black to match the color of most home electronic items.

4560	VersaBUCKLE/VCR-Stereo	Black
4000	VersaBUCKLE	Gray
4021	VersaBUCKLE	Grape



Each Kit Contains:
4 buckles with 3M adhesive
2 (8") Quake Straps
2 surface prep pads
Instructions



Stainless Steel Braces™

Microwaves can be heavy and often have sharp corners. This is a very strong fastener as it wedges the appliance between two steel braces with industrial VELCRO.

2110	Stainless Steel Braces	Silver
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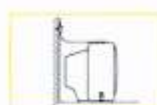
Each Kit Contains:
2 (8" L x 1-3/4" H) stainless steel braces with VELCRO
2 surface prep pads
Instructions



TV Fastening Kit™

TV sets present a unique safety problem because most sets (15" and larger) are top-heavy. Since small children often sit on the floor in front of the TV, the need for securing them is even greater. The TV Fastening Kit uses VersaBUCKLES on each side of the TV to hold down the base. A top strap is used to restrain the TV from coming forward. The top strap is secured to the top of the TV with industrial VELCRO brand hook and loop fastener. It can be secured to either the tabletop behind the TV with the VersaBUCKLE, or screwed into a wall stud through the VersaBUCKLE. For sets 25" and larger, use two TV Fastening Kits or the Big Screen TV Strap for added security.

4065	TV Fastening Kit	Black
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Each Kit Contains:
1 4560 kit (see above)
1 (60") top strap w/VELCRO
1 buckle with 3M adhesive
1 wood stud screw
2 surface prep pads
Instructions



Big Screen TV Strap™

After the Northridge Earthquake, Q-Safety was inundated with calls from customers whose big screen TV sets fell over. As a result, the Refrigerator Strap was adapted for big screen TV use. To each side of the TV, one end of the strap is applied with industrial VELCRO brand hook and loop fastener. The other end of the strap is screwed into a wall stud. Between the two is a quick-disconnect buckle. The straps are adjustable so the big screen TV can be as far away as 4 feet from the wall.

4508	Big Screen TV Strap	Black
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For other colors, see Refrigerator Strap, shown below.



Each Kit Contains:
2 (48" x 2") straps with VELCRO and quick-disconnect buckle
2 wood stud screws
2 washers
2 surface prep pads
Instructions



Washer/Dryer Strap™

Gas dryers are especially vulnerable during an earthquake. If the gas line connection is broken, resulting fires can cause more damage than the quake itself. The Washer/Dryer Strap will help keep the washer/dryer from moving away from the wall during an earthquake. Two ends of the strap are screwed into wall studs behind the washer/dryer. The strap buckles together in front, much like a seat belt. Each kit fastens one machine.

4506	Washer/Dryer Strap	Gray
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Each Kit Contains:
1 (105") strap w/buckle
2 wood stud screws
2 washers
Instructions

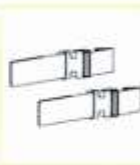


Refrigerator Strap™

Refrigerators are often on wheels and can roll across a kitchen during an earthquake. The Refrigerator Strap is designed to keep them in place. To each side of the refrigerator, one end of the strap is applied with industrial VELCRO brand hook and loop fastener. The other end of the strap is screwed into a wall stud. Between the two is a quick-disconnect buckle. The straps are adjustable so the refrigerator can be as far away as 4 feet from the wall.

2799	Refrigerator Strap	Gray
5805	Refrigerator Strap	White

For a black refrigerator, see Big Screen TV Strap, shown above.



Each Kit Contains:
2 (48" x 2") straps with VELCRO and quick-disconnect buckle
2 wood stud screws
2 washers
2 surface prep pads
Instructions

QuakeHold Putty, QuakeHold Gel, and Museum Wax, what's the difference?

Use QuakeHold Putty for a sturdy bond between collectibles and any hard surface. Use QuakeHold Gel for a secure bond specifically between transparent items. Both QuakeHold Putty and QuakeHold Gel are simple to apply, easy to remove, and reusable. Use Museum Wax for a gripping bond on items that are seldom moved.

Add safety for tall items like statues and vases.

On the base of the item, use QuakeHold Putty, QuakeHold Gel, or Museum Wax. If the tabletop is leather or fabric, use the DON'T WALK Mat. Tie a clear monofilament line (fishing line) near the top of the item. Screw an eye screw into the wall (stud if possible). Tie the monofilament line from the item to the eye screw.

Illustration of this fastening method, search web reference number 2845. See page 3 for web access instructions.

Secure extra-heavy mirrors and large pictures.

Screw one eye screw into a stud and another one into the mirror or picture frame. Connect the two with a quick link (available at most hardware stores). Do this in at least two locations on the item and in as many other locations as necessary to make it secure. Use Quake Tape or VersaBLOCKS in the lower corners for stability.

Illustration of this fastening method, search web reference number 2846. See page 3 for web access instructions.

Up to what magnitude earthquake will these fasteners hold?

This question can not be answered prior to an earthquake because many elements influence the answer. Here are some factors to consider:

- **Location Relative to Epicenter**
Locations directly on the epicenter of a 5.0 magnitude earthquake can sustain tremendous damage, whereas areas a few miles away may have no damage at all.

Epicenters may be located near the surface, such as the Northridge Earthquake which struck 10 miles underground; or deep beneath the surface such as the June 8, 1994 Bolivia Earthquake that was centered 400 miles underground.

- **Type of Ground Composition**
Is it landfill such as San Francisco's Marina District that was devastated in the Loma Prieta Earthquake?

- **Direction**
Is it a vertical thrust or a slip-strike (horizontal) earthquake?

Various combinations of these factors result in different degrees of damage.



Each Kit Contains:
1 (2.64 oz.) pod of QuakeHold Putty adhesive

QuakeHold™ Putty

QuakeHold Putty protects valuables from earthquakes, playful kids, and pets. This non-toxic, poly putty is formulated to create a sturdy bond. It is non-drying, removable, and reusable. One 2.64 oz. pod will secure about 20 medium-size items. QuakeHold is excellent for securing collectibles, figurines, antiques, knock-knocks, and vases. Apply to hard surfaces that are waterproof such as glass, Plexiglas, tile, stone, laminated plastic, metal, ceramic, and finished wood.

4080 QuakeHold Putty Putty



Each Kit Contains:
1 jar of Museum Wax adhesive

Museum Wax™

Museum Wax is the same formulation museum conservators have been using for years. It is non-toxic, microcrystalline wax used to secure collectibles against falling and breaking. Its stickiness grips instantly. Museum Wax is recommended for objects that are seldom moved. Removal requires mineral spirits and/or dental floss. Apply to hard surfaces that are waterproof such as glass, Plexiglas, tile, stone, laminated plastic, metal, ceramic, and finished wood.

4084 Museum Wax (2 oz.) Pearl
4085 Museum Wax (13 oz.) Pearl



Each Kit Contains:
1 (4 oz.) jar of QuakeHold Gel adhesive

QuakeHold Gel™

Clear QuakeHold Gel was designed specifically for use on transparent items such as crystal, glass, and Plexiglas. It is a non-toxic gel that transforms into a solid film to create a secure bond. It is removable and reusable. One 4 oz. jar will secure up to 300 small figurines. Apply to hard surfaces that are waterproof such as glass, Plexiglas, tile, stone, laminated plastic, and metal. Do not use on tilted surfaces.

4090 QuakeHold Gel Clear

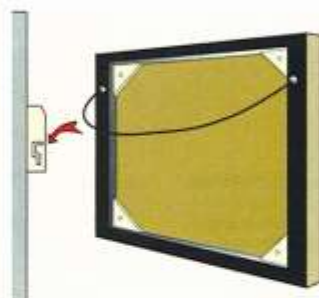


Each Kit Contains:
1 roll VELCRO hook & loop
12 surface prep pads
Instructions

Quake Tape™

Quake Tape is industrial VELCRO brand hook and loop fastener with pressure-sensitive adhesive on the back of both the hook and loop. It is excellent for adhering flat surfaces together. It is recommended for use on potted plants, lamps, trophies, sorting trays, file boxes, etc. Apply to any hard surface such as glass, tile, stone, laminated plastic, metal, ceramic, and finished wood. Do not use on vertical surfaces.

2800 Quake Tape Roll 3' Gray
2801 Quake Tape Roll 9' Gray



Each Kit Contains:
4 hangers
4 nails
4 wood stud screws
8 VELCRO pads
4 surface prep pads
Instructions

Picture & Mirror Fastening Kit™

Hang your pictures and mirrors in a tough, plastic maze. Each fastener comes with a nail for light-weight pictures, and a wood stud screw for heavier pictures. Two fasteners used together hold up to 100 pounds. The kit contains VELCRO pads to stabilize the picture against the wall. For heavier pictures, use the VersaBLOCK (page 5) to stabilize the picture against the wall.

5813 Picture & Mirror Fastening Kit Putty



Each Kit Contains:
1 (12' x 1') roll

DON'T WALK Motion Resistant Mat™

Keep items from "walking" during an earthquake. DON'T WALK has gripping power on both the equipment and the tabletop. It is ideal for placing under items that have leather- and fabric-covered bases. It is great for lining drawers, bookshelves, and workbench surfaces. DON'T WALK is not a universal earthquake fastener since it does not protect against vertical thrust.

2641 DON'T WALK 12'x1' roll Putty

Door Lock and Shelf Content Restraints

Are childproof latches adequate in an earthquake?

Childproof latches were not designed as earthquake safety devices. They can come off their catch latches with extreme lateral motion. If you choose to use them, try to find one with a wide catch latch.

Tips for safe storage in cupboards

Keep the heaviest items on lower shelves. Whenever possible, purchase liquids in plastic bottles rather than glass. Expensive dishes and china that are used for special occasions and are not kept on display should be packed in boxes with plenty of padding and kept on lower shelves.

Top California Earthquakes*

Magnitude	Date	Location	Seconds
7.8	Jan 7, 1857	Fort Tejon	130
7.7	April 18, 1906	San Francisco	110
7.5	July 21, 1952	Kern County	27
7.3	June 28, 1992	Landers	24
7.0	Oct 17, 1989	Loma Prieta	7
6.9	May 18, 1940	Imperial Valley	15
6.7	Feb 9, 1971	San Fernando	8
6.7	Jan 17, 1994	Northridge	7
6.6	Nov 24, 1987	Superstition Hills	15
6.5	April 9, 1978	Bozoma Mountain	6
6.4	Oct 15, 1979	Imperial Valley	13
6.4	March 10, 1933	Long Beach	5
6.1	April 22, 1992	Joshua Tree	5
5.9	July 8, 1986	No. Palm Springs	4
5.9	Oct 1, 1987	Whittier Narrows	3
5.8	June 28, 1991	Sierra Madre	2

For comparison, the largest earthquake ever recorded was a moment magnitude 9.5 in Chile on May 18, 1960. The largest earthquake ever recorded in the United States was in Alaska on March 27, 1964, with a moment magnitude 9.2.

Describing Magnitude

When scientists refer to a "great" earthquake, they do not mean the earthquake was fabulous, they mean it was huge. Informally, earthquakes are classified according to their size:

magnitude

Under 5	small
5 - 6	moderate
6 - 7	large
7 - 7.8	major
7.8 or above	great

*Source: *Putting Down Roots in Earthquake Country*, by Lucile M. Jones, USGS.

Q-Lock™ Cabinet Door Locking System

Earthquakes often cause cabinet doors to open and the contents to spill out onto the floor. This can be very dangerous, especially where glass and other breakable objects are concerned. The Q-Lock Cabinet Door Locking System is an ideal solution to this problem.

The knob must be pulled to open the cabinet door. This releases the latch and allows the door to open. To close the door, simply push it closed. The latch will slide over the locking plate and lock into position.

Q-Locks can be installed at the bottom, top, or side of most wood cabinet doors and most metal cabinet doors.

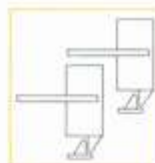
5100	Q-Lock 3/4" - 7/8"	Metal
5120	Q-Lock 1" - 1-1/8"	Metal

Chrome Knob

5140	Chrome Knob (1-1/2" dia.)	Chrome
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Most metal, wood, and plastic knobs available in hardware stores fit the Q-Lock. Ask for knobs that have an 8-32 hole top.

Use the Q-Lock with a D-shaped cabinet door handle, search web reference number 2844. See page 3 for web access instructions.



Each 5100 & 5120 Kit Contains:
2 locks
2 (8-32) knob screws
2 locking plates
8 wood screws
Instructions

Each 5140 Kit Contains:
2 (1-1/2" diameter) chrome knobs for Q-Lock
Instructions



Each Kit Contains:
1 male and female lock component
4 brass screws
Instructions

InnerLOCK™

If it is not desirable to drill through the cabinet door, as shown above with the Q-Lock, consider the InnerLOCK. This lock does not give the protection of the Q-Lock, but it is the next best solution. The male piece is attached to the door with 2 screws. The female piece is attached to the base of the cabinet. There are ball bearings on either side of the female piece that hold the male piece in place when the door is closed. There are adjusting screws on either side of the female piece that will loosen or tighten the tension on the ball bearings. This gives the installer the ability to determine the amount of force it will take to open the door.

5150	InnerLOCK	Brass
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Each Kit Contains:
2 VELCRO loop fastening straps
4 VELCRO hook pads
2 surface prep pads
Instructions

Refrigerator Door Straps

The food in your refrigerator can be very important to your survival in the days following an earthquake. As well as securing your refrigerator to the wall with our Refrigerator Strap, consider the Refrigerator Door Strap to keep doors closed and prevent food from spilling out. This is also a handy way to keep small children out of the refrigerator. The Refrigerator Door Straps are rated for 10,000 release cycles. They are easy to open and close, yet strong enough to keep the refrigerator door from swinging open. Each kit contains two door straps.

5806	Refrigerator Door Straps	White
5820	Refrigerator Door Straps	Black

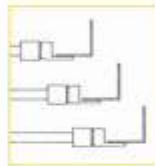


Each Kit Contains:
1 (9') shock cord
6 end cap connectors
6 block screws
Instructions

BoingBAR™

The BoingBAR is a sleek-looking, practical method of securing bookshelf and storage contents. It is ideal for offices, laboratories, homes, and garages. Because it is elastic, removing and replacing items is easy. A special locking end cap connector attaches to the ends of the cord (bungee), allowing the cord to be screwed into the vertical ends of the bookcase. Each kit can make up to 3 (36") BoingBARS.

5040	BoingBAR	Black
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Each Kit Contains:
1 (9') shock cord
6 end connector
6 block screws
Instructions

BoingBAR™ Internal

The BoingBAR Internal is the same as the BoingBAR except the end connector is designed to be attached to the inside of the shelf unit. Use on shelving where the vertical edge is round, has plastic molding, or can not be screwed into for other reasons.

5050	BoingBAR Internal	Black
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Shelf Content Restraints

What if I want to relocate equipment?

Relocation pads are available for both industrial VELCRO brand hook and loop fasteners and 3M VHB adhesive fasteners. To relocate a piece of equipment, simply remove it and the fasteners from the desktop and take it to the new location. Add relocation pads to the fasteners that attach to the desktop. The used pads can be removed from the old location and thrown away.

Can I use Velcro to mount items on a wall?

No. Adhesives used on VELCRO brand hook and loop fasteners and 3M VHB fasteners are meant only for horizontal applications. They are not recommended to be used in vertical applications such as hanging items on a wall where there is a constant load on the fastener. A constant vertical load will affect the adhesive curing and cause it to slip.

Are there laws covering earthquake safety?

There are very strict building codes that have been in place for decades as a result of the 1933 Long Beach Earthquake. Laws regarding non-structural fastening did not exist until 1992 when provisions in California Senate Bill 198 hold managers personally responsible for the safety of their employees.

i Information on legal liabilities, search web reference number 2903. See page 3 for web access instructions.

Are there any guarantees?

The forces of Mother Nature can be great. There is no guarantee that securing your equipment against earthquake damage will keep it from being damaged in a violent earthquake.

Because the real forces of an earthquake can not be precisely duplicated in a laboratory for product testing, it is up to the individual to determine what level of protection is required.

It does stand to reason that taking diligent steps to secure items against earthquake damage will be advantageous.

What FEMA Says:

In an October 23, 1995 speech before the Association of Contingency Planners, FEMA director James Lee Witt stated:

"We can start to strap down our computers. We can start strapping down file cabinets. For example, in earthquake and hurricane zones, just attaching bookcases to walls [and] securing hot water heaters in a closet should be as common as when you get in a car buckling your seat belt."



Each Kit Contains:
1 adjustable Book-KEEPER bar
2 mounting plates with 3M adhesive
2 lock nuts
2 surface prep pads
Instructions/template

Book-KEEPER™ Bar

This system for restraining books and other shelf items uses gravity to keep the restraining bar in place. To remove a book, just pick up the bar and pull the book out. By releasing the bar, it falls back into the secure position. Made of steel rod and aluminum tubing, they come in two adjustable sizes: 25" - 39" and 40" - 55". Installation is simple and does not involve drilling. The aluminum mounting plates are attached with 3M adhesive tape. A template is included to mark the mounting locations.

5060	Book-KEEPER Bar 25" - 39"	Silver
5070	Book-KEEPER Bar 40" - 55"	Silver



Each Kit Contains:
1 net with BoingBAR at top and VELCRO on bottom
2 screws
2 surface prep pads
Instructions

QuakeNET™

QuakeNET was designed for items that are too small to be secured by the BoingBAR or Book-KEEPER bar. The nets pictured here were created for the Olive View Medical Center in Sylmar (which suffered major damage in the 1971 Sylmar Earthquake). These nets were installed on 12 shelves and successfully contained their chemotherapy drugs in the 1994 Northridge Earthquake. The nets use a BoingBAR across the top, and VELCRO brand hook and loop fasteners along the bottom to hold it in place. Since these nets are custom made, the width of the shelves and the desired net heights are required when ordering.

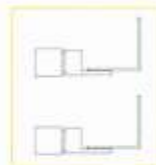
i Ordering information, search web reference number 4802. See page 3 for web access instructions.



These photos are misleading as products behind the nets are visible.



Each 4832 Kit Contains:
2 end connectors
2 screws
Instructions



Each 4834 Kit Contains:
2 end connector - L
2 screws
Instructions



Each 4836 Kit Contains:
20' shock cord
Instructions



Each Kit Contains:
1 adjustable strap with D-rings and quick-disconnect buckle at each end
Instructions

BoingBAR™ - Spare Parts

When installing BoingBARs, you may need spare parts to complete your job. Listed below are various components that make up the BoingBAR.

4832	End Connector Sets	Black
4834	End Connector - L Sets	Black
4836	Shock Cord 20'	Black

D-Ring ShelfSTRAP™

This strap was designed for metal, rack-type storage shelves. It attaches around the post at each end of the shelf with a D-ring cinch fastener. The quick-disconnect buckles allow for easy shelf access. Straps adjust between 3 feet and 6 feet.

4531	D-Ring ShelfSTRAP 3' - 6'	Gray
4533	D-Ring ShelfSTRAP 3' - 6'	Black

Product List/Price Guide

The Importance of Earthquake Fastening

Home:
Tall items such as bookcases, entertainment centers, refrigerators, and china cabinets can weigh hundreds of pounds. If not secured to wall studs, they can travel and topple during an earthquake causing injury or death to pets and people. The contents of these items can become missiles, causing injuries and blocking pathways. Washers, dryers, hot water heaters, and stoves are often gas-operated. Unsecured, they can break the gas connection and become a fire threat. Natural gas fires are a common consequence of earthquakes. TVs, microwaves, and other appliances are also prone to projectile movement in earthquakes and need to be secured.

Business:
Much of what is mentioned in the home applies to businesses as well. In addition to personal and property safety, businesses need to stay functional. Loosing servers, networking computers, desktop computers, and printers in an earthquake could be disastrous. The resultant loss of productive time could be calamitous. In the aftermath of an earthquake, the demand for resources such as replacement parts, consultants, and services will be far greater than those in normal times. Another important consideration for business is the legal liability inherent in failing to take prudent measures to mitigate hazards in the workplace. Businesses located in earthquake country should be aware of California Senate Bill 198 as well as the Corporate Criminal Liability Act, both supporting worker safety and management responsibility for safety issues in the workplace.

i Information on legal liabilities, search web reference number 2903. See page 3 for web access instructions.

Prices are effective May 1, 2001.

All prices are subject to change without notice.

Part #	Description	Color
2110	Stainless Steel Braces	Silver
2150	VerseBLOCK 1" x 1" x 3/8"	Black
2200	VerseBLOCK 1" x 2" x 5/8"	Gray
2300	VerseBLOCK 2" x 2" x 5/8"	Gray
2641	DON'T WALK 12"x1" roll	Putty
2770	Partition WallGRIP	Gray
2771	Partition WallGRIP	Black
2755	MonitorPULL - Graphic	Gray
2756	MonitorPULL - Graphic	Black
2757	MonitorPULL - Graphic	Grape
2760	MonitorPULL - Data	Gray
2761	MonitorPULL - Data	Black
2764	MonitorPULL - Data	Grape
2799	Refrigerator Strap	Gray
2800	Quake Tape Roll 3'	Gray
2801	Quake Tape Roll 9'	Gray
2877	Open Shelf Monitor Strap	Gray
2878	Open Shelf Monitor Strap	Black
2879	Open Shelf Monitor Strap	Grape
2880	Open Shelf Server Strap 5'	Gray
2881	Open Shelf Server Strap 5'	Black
2882	Open Shelf Server Strap 5'	Grape
4000	VersoBUCKLE	Gray
4021	VersoBUCKLE	Grape
4030	GrommetGRIP	Gray
4031	GrommetGRIP	Black
4032	GrommetGRIP	Grape
4065	TV Fastening Kit	Black
4080	QuakeHold Putty	Putty
4084	Museum Wax 2 oz.	Pearl
4085	Museum Wax 13 oz.	Pearl
4090	QuakeHold Gel	Clear
4151	ContourGRIP	Gray
4152	ContourGRIP	Black
4153	ContourGRIP	Grape
4220	ShapTRAC	Gray
4221	ShapTRAC Wall	Gray
4229	Spacemaker E-25-80	Metal
4309	Spacemaker E-120	Metal
4310	ShapTRAC	Black
4311	ShapTRAC	Grape
4314	ShapTRAC Wall	Black
4506	Washer/Dryer Strap	Gray
4508	Big Screen TV Strap	Black
4531	D-Ring ShelfSTRAP 3' - 6'	Gray
4533	D-Ring ShelfSTRAP 3' - 6'	Black
4560	VersoBUCKLE/VCR-Strap	Black
4641	Cert - to - Wall Strap	Gray
4772	Cert - to - Wall Strap	Black
4832	End Connector Sets	Black
4834	End Connector - L Sets	Black
4836	Shock Cord 20'	Black
4926	Spore VersoBUCKLEs	Gray
4933	Spore Quake Strap 4'	Gray
4939	Spore VersoBUCKLEs	Black
4946	Spore Quake Strap 4'	Black
4948	Spore Quake Strap 4'	Grape

Part #	Description	Color
5003	Universal Strap <50 lbs.	Gray
5004	Universal Strap <50 lbs.	Black
5005	Universal Strap <50 lbs.	Grape
5006	Universal Strap >50 lbs.	Gray
5007	Universal Strap >50 lbs.	Black
5008	Universal Strap >50 lbs.	Grape
5009	Back Strap 2' - 6'	Gray
5010	Back Strap 2' - 6'	Black
5011	Back Strap 2' - 6'	Grape
5030	DeskHOOK Fastener <50 lbs.	Gray
5031	DeskHOOK Fastener <50 lbs.	Black
5032	DeskHOOK Fastener <50 lbs.	Grape
5033	DeskHOOK Fastener >50 lbs.	Gray
5034	DeskHOOK Fastener >50 lbs.	Black
5035	DeskHOOK Fastener >50 lbs.	Grape
5040	BeingBAR	Black
5050	BeingBAR Internal	Black
5060	Book-KEEPER Bar 25" - 39"	Silver
5070	Book-KEEPER Bar 40" - 55"	Silver
5100	Q-Lock 3/4" - 7/8"	Metal
5120	Q-Lock 1" - 1-1/8"	Metal
5140	Chrome Knob 1-1/2" dia.	Chrome
5150	InnerLOCK	Brass
5200	FileSTRAP	Gray
5220	FileSTRAP - Extra Long	Gray
5250	FileSTRAP - Gang Kit	Gray
5251	FileSTRAP - Gang Kit	Black
5300	Fire Ext. Strap 3" dia.	Red/Yellow
5320	Fire Ext. Strap 5" dia.	Red/Yellow
5340	Fire Ext. Strap 7" dia.	Red/Yellow
5600	Water Cooler Kit	Gray
5601	Water Cooler Kit (base only)	Gray
5799	Q-Furniture Straps	Gray
5800	Q-Furniture Straps	Beige
5801	Q-Furniture Straps	Brown
5802	Q-Furniture Straps	Oak
5803	Q-Furniture Straps	White
5804	Q-Furniture Straps	Black
5805	Refrigerator Strap	White
5806	Refrigerator Door Straps	White
5809	FileSTRAP	Black
5810	FileSTRAP - Extra Long	Black
5812	Out-of-Sight Furniture Straps	Gray
5813	Picture & Mirror Fastening Kit	Putty
5820	Refrigerator Door Straps	Black

Relocation Items

Part #	1" wide Velcro Loop	Color
5700	VELCRO Relocation Loop	Gray
5701	VELCRO Relocation Loop	Black
5702	VELCRO Relocation Loop	White

Kit Contains: (1) 36" x 1" roll industrial VELCRO loop with adhesive, 12 surface prep pads, & Instructions

Part #	2" wide Velcro Loop	Color
5708	VELCRO Relocation Loop	Gray
5709	VELCRO Relocation Loop	Black

Kit Contains: (2) 6" x 2" industrial VELCRO loop pads with adhesive, 2 surface prep pads, & Instructions

Part #	3M Adhesive Pads	Color
5720	3M Relocation Tape Pads	White

Kit Contains: 36 (1-1/4" x 1") 3M VHB adhesive tape pads, 12 surface prep pads, & Instructions

Important notice to purchaser

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Ship To: (if different from Ordered By)

Business Name (if applicable)

Negative

Address

City

State

Daytime telephone

Business Norms of marketing

Name _____

Address (can not ship to a P.O. box)

City

State

Daytime telephone

[illegible]

UPS Ground and Handling Charges:

For orders totalling

\$ 1.00 - 50.00

\$	30.01	20.00
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\$	50.01	-	70.00
\$	60.01	-	100.00

€ 100.01

Freight

\$ 5.00

\$ 7.00

\$ 10.00

£ 12.00

Subtotal

Sales Tax

Freight (see chart):

Total Enclosed:

Loma Prieta Earthquake Facts:

Struck: October 17, 1989

Magnitude: 7.1

Location: Southern Santa Cruz Mountains

Lives Lost: 63

Damage: \$5.6 to 7.1 billion

Occurred along a section of the San Andreas fault that had been "locked" since the 1906 San Francisco Earthquake.

In 1988, the USGS concluded a 30% probability of the fault rupturing between 1988 and 2018.

Source: Environmental Geology, Third Edition by Carlo W. Montgomery

Northridge Earthquake Facts:

Struck: January 17, 1994

Magnitude: 6.7

Location: Northeast San Fernando Valley along Santa Susana Mountain Range

Lives Lost: 57

Damage: \$30 billion

20,000 left homeless.

Since 1985, the frequency of quakes in Southern California has run higher than in the previous four decades.

In 1992, the USGS and OES revised to a 47% probability that a magnitude 7 or greater earthquake would strike California within five years (based on historic patterns).

Source: The LA Times

Kobe Earthquake Facts:

Struck: January 17, 1995

Magnitude: 6.9

Location: Kobe and Osaka, south-central Japan

Lives Lost: 5,500

Injuries: 35,000

Damage: \$147 billion, not including long-term economic effects.

300,000 left homeless.

180,000 buildings damaged or destroyed.

Source: EQE, International Summary Report "The January 17, 1995 Kobe Earthquake"

Izmit, Turkey Earthquake Facts:

Struck: August 17, 1999

Magnitude: 7.4

Location: Izmit, in western Turkey, about 80 km southeast of Istanbul

Lives Lost: 15,135

Injuries: 24,000

Damage: \$16 billion

Source: Bogazici University Kandilli Observatory & Earthquake Research Institute

El Salvador Earthquake Facts:

Struck: January 13, 2001

Magnitude: 7.7

Location: Off Coast of Central America

Lives Lost: 844

Injuries: 4,723

Homes Destroyed: 108,226

Source: USGS, National Earthquake Information Center

Gujarat, India Earthquake Facts:

Struck: January 26, 2001

Magnitude: 7.7

Location: Bhuj, Gujarat, India and southern Pakistan

Lives Lost: 20,000

Injuries: 167,000

Homes Destroyed: 332,000

Source: USGS, National Earthquake Information Center

Nisqually, Washington Earthquake Facts:

Struck: February 28, 2001

Magnitude: 6.8

Location: 35 miles SW of Seattle, Washington

Injuries: 270

Damage: \$2 billion

Source: USGS & University of Washington



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