

## FAQ'S - General

**1. How much space do Cycle-Safe's lockers occupy?** The footprint of a properly designed bike storage rack (rectangular plan) is typically larger than a quality bike locker (only 10 square feet). For example, you can fit *nine of our bike lockers in one car parking space* - that's enough parking to hold eighteen bikes.

We also offer two-tiered units that allow you to double the density of your bike parking.

**2. How long does it take to load and unload a bicycle from a Cycle-Safe locker?** Closing the locker with bike inside: it typically takes less than one half the time to load the bicycle in the locker, close and lock the door, than locking into a bike rack, fumbling with lock and removing valuable accessories. Bike removal from storage locker is more time efficient for the cyclist

**3. Have you heard of any bike theft problems from those who have installed Cycle-Safe lockers?**

Since our establishment in 1980 Cycle-Safe has installed lockers at over 1,000 sites in the U.S. and at more than 55 locations throughout Europe. Of those installations 100% of the lockers are still fully operational today and there have been no reported bike thefts from the units.

**4. Do you have a bike locker that holds more than two bicycles?** Yes, we recently introduced a two-tier bike locker that allows companies to double their parking density without taking up more space. The two-tiered unit is 8.3 feet high and is composed of high strength polyester fiberglass parts are standardized, creating a unified system. Additional benefits of this new Cycle-Safe development include a stainless steel spring loaded door check holdback and a lock mechanism in the lower right corner of the upper unit, both of which contribute to cyclist's ease of use.

**5. What advantages do Cycle-Safe bike lockers have to offer over Guarded Bike Parking?** Guarded bike storage only offer secure parking for limited working hours. Bike lockers are available 7 days a week, 24 hours a day.

Bike lockers can be assigned to regular users guaranteeing them bike parking availability.

Bike lockers are much quicker to secure and remove bike parking from than putting them in guarded storage or racks.

Bike lockers do not require on-site personnel to be present. This avoids the costs involved with wages, benefits, absenteeism, supervision, training, employee loss of bike components, and shift changes.

Our bike lockers are a more flexible storage system and are much easier to relocate than a guarded storage development.

Quality bike lockers are a much lower risk investment than guarded storage development.

They are a one time capital outlay with a minimal administrative expense budget.

**6. Why should bike lockers be the first step towards solving your bike parking issues?** One of the primary reasons Cycle-Safe should be the first solution to your bike parking dilemma is due to the fact that lockers can easily be relocated to a satellite location.

Many sites with guarded bike storage project developments or plans have quality bike lockers installed for many years prior to the development of a guarded bike storage development. Demand for quality bike lockers are effective to prove the need for the next step without investing in expanded service guarded bike storage development.

**7. Why buy Cycle-Safe lockers instead of another bike parking option that may seem cheaper?** Nobody can offer you the same quality, environmental sensitivity and life-cycle economy as Cycle-Safe. Cycle-Safe is neither the cheapest bike locker on the market or the most expensive. At least, not in terms of initial cash outlay. But when the cost is amortized over the life of the locker, there's no better bargain than Cycle-Safe.

Every Cycle-Safe locker produced and sold since we began our business more than 20 years ago is still fully operational today. In that time, we've seen companies replace other manufacturer's lockers three and four times—spending many multiples of what they would have if they would have just bought Cycle-Safe the first time around.

**8. Are there federal funds available that can help with the cost of bike lockers?** Yes, in fact recent legislation allows for as much as 95% of bicycle or pedestrian related projects to be federally funded. The Transportation Equity Act (TEA-21), adopted in 1998, allows for bicycle-related transit projects to receive 90-95 percent of their funding from federal sources, leaving only 5 percent to be contributed by state and local governments

**9. What websites can I visit to find out about funding that is available?**

[www.tfhrc.gov/pubrds/septoct99/wykle.htm](http://www.tfhrc.gov/pubrds/septoct99/wykle.htm) - Features an article, "Pedaling into the 21st Century," written by Kenneth Wykle, the Federal Highway Admini.

[www.bikefed.org/summary.htm](http://www.bikefed.org/summary.htm) - Provides highlights of the new bicycle and pedestrian provisions.

[www.tea21.org](http://www.tea21.org) - Web site focusing on the Transportation Equity Act (TEA-21). Includes valuable information on how to make the most of the new bill.

[www.enhancements.org](http://www.enhancements.org) - National Transportation Enhancements Clearinghouse web site. This group is responsible for creating a more balanced transportation system that takes into consideration environmental, cultural, economic, and social conditions.

[www.reailstotrails.org](http://www.reailstotrails.org) -Rails to Trails Conservancy web site.

Contact your Cycle-Safe representative for more funding information

## FAQS – Initial Purchase

### **1. How do I check received units?**

Pre-assembled unit components are received in cardboard cartons banded to skids, to be off-loaded by fork lift or hand truck. Customer should always inspect shipment immediately upon delivery. If shipment is damaged in transit and so received or arrives incomplete, you are responsible for securing proper notation of such damage or shortage from your local freight agent, or driver(truck delivery by common carrier). This noted freight bill must be returned to us so we can make claim for loss to the railroad or motor truck company. When such noted freight bill is received by us, we stand ready to make immediate replacement shipment. Otherwise, we can not be responsible. This policy must be stringently adhered to. No equipment to be returned without our written consent. Call Company for return authorization.

### **2. How Do I determine the best installation site?**

**Dimensional information on site plan and set back recommendation are available in the owners installation manual and on the Cycle-Safe.com website (ordering and installation)**

### **3. How do surfaces and slopes effect my new lockers?**

**Locker mounting surface recommended is typical concrete pad mount. Other surfaces can be accommodated by different means, such as aluminum floor plates. See Accessories section of Cycle-Safe website for details. Installation manual has some details on surfaces and slopes.**

## FAQS – Installation

### **1. Are the lockers difficult to install?**

An installation manual is supplied with all orders. We recommend that assembly labor who possesses carpentry type skills install the lockers. The job typically requires two men (one leader and one helper); this takes approximately one and one half hour per unit (2 lockers). Therefore, the estimated budget for installation services is suggested to be around three man hours per unit. Initially the per unit assembly may take slightly more then with a learning curve it may take even less time.

Detailed instructions are provided to give step by step installation procedure with common industrial hand tools. If instructions are reviewed in advance, and followed closely the installation procedure can be completed efficiently.

### **2. How are they attached to the mounting surface?**

Each unit has expansion type anchor bolt (3/8-inch of stainless steel) at each corner of the locker system and two anchors for each frameset for expansion units.

### **3. What kind of mounting surfaces are recommended?**

Typical installation surface is a concrete pad mount with conventional sidewalk construction. Specifications are based on local codes.

### **4. What kind of tools are required?**

A complete listing of common industrial hand tools are provided to the installer in the front of the Owner's Installation Manual, with complete step-by-step instructions furnished.

**5. Does alignment and slope effect installation?** Alignment: Locker alignment is to be generally plumb and square. Checking for alignment is by operation of the door panel and door top flush with bottom of the top panel front edge. Leveling can be accommodated for some uneven surfaces with built-in leveling and adjusting plates within each frame assembly.

Slopes: Unit can be installed on slopes but, no more than 3 degree slope is recommended to avoid bottom of door rubbing on the mounting surface. Some conforming to slope is allowed for locker units. Smooth radial edges are good at concealing some misalignment with nearby square building surfaces.

## FAQS – Ad-Ons & Management

**1. Will additional lockers fit with my initial purchase?** Locker units can be ordered anytime after the original units are shipped and installed. Modular components are die molded and will always be uniform and fully compatible with existing unit components. Contact company or representative for valid prices and components.

**2. Are the lockers able to be relocated?** Modular locker units can be easily relocated at future date if they become a misplaced improvement. Common internal bolt fasteners are removed and component assemblies are removed and relocated. Instruction manual gives some details on this operation procedure.

**3. How do I manage the keys?**

Suggested procedure to give to manager in a plastic sealable 'sandwich box', suitably labeled. Other suggested key management supplies are shown in the key management section on the CD Rom. There are several vendors that furnish key storage supplies and systems. Some are available from local locksmith and supply companies. You can also find key management solutions at your local office supply store.

**4. How do I promote the lockers?**

See section in CD Rom on display posters and promotional materials for ideas and supplies.

## FAQ's - Service and Repair

### 1. Who will service my lockers?

The lockers are virtually maintenance free. The locks can be replaced or repaired by calling cycle-safe. Paint can be obtained from your local hardware store. Damage can be repaired by a local body shop. Catastrophic damage can be addressed by calling cycle-safe

### 2. Are repairs to the surface difficult?

Common automotive repair materials for fiberglass materials are used and repairs can be made on-site or at nearby automotive body shop.

### 3. How do I clean the lockers?

Recommend regular annual power washing locker units to remove grime and keep units fresh looking. Precaution to cover lock opening should be taken prior to cleaning. Household cleaners are typically used.

### 4. Can the lockers be painted?

See section of [Owner's Installation manual](#) for details on the touch-up painting and recoating procedures and materials.

### 5. Are Numbers provided?

Door identification numbers are provided sequentially per owner's direction at the time of ordering. Number plates can be removed if needed.

### 6. Are cover plates provided?

Door cover plates are typically fastened to door in recessed area with pop rivets. Earlier lockers units without pop-riveted plates can be field upgraded with common small diameter stainless steel pops.

## FAQ's - Warranty

### 1. How does it stand up in the wind?

Bicycle locker are designed to withstand normal wind load (90 mph) with a safety margin. If installed according to Cycle-Safe's specifications, the locker units are designed to stand up to normal wind load.

### 2. Does the product become brittle in winter?

Tests on similar engineered thermoset composite by the US Navy show the material actually becomes stronger in colder weather. As with most fiberglass reinforced plastic (FRP) products, composite will not become less flexible in colder weather conditions. Unless subjected to unusual impact, it will not break or crack. Our products have been engineered to accommodate normal temperature swings.

### 3. Does it expand?

It is not normal for Cycle-Safe's low shrink thermoset composite materials to expand and contract during temperature changes. Thermoplastic materials like some competitors polyethylene will exhibit expansion and contraction which may effect the smooth operation of locker unit door.

### 4. Is it maintenance free?

Engineered composite does require a limited amount of maintenance. Under normal conditions this maintenance is in the form of annual washing of the storage system to keep it looking new.

### 5. Will it crack, chip, peel or rot?

During the life of the product you should not expect to find surface cracking, peeling, chipping or rot. Common gel coated fiberglass products will not resist these problems well.

### 6. Will it mildew or collect mold?

Cycle-Safe lockers come with a baked-on polyurethane finish, the finest in the industry. They are easily cleaned with a solution of mild household detergent and water. Competitors common gelcoated fiberglass products will, when subjected to extended damp weather, collect mold and mildew.

### 7. We are considering options to purchase lockers soon and have existing locations of CS lockers that need to be expanded with more locker spaces. Is disassembly and reassembly of the existing units prohibitive? Is this something you would recommend?

The Cycle-Safe system is modular to easily permit either adding units at any future date or relocating some of the units to other sites if they become a misplaced improvement. Cycle-Safe unit are often removed and relocated several times as parking decks are rebuilt. The "end wall" component kit can be System components can be furnished the end wall component kit to allow one row to be divided into two rows, with one relocated. To add lockers to existing rows, you just order "adder units" to stretch out the row. In your case, if the lockers are just being added to, we recommend that your installer remove the top panel and door from the end wall, move the end wall over as many bays as is being added, and assemble the new locker components per directions in your instruction manual. **The pad mounting can be expanded by regular means (i.e. adding additional pad).**

### 8. Is the locker system graffiti proof?

A two-part polyurethane finish is classified as graffiti proof. The strong industrial finish is resistant to most chemicals and cleanup of graffiti is easily accomplished with common cleaners and thinner. A factory finished composite locker is easy to clean and most paint comes off with just a little effort. It may require the use of a pressure washer or in extreme cases the use of paint thinner. 400 grit sandpaper can be used when some spots will not come off using the above methods

## FAQ's - Do's & Don'ts

**DO** place short-term parking as close to the building entrance as possible

**DO** make bicycle parking visible to bicyclists, building security, foot traffic, and anyone who might approach the building. By making bicycle parking visible to foot traffic, you reduce the incidents of theft and vandalism.

**DO** provide lighting for short term and long term bicycle parking areas if needed.

**DO** install short term parking devices that support the frame of the bicycle, not just the wheel.

**DO** install short term parking devices that accept a variety of locks

**DO** make the parking facility simple. Inverted-U's are simple, relatively vandal and maintenance proof, and accept a variety of locks.

**DO** keep short term and long term bicycle parking areas clean.

**DO** provide cover from the elements if possible for short term parking.

**DON'T** put short term bicycle parking in an out-of-the-way place. Bike thieves will love you, bicyclists won't.

**DON'T** put screening of landscaping around short-term bicycle parking. It's better to see bikes than to have them stolen.

**DON'T** put up signs that say "No Bike Parking." If you feel the need to place such signs, something is wrong with your bicycle parking. If you must provide signage, place a sign indicating the location of bicycle parking.

**DON'T** place bicycle parking where an irrigation system waters bicycles.

**DON'T** install bicycle parking devices which are too short and could be a hazard to pedestrians.

## FAQ's – Product Q&A

### 1. What are Cycle-Safe System lockers made out of?

Cycle-Safe lockers are made out of a custom engineered formula of fiber-reinforced composite that is maintenance free. **What is fiber reinforced composite?** A composite is a mixture of two or more materials that, when physically combined, exhibits significantly improved properties over the individual materials. Cycle-Safe specializes in the molding of reinforced thermoset composites (SMC). Glass fibers provide structural properties and thermosetting resins provide the matrix to hold the fibers. Additional components, such as pigments, fillers, flame-retardants, and low shrink additives enhance or modify the composite's performance.

### 2. What is Cycle-Safe's Sheet Molding Compound (SMC)?

SMC is a combination of chopped glass strands and filled polyester resin, in the form of a sheet.

SMC processed by compression or injection molding is used in the production of bodywork or structural automotive components and electrical or electronic machine housings in large industrial volumes. SMC is also used in other products such as sanitary ware (baths and sinks) and urban furniture (stadium and cinema seating), etc.

### 3. Where Does Cycle-Safe's Compression Molding Composite Really Shine?

When you need parts that are **stronger** than "plastic". The construction of Cycle-Safe lockers is unique because the materials that they are made out of make them as strong and as stiff as aluminum.

Cycle-Safe lockers feature a highly complex geometric design with a lot of detail, changing thickness, and many other features that can only be produced by compression molding. In comparison to machined metal castings and sheet metal fabrications you will find that products, like Cycle-Safe, that are composed of reinforced thermoset truly surpass the competition.

### 4. What is the Compression Molding process advantage in bicycle locker enclosures?

Some of the major advantages associated with compression molding include: it is a fairly simple process, cycle times can be relatively fast, it offers excellent repetition, allows for high volume production, guarantees good surface finish of the parts, and allows for parts with tight tolerances to be produced. And because the resin and fibers can be mixed before the actual process the chemistry and the mix of the final product can be controlled. The major disadvantages are that a large initial investment in molds and presses is necessary, the material must be stored under certain environmental conditions, it must be used within a certain time, and several flow related problems can arise during the process so mold design is difficult and tedious.

Cycle-Safe looked upon that challenge and produced a unique compression molded product, the first and only in the bicycle storage industry, and won industry awards for excellence in design and construction.

### 5. Why are lockers that are produced using the spray up/hand-lay up construction problematic?

Despite the industry's previously widespread acceptance of this fabrication technique, competitor lockers produced using this technique are susceptible to several problems caused in part by the expansion and contraction of the materials used in their construction.

One customer who purchased this type of locker became aware of roof joint leakage that can occur inside a locker when he installed those BIKESHELL #352 lockers and then added roof caulking on the top seams to attempt to seal units from run off inside the locker housing. However, he was not successful and cyclist's found water had leaked in on their bikes, and helmets.

Rainwater leakage where the two fiberglass reinforced plastic panels seams meet and along the sidewall seams occurs frequently, as the caulking ages, and cracks, or simply fails. Water damage to the locker interior and its contents can be a nuisance, so can the mildew and mold that can often accompany water leaks.

Also, the factory-made composite on this type of lockers is not especially durable – it is more vulnerable to dents from normal on-site occurrences (falling branches, hail storms, etc.) in addition to everyday use and bike storage. The gel coat layer, the very outer layer, used as mold release, has no reinforcement fibers, so it easily cracks, chips, becomes delaminated and can suffer UV degradation within three years. Not only does this quickly compromise the aesthetic look of the top and sides, it increases the risk of leakage and other failure. While this is a specific example, these problems are universal within the bicycle locker market.

Cycle-Safe's patented interlocking and seamless flange design, crowned roof-line, and rib reinforced molding provides an overall stiffer construction and avoids these problems.

### 6. What are some other advantages of the technique and materials Cycle-Safe uses over the open molded hand lay up / laminate composite technique, used by competitors?

Strength of the Cycle-Safe compression closed molded SMC material is superior to non-pressure molded material; it is typically rated (ASTM testing) more than double the toughness to stand up to the environment. Tolerance of the closed die-molded SMC is controlled to 0.010 inch where the open molded material has highly variable tolerances, requires parts to be hand trimmed, and can only smooth mold products on one side. The process used by Cycle-Safe uses male and female tooling and allows products to be smooth molded on both sides. Open molded oversized products like, the BIKE SHELL #352 has hand-trimmed edges that can create sharp surfaces which have been a problem for users that have received cuts to hands, arms, and knees while moving bikes in and out of units. Cycle-Safe's machine made, compression molded SMC construction and the baked on polyurethane coating avoids the gel coating problems of delamination, chalking, blistering, cracking, UV breakdown, variable thickness that is caused by the hand made operation. It also helps to prevent the fungus and bacteria commonly found growing on the side of these types of structures. What's more, air pollution (VOC's) given off by open molded fiberglass reinforced plastic operation is avoided by Cycle-Safe's closed molded SMC operations. The EPA is increasingly regulating small fiberglass operators and some are going out of business. Molding operations of open molded fiberglass give off harmful styrene gas in both the spraying and curing cycles. In fact, the location of a competitor's plant producing spray up and lay up fiberglass bike locker parts is in the state of California, one of the most heavily air polluted parts of the country.

## FAQ Q&A

### 7. How do the thermoset composites used by Cycle-Safe compare to the thermoplastic composites that competitor's use for their lockers

Unlike thermoplastics (like the competitor's polyethylene material), the thermosets (Cycle-Safe SMC) do not soften once they cure during the molding process.

Competitors like GUARDIAN of Canada and MADRAX use a plastic material that is polyethylene with no reinforcement in the material. If it was reinforced thermoplastic material, the competitor's polyethylene would be considered an engineered thermoplastic, but, it would cost them a lot more. Since it is not reinforced, it is not of an equivalent grade of material as the Cycle-Safe ProPark structural grade SMC material. Common un-reinforced polyethylene is a commodity grade material, like that used in Tupperware, trash cans, backyard slides and toys. It is not allowed for use in structural applications in playground installations. Vandals can easily cut into un-reinforced polyethylene; it is typically trimmed using a box cutter knife, which means it can easily be cut out in the field. What's more, Polyethylene material can be ignited with common BIC type lighter and drips flaming droplets when burning. The competitors polyethylene material has no flame retardant additives and is therefore not made of self-extinguishing material like the Cycle-Safe System that is made of a self-extinguishing material for safety.

In fact, uniform building codes require outdoor litter containers and urns made of polyethylene material to be lined with steel inserts to avoid burning problems. There have been several instances where rows of bike lockers made of polyethylene material have burned with bikes in them because of vandalism.

Compared to un-reinforced polyethylene or reinforced thermoplastics, reinforced thermosets (SMC) offer the following advantages:

- Higher mechanical properties such as flexural strength, flex modulus, tensile strength, and compressive strength.
- Higher impact resistance.

### 7. How do the thermoset composites used by Cycle-Safe compare to the thermoplastic composites that competitor's use for their lockers

Greater resistance to change in shape and change of dimensions due to changes in temperature and passage of time, called creep resistance.

- Low thermal conductivity and thermal expansion.
- Excellent non-conducting strength and greater resistance to most chemicals.

At Cycle-Safe our primary process is compression molding. We use a pre-compounded mixture of glass, resin, and additives in the form of sheet molding compound (SMC) to mold parts. Compared to structural foam and RRIM, SMC parts have lower shrink rates, higher strength properties, and a much more consistent surface color and finish. In some applications, SMC can remain unpainted, however, a reinforced thermoplastic must be painted.

#### SSMC: Structural Molding Compound

Sheet Molding Compound (SMC) is a specific form of compression molding. It is currently the most developed and used processing technique to obtain structural composites, particularly in the automobile industry. Over 1.75 million FORD Explorers and Rangers have SMC beams in them. It is possible to use both thermoplastics and thermosets in SMC but the majority of SMC is done using thermosets. To form the sheets of SMC material a specific procedure is used.

The SMC compound includes all the components needed for molding the final part (resin, reinforcement, filler, catalyst, low profile additives, etc.) in a malleable and non-tacky sheet. Its characteristics allow it to fill a mold under the effects of the molding temperature and pressure.

SMC compound is made from glass strands chopped to lengths of 25 or 50mm (1 - 2 inch), sandwiched between two layers of film, onto which the resin paste has already been applied. The compound passes through a compaction system that ensures complete strand impregnation before being wound into rolls. These are stored for a few days before molding to allow the prepreg to thicken to a moldable viscosity.

The actual manufacturing process to form the part begins with a large roll of SMC, the material is then cut to the desired size and shape and the two thin nylon sheets on the outside are removed. The material is then placed inside a mold, and the regular compression molding procedure previously discussed is followed.

Temperatures for this procedure are between 130 and 160 degrees C (up to 300 degrees F) and pressures can reach 21 Mpa (up to 1,000 lbs per square inch). The mold is usually made of steel and it is hardened in key areas where the mold can wear out more easily. This is important because the mold is subject to high pressures and temperatures and it also undergoes many cycles continuously. For this reason mold design is very important and the overall cost of the mold is usually high. Cycle times are between 1 and 4 minutes. Several different resin systems can be used in SMC, vinyl ester and polyester are the most common type of resin used in the automotive industry, epoxy resins are widely used in the aerospace industry.

# cycle-safe<sup>®</sup> SYSTEM