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I. TECHNICAL OVERVIEW

A. Imprint Wall System

Entre Prises USA has worked for years to develop our Imprint climbing wall system. This modular curved surface is the most realistic and versatile wall the climbing industry has to offer. We are proud of this climbing system and believe you will enjoy many years of use with your Imprint climbing wall.

In 1984 Entre Prises was the first company to develop and market changeable climbing holds. This innovation has improved the quality of climbing walls and indoor climbing enormously. Since then we have developed an entire wall system that is changeable and original. These modular constructions are the most advanced climbing structures in the world. Entre Prises calls this modular, curved panel system IMPRINT. This technical advance has made climbing easily accessible to everyone, and provides a safe and fun atmosphere for learning. The modular nature of our system allows progressive learning from easy scrambling to top level competition.

The Imprint system allows creation of a three-dimensional curved climbing surface with complex and realistic climbing features. Installation of this system requires no special tools due to a simple but effective attachment method. This method also makes the climbing wall able to be easily dismantled and reconfigured into different surface topographies. This versatility is the key to long value in a climbing wall system.

Each Imprint panel has numerous features molded onto the panel surface. These features have been designed and sculpted to provide visual interest and an enjoyable and challenging climbing surface. More importantly they add sophistication and subtly to the Imprint climbing experience. In addition, each panel has many modular handhold attachment locations for adding additional hand and footholds. Imprint panels are manufactured from a resinous concrete material, which is highly reinforced with fiberglass mat and chopped fibers. This material makes the surface exceptionally tough and gives a texture extremely close to real rock.

The Imprint system represents such a great step forward that it has received two international patents. One patent concerns the design of the system and the other concerns manufacturing technique.
The idea behind the Imprint system is to obtain a curved, reconfigurable surface from a finite number of panels. To do this the surface must be divided into two planes of projection. The vertical plane (the plane of the support wall) is divided into a projected panel size of 1 m by 1 m. The perpendicular plane, which determines the shape or topography, is divided into 25-cm increments. Taking into consideration the various panel possibilities resulting from 0, 25, or 50-cm intervals, 33 different panels will result. These represent the base panel shapes. Other shapes have been developed to handle specific situations such as horizontal roofs, cracks, and edge returns.

Four corner locations, may be .25 or .5 meter out of plane with adjacent corners.

Typical IMPRINT Panel: "13G" shown

no scale: axonometric view
Following aesthetic and functional criteria, Entre Prises has three typical profiles: one for the 0 cm interval (flat), one for the 25 cm interval (a broken profile) and one for the 50 cm interval. For the panels to fit together, the panel edges must correspond to one of these profiles. Several panel profiles are available in each panel configuration allowing for a huge variety of combinations.
Special return panels make it possible to connect two perpendicular surfaces or create freestanding boulders. Other specialty panels also allow the creation of realistic finger or hand width cracks.

Corner Return & Crack Panels

NOTE: R and I panels may be used in roof orientations (rotated 90°), or as side panels.

IMPRINT return & crack panel designation key
B. Imprint Wall Assembly

This is a description of the modular assembly system.

On each panel a metal Corner Plate is built into each corner. A Corner Bracket is then bolted to the Corner Plate allowing us to:

- Bolt the panels together creating a continuous climbing surface.
- Attach the panel surface to the substructure.
- Fasten rope attachment anchors to the climbing surface and simultaneously transfer climbing loads to the substructure and primary support.

The Corner Brackets are connected to Pinch Pipes, which are attached to Angle Clips, which are attached to the support wall. One horizontal Pinch Pipe and one diagonal Pinch Pipe are attached to each set of Corner Brackets. A vertical Pinch Pipe attaches from each set of Corner Brackets to the set above it. This structure supports the forces produced by it’s own weight, the weight of climbers, and any possible falls in accordance with specifications and industry standards.

DETAIL: Typ. Corner Bracket Conn.
The lengths of the pipe correspond with the different increments indicated on the plan (0, 25 cm, 50 cm, ..., 350 cm). The specifications of the pipe and the live load standards for climbing wall limits the useable pinch pipe length to 3.5 meters. If the topography you choose overhangs more than 3.5 meters, it is necessary to install additional framework. Connection of the pipe substructure to the primary support structure is via Angle Clips attached to Unistrut channel railing, which is fixed to the primary support structure (typically welded). The diagonal pipes are sized such that they can be connected to the Unistrut channel railing at the same Angle Clip that connects the next highest horizontal pipe. All fasteners must be securely tightened and channel nuts visually inspected for proper installation.

DETAIL: Typ. Pinch Pipe to Strut Conn.
C. Freeform Modular Wall System

The Entre Prises Freeform Wall is a hand crafted polymer concrete climbing surface that can be built on the same modular assembly system as the Entre Prises Imprint wall. We use the same hardware and substructure to support the climbing wall.

D. Freeform Integral Wall System

The Entre Prises Freeform Wall is a hand crafted polymer concrete climbing surface that can be built on large welded frames that are bolted together on site. All Lead and top-rope anchors connect directly to structural steel.
II. USING YOUR CLIMBING WALL

A. Modular Hold Installation And Use

Entre Prises modular climbing holds require a 3/8” X 16 flat or socket head cap screw for mounting to the climbing surface. We have supplied all the necessary hardware, in the appropriate lengths for each hold. To install the hold, carefully start the bolt by hand, then tighten with the supplied Allen wrench until the hold is secure from rotating. It may be necessary to lightly oil screws periodically with a small quantity of WD-40. Care should be taken to avoid over tightening, as the hold or panel may be damaged. Take care not to use holds that are too large for the location. If the hold does not mount flat and firmly against the surface choose a smaller hold or different location. Be sure to periodically check holds, and re-tighten them as necessary.

Entre Prises holds are suitable for interior and exterior use. Using chalk enhances the feel and increases the performance of the holds. If chalk build-up becomes a problem, brush the holds with a hard-bristled toothbrush. To get the maximum life from your climbing holds, we recommend using only soft-soled shoes; avoid wearing Vibram, street or hard soled shoes.

All Entre Prises climbing holds are guaranteed for life. If our holds ever break during normal use, we will replace them free of charge. Simply call our office for replacement authorization.

We recommended changing holds and routes often. The many different hand and foot holds that Entre Prises offers allows for the course setter to create a wide variety of routes varying in difficulty and style. We are also pleased to offer the services of nationally recognized course-setters for your Imprint wall. Contact our sales department for assistance or a new selection of modular holds.
B. Wall and Handhold Cleaning

Proper care must be taken of your climbing wall. Marks from climbing shoe rubber and chalk build-up will appear after use. It is also common for holds to appear and feel dirty or grimy after heavy use.

Imprint panels: Brush off chalk marks, dirt and climbing shoe rubber with a nylon bristle brush for light cleaning. Another option is to clean the Imprint panels with soap and water. The most aggressive method of cleaning your Imprint panels is with acetone and a hand brush. Be careful to use rubber gloves and eye protection and work in a well-ventilated room. Acetone may be purchased at any paint or hardware store, or from Entre Prises. Be careful when using Acetone and do not use it in conjunction with soap and water as it may stain your wall. Acetone can stain your wall by itself so use caution. It is also possible to rent a powerwasher and high-pressure scour the panels. It is recommended that a strong detergent soap be used.

You will notice that the majority of climbing shoe rubber and grime appears on the bottom of the wall. The panels on your wall can be washed annually with a powerwasher, while the regular cleaning need only be a nylon brush, warm water and soap. Always use a nylon brush and never use metal bristle brushes, as they will permanently remove the texture from your wall. Call your Entre Prises representative for cleaning tips or to hire a qualified representative for cleaning.

Freeform Wall: Brush off chalk marks, dirt and climbing shoe rubber with a nylon bristle brush for light cleaning. Your Freeform wall is a custom painted wall and aggressive cleaning can damage the paint. Soap and water can be used on your Freeform wall but be aware that it will take a large amount of water to remove the water streaks. Always use a nylon brush and never use metal bristle brushes, as they will permanently remove the texture from your wall. Call your Entre Prises representative for cleaning tips or to hire a qualified representative for cleaning.

Hand Holds: We recommend that you clean your hand holds every time you change the holds on the wall or set a new route. The easiest way to clean holds is to run them through a dishwasher on high setting. Another method is to clean the holds in a bucket of warm soapy water with a scrub brush. It is necessary to scrub vigorously to clean the holds thoroughly. You will find that a regular cleaning returns your holds to a like-new condition and texture. Always use nylon brushes and never metal bristle brushes, as they will permanently remove the texture from your hand holds.
C. Lead Climbing And Top Rope Anchors

Entre Prises climbing walls are typically designed for bouldering, top rope and lead climbing. Check specifications on your wall for any use limitations. Certain safety procedures have been used. An explanation of these features is listed below.

Bouldering: The climbing wall is designed for a working load of one climber per five linear feet of climbing wall. The density of climbing routes may be greater than one every five feet; however, no more than the stated number of climbers should be on the wall at any given time.

Top-roping: Top rope anchors are typically installed on the top row of Imprint or Freeform panels at any Corner Bracket location where two panels connect. U.I.A.A. approved bolt hangers have been used. The anchor consists of two (2) approved bolt hangers attached to two adjacent Corner Brackets using 3/8” Grade 8 button head cap bolts. The maximum space between the two hangers is 6”. Only Corner Bracket locations have anchors! Only Entre Prises personnel may install, relocate, or replace these anchors.

Lead climbing: Imprint and Freeform climbing walls are designed for lead climbing with lead bolt locations spaced at every panel intersection. Lead climbing bolts have been placed into Corner Brackets on the climbing wall using Grade 8 bolts. As with Top Rope anchors, U.I.A.A. approved bolt hangers have been used. A single hanger bolted into the Corner Brackets and vertically spaced every meter is sufficient for lead bolts. Two (2) hangers attached to two adjacent Corner Brackets where two or four panels intersect have been used for belay and top rope anchors. Only Corner Bracket locations have anchors! The maximum space between these hangers is 6”. Only Entre Prises personnel may install, relocate, or replace these anchors.
III. IMPRINT WALL MAINTENANCE

A. Tool Kit

Primary Tools

3/8” Thread Tap, for clearing threads in panel Hand Hold bolt locations.
Tap Handle, (3/8” drive)
7/32” Allen Socket, (3/8” drive)
5/16” Allen Socket, (3/8” drive)
1/2” Bolts and Locknuts, (Spares)
Hand Hold Bolts, (Spares)

Common Tools Necessary For Maintenance

WD-40 For Hand Hold bolts and Threaded Inserts
3/4” Wrench
3/8” Ratchet
3/4” Socket (3/8” drive)
Scrub brush and bucket for cleaning panels and holds.
B. Inspections

Note:
A complete inspection log documenting care and maintenance of your wall should be kept.
All inspections must be by a qualified and competent individual.
We recommend an inspection every two years by an Entre Prises trained Inspector.
Please call Entre Prises for our inspection services.

Visually inspect all top rope and lead anchors daily. Make a visual inspection of the general condition of the wall part of your every day routine.

a. Monthly Inspections

Check all top rope and lead anchors and bolts.

Inspect all anchors for signs of wear and replace as needed.

Check for cracks in panels (hairline cracks may be present in the panels from the manufacturing process and are not a safety issue). If new cracks appear or existing cracks start to spread, contact Entre Prises.

Clean panels as needed.

Inspect and tighten modular Hand Holds as needed. Cracked or broken holds will be replaced by Entre Prises.
b. Six Month Inspections

Top row Panel Corner Plate to Corner Bracket
Hand check for loose bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Corner Bracket to Pinch Pipe
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Pinch Pipe to Angle Clip
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Angle Clip to Unistrut connection
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Carabiners and Quick links
Inspect for wear and replace unsafe pieces.
c. Yearly Inspections

Top row Panel Corner Plate to Corner Bracket
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Corner Bracket to Pinch Pipe
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Pinch Pipe to Angle Clip
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Top row Angle Clip to Unistrut connection
Check all bolts and tighten as needed (Do not overtighten). Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Carabiners and Quick links
Inspect for wear and replace unsafe pieces.

Substructure connections
Hand check all bolts on the entire wall. Carefully inspect that all parts of the structure are in place and that bolts are not loose.

Strut to Support Wall, Welds and connections
Inspect all welds for cracks. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place and tight.

Support Wall, Floor and Ceiling connections.
Visually inspect all bolts and check that they are in place. Check for rust or cracks in metal parts. Contact Entre Prises if metal appears structurally unsound. Must have all bolts in place.
IV. ENTRE PRISES CONTACT INFORMATION:

Internet address:  
www.epusa.com

E-mail:  
epusa.com

Mailing address:  
Entre Prises USA, Inc.
20512 Nels Anderson Place
Bend, Oregon 97701

Sales department: (541) 388-5463  fax: (541) 388-3248
Adam Koberna           Director of Sales and Marketing

Technical: (541) 388-5463
John Pinckney V.P.   Design and Engineering Department Head

At Entre Prises we provide the highest quality products with complete technical support. We are always available to answer your questions and offer information and advice about your climbing needs. Call our Bend, Oregon office and we’ll endeavor to help you in any way we can through the complex world of wall management, equipment supply, modifications and event marketing.
VI. WARRANTY INFORMATION

Entre Prises USA warrants to the original purchaser, for one year from the purchase date, that its products are free from defects in materials and workmanship. If during the warranty period the purchaser discovers a defect covered by this warranty, the purchaser shall immediately stop using the product and notify Entre Prises. Entre Prises will repair or replace defective products free of charge, which is the extent of Entre Prises’ liability under this warranty. Upon expiration of the warranty period, all such liability shall terminate.

Warranty Exclusions:

Entre Prises does not warrant its products against normal wear and tear, unauthorized modifications or alterations, improper use, improper maintenance, accident, negligence, damage or if the products are used for a purpose for which they were not designed.

EXCEPT AS EXPRESSLY STATED IN THIS WARRANTY, ENTRE PRISES SHALL NOT BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHER TYPES OF DAMAGE ARISING OUT OF OR RESULTING FROM THE USE OF ITS PRODUCTS. ALL IMPLIED WARRANTIES IMPOSED BY LAW ARE ALSO LIMITED IN DURATION TO THE ONE-YEAR WARRANTY PERIOD.

This warranty gives you specific legal rights, and you may have other rights that vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on the duration of an implied warranty, so the above exclusion may not apply.