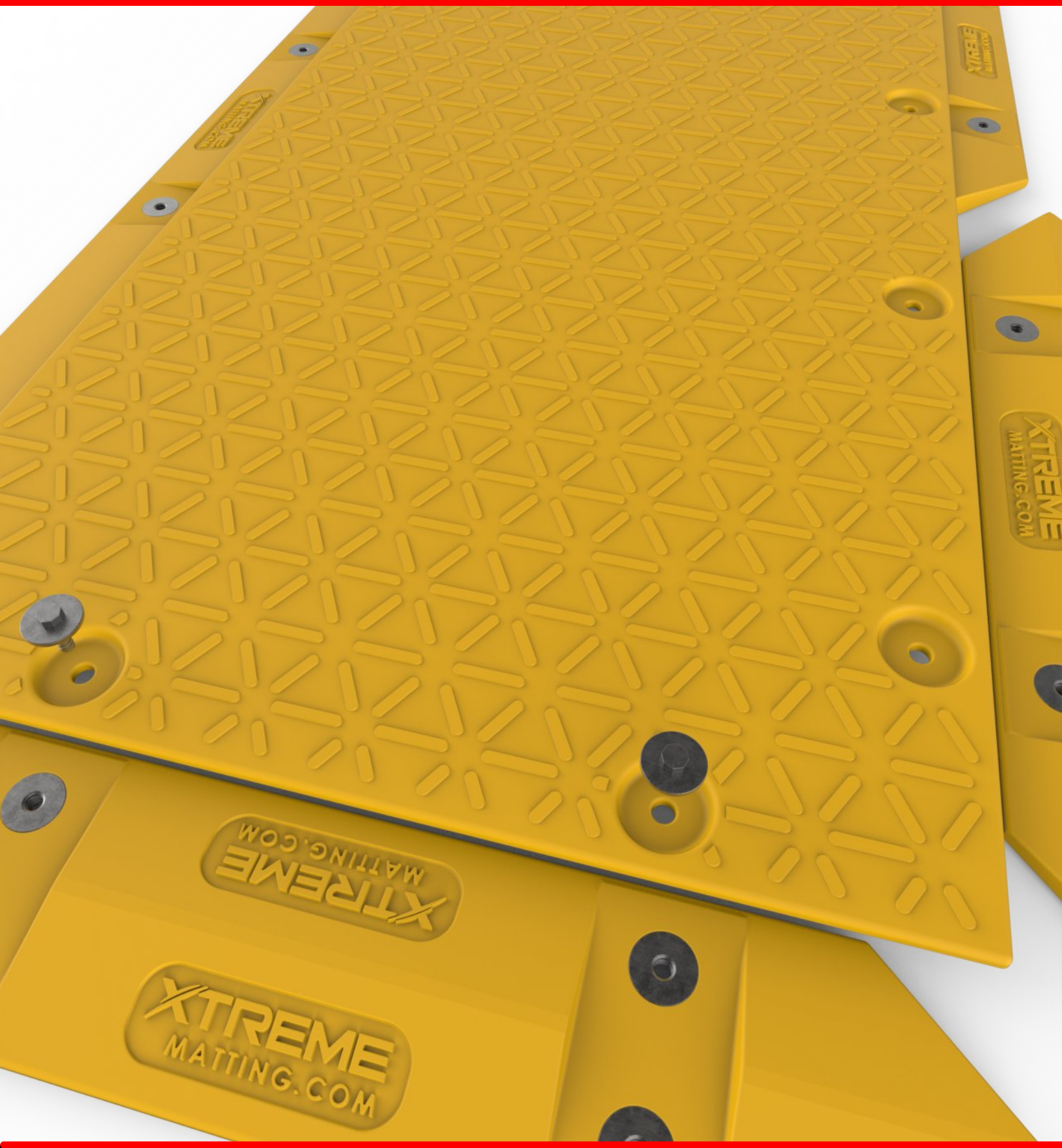
MANUAL



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1. About the Xtreme HDPE Rig Mat

The Xtreme HDPE Rig Mat system provides a safe, cost-effective surface for year-round, all-weather performance. The mats are made of high density poly-ethylene (HDPE) for a strong, durable, uniform surface that can be used for any industry that requires access in unruly environments, the stabilization for heavy equipment or simple ground protection.

Engineered for performance and strength, the interlocking mats distribute weight across a large surface area, while remaining stable and strong through all weather conditions. The tread pattern improves safety and traction for load-bearing vehicles, while the interlocking system reduces the chance for drift and slippage.

These extremely durable mats will provide years of reusable performance and an endless shelf-life with proper handling techniques, recommended application use and on-going maintenance.

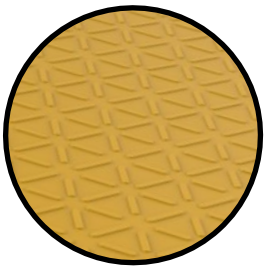
1.1 Main Mat Features Overview

The Xtreme HDPE Rig Mat is available in one size: the 7.5 ft (2.29m) x 14.25 ft (4.34m) x 4.0 inches (10.2cm) thick and weighs 860 pounds (385kg). Each mat is equipped with an over-lap lip on two sides and two under-lap lips on the opposite two sides which create the interlocking joint when two or more mats are connected. Along the perimeter of the mats there are 6 threaded inserts bonded into the mats and 6 open pocket holes that are used when locking the mats securely together with the bolt connector assembly.

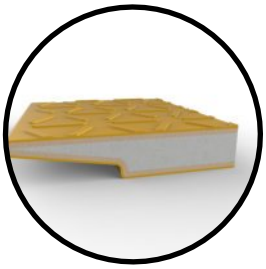
OVER-LAP/UNDER-LAP

BOLT CONNECTOR

ANTI-SLIP SURFACE



SOLID CORE



6 THREADED INSERTS

6 OPEN POCKET HOLES

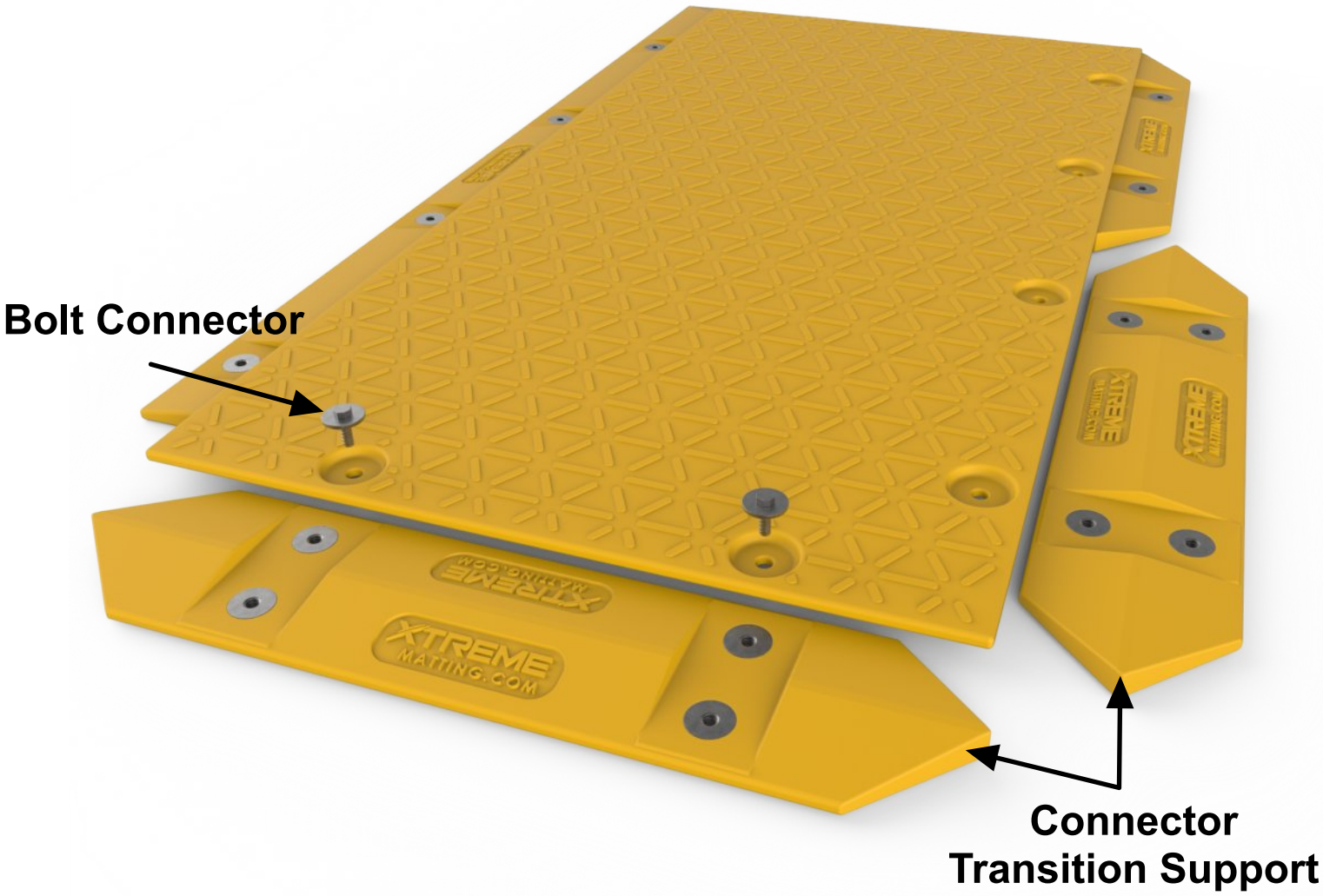
1.2 Bolt Connector Assembly

The mat sections are secured using our Patented bolt assembly. The bolt assembly consists of a hex head with a coarse coil thread that secures the mat connections by fastening together the bolt assembly into the mat's bonded female threaded insert. Once secure, the connections between adjacent mats can bear tremendous weights. All connector components are made from heavy-duty galvanized cast that will not corrode, rust or break which will allow for many uses.

1.3 Hand Installation Tools Required

The mats can be installed using a waist-height T-bar wrench (optional) or any powered impact tool with standard square drives of 1/2” or 3/4” SAE (12.5mm or 19mm) to accept a socket. Either one of these type of tools along with a standard 1-1/2” SAE (38mm) socket attached, can be used to secure the bolt assembly into the mat. We also recommend using a metal 3/4” (19mm) thick pry bar to line up the open pocket hole of the top over-lap mat with the under mat’s bonded threaded insert. This technique is the most efficient method to assist when lining up the mat connection points prior to securing the bolt assembly connectors.

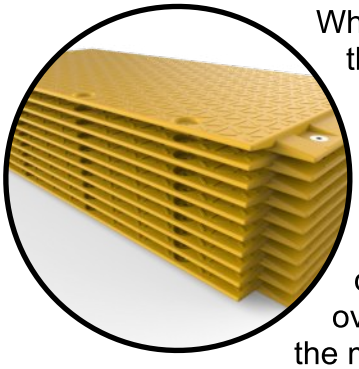
1.4 Accessories



2. Safety When handling Xtreme Mattings

We strongly recommend all personnel meet or exceed the minimum the safety requirements of your local jurisdiction and follow your corporate safety procedures prior to handling the mats on or off the work site. Proper use of Personal Protective Equipment (PPE) is highly recommended at all times.

2.1 Storing and Stacking Matting



When storing your Xtreme Mattings, care should be taken to ensure that the ground is level and stable beneath the stack. The surface and size of your storage site as well as equipment capabilities will determine the optimal height of the stack. Clear major obstructions from the surface before stacking the mats. The mats are designed with a shape memory and will return to their flat position even if there are surface irregularities or obstructions. Over time, a mat may conform to a depression in the surface. To restore it to its original shape, either turn over the mat and allow its own weight to return it to its flat condition or lay the mat down on a hard, flat surface and it will flatten out.

2.2 Loading Mats

When loading the mats on to a trailer for transport, care should be taken to make neat, even stacks that meet weight and height requirements for local transportation. Remove major debris or obstruction that would hinder the mats from resting evenly on top of each other or on top of the trailer bed surface. To assist the loader, blocks or 4” (100mm) x 4” (100mm) timbers can be placed at even intervals on the bed of the trailer The gap created between the mats and the trailer bed will allow the forks of the loader to slide under the stack.

The mats should be secured with three or more straps before transporting them just as you would any other load of manufactured material. Refer to the safety manager or an experienced driver for specific details about how to properly secure the load.

3. Installation & Removal of the Xtreme Mattings System

3.1 Personnel

A crew size of three is recommended for simple installation. One crew member will operate the loader and bring mats to the area and the other two will be on the ground guiding the mats into place, inserting the coil threaded connectors and locking them. For increased efficiency and speed, a forth crew member can assist the installers by supplying bolt connectors at each mat assembly.

3.2 Heavy Equipment Required

Stacking, moving and placement of the mats should be accomplished by heavy equipment with a skill trained operator. We recommend a properly sized rubber tire loader or rubber track skid steer to handle 2-4 mats at a time. The equipment should have a 5 ft.(1.50m) minimum fork length with a hydraulic mat grapple attachment. This type of attachment is important when handling the mats in the field. Site conditions are typically uneven and by using this type of mat grapple you can secure the mat properly to the base of the forks which will prevent the mats from bouncing and sliding from off the forks when the equipment is in motion.

You can also use a lifting device such as a crane or boom truck to manoeuvre the mats into place, however this method will require special training and typically is not the most efficient method to handle the mats. If this method is used, be certain that the proper harness mechanism is used with the lifting device and all safety precautions and procedures are followed.

3.3 Site Survey & Project Objectives

Questions about the soil condition of your site, the bearing capacity of the sub-grade, the load and traffic requirements and duration of the project will all impact the number of mats and the configuration of your road or work-site. These issues are best addressed by geo-engineers or project managers prior to installation. We have experienced staff ready to assist with any technical challenges you might face as you install or remove the mats, contact us if you have any questions or concerns.

3.4 Matting Installation

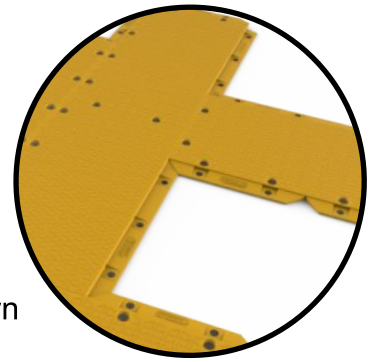
Ideally, it is best to position mats so that the projecting flange (under-lapping) on the first mat is open to receive an over-lapping mat flange. The surface of the flanges should be free of debris that could interfere with proper connection. The receiving flange has a self-aligning tabs which will assist the alignment with the corresponding hole on the overlapping flange, making it easy to align the connection system.

Installation teams should assign two team member to the task of aligning and positioning mats, using a positioning bar is recommended. As the second mat is positioned and aligned, a hex bolt can be screwed through the receiver hole in the over-lapping mat and into the receiver hole in the under-lapping mat.

When connecting mats, it can sometimes become difficult to lock the bolts into place. This is likely due to ground variation or debris such as in muddy environments. It is often helpful to put pressure on the overlapping mat flange to press the two mats together. This should assist in such situations.

Once the first series of mats are laid, mats may be continuously laid in the direction of the projecting under-lapping flanges. Should positioning of a mat underneath a projecting flange be required, a mat can generally be nudged with skid steer, or loader fork underneath the overhanging flange, due to the unique self-aligning tabs design of the flange end, which guides the under-lapping flange underneath the overlapping flange.

3.5 Connector Transition Support



We strongly recommend using our connector transition support components to complete the matting installation. These components are designed to provide support under the over-lap lip of the mat while equipment and personnel traverse over them. This will prevent the over-lap lip from getting damaged and increase the longevity of the mat. Plus, it will provide a safe smooth ramp transition up and down the matting surface.

3.6 Removal

To disassemble the mats, all the coil threaded bolts should be removed. Do not attempt to disassemble the mat system without removing the bolts; the result could be damaged bolts, damaged mats, harm to equipment and possibly injury to personnel. Have a bin ready to accept the coil threaded bolts for future use. Pick up the last mat first so that the sequence in which the mats were first laid is reversed. Once the bolts are removed, the forklift or loader operator will be able to slide the forks beneath the mat that was laid last. As the operator squares up to the broad edge of the mats, the forks should be spaced evenly under the mats in order to maintain a balanced load. Many of the removal techniques depend on the type of equipment used and the skill or experience of the equipment operator. The manufacturer recommends that you strictly adhere to safety standards as you lift and move any number of mats

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4. Uses & Applications

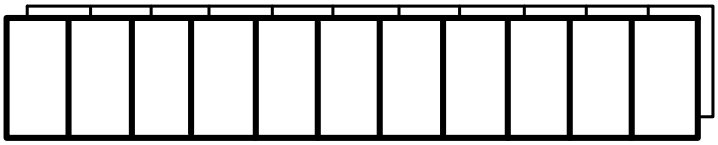
4.1 Access Roadways

Xtreme Mattings is designed to connect in multiple directions, thus allowing flexibility in roadway design. Typical full sized mats are connected lengthwise and width wise. It is recommended that mats be connected length ways, with short sides connecting, which create a 15ft (4.5m) wide roadway, suitable for typical vehicles and equipment.

Mats may be laid side by side or staggered, depending on the need for additional strength. It is generally recommended that when connecting roadways using the short-side to short-side

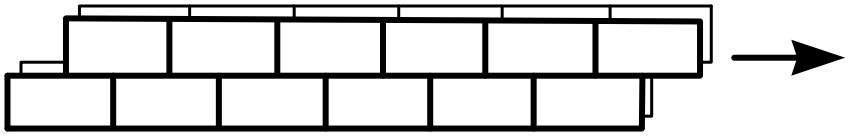
method that mats be staggered for greater strength.

4.1a Single Width Transverse Road



The single width transversal method requires the mats to be installed long side to long side in the direction of the road. Mats installed in this manner have 4 locking connectors, adding strength to the joints between the mats, as well as a road width of 13'-6" (4.2m).

4.1b Double Width Longitudinal Road



The longitudinal method requires that the mats lay end to end in a straight line, with the edges of the two adjoining mats lined up evenly so that both will accept the two connectors bolts. Many roadway projects would benefit from using the double-width configuration as opposed to a single string of mats simply because of the added strength that staggering the mats provides.

By staggering the mats, road strength and stability is increased because weight is directed away from joints and distributed throughout the body of the mats. A two-mat wide longitudinal road can be installed by laying mats end to end in two parallel but staggered lines so that the mats resemble brick-work. The mats should be laid in place so that the lips of the laid mats are always exposed to receive the over-hanging lip of the next mats.

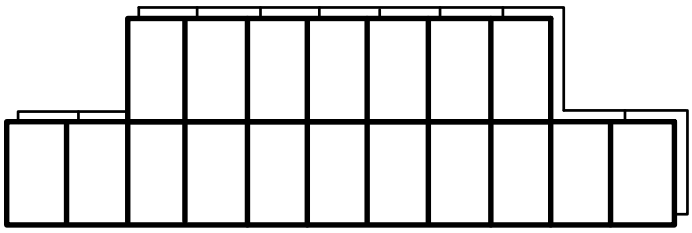
To do this, you must begin with two mats joined end to end. Attach a third full-size mat to the two mats joined end to end. Now that the staggered configuration has been established, the rest of mats laid into position will follow the brick-work pattern

4.1c Bypasses, Passing Lanes &Turnouts

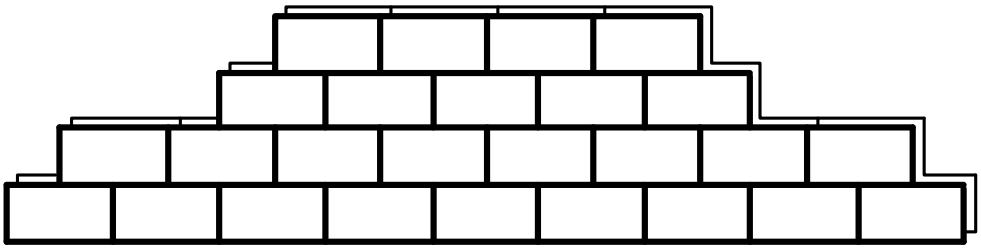
While straight roadways are ideal, there will always be situations where the length of the roadway would dictate the need for a passing area. For these situations, it is possible to add additional mats to the roadway for both the short-side and the long-side connection methodologies.

Passing lane mats should be added to the side where the under-lapping flange is exposed, thus facilitating the connection and positioning of the passing lane mats. Depending on the length of the passing area required, additional Xtreme Mattings sections can be added to the passing area, once again on the side where the under-lapping flanges are exposed.

To create a large turning area or turn-out, the same methodology would apply, in that mats are most easily installed with the overlapping flange placed over the exposed under-lapping flange. Matting can be built out in the both directions of the exposed flanges.



Transversal Bypass



Longitudinal Bypass

4.2 Oil & Gas Rig & Lease Pads, Work Platforms, and Storage

The Xtreme matting system is designed to connect in all directions, allowing for the construction of a lease pad, work compound, equipment pad, storage yard, or other contiguous surface.

It is generally recommended that matting slated for use in long term or semi-permanent work compounds be positioned using the staggered methodology described above. While this method provides the greatest strength, it is important to keep in mind that it leaves a staggered edge along the perimeter of the compound.

To begin installation, always begin in one corner of the site (preferably closest to access road) and be sure to lay the first row of mats in as straight a manner as possible, ensuring that the

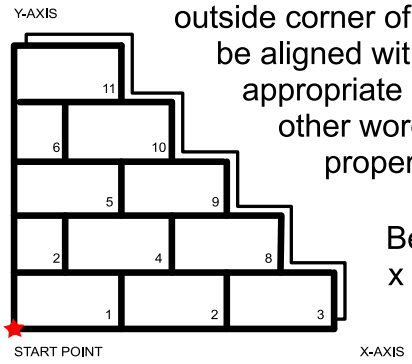
first row of mats is parallel to the site so that further mats don't drift off course. This first row is the most important, as subsequent rows of mats simply follow the same line. To verify the alignment is it suggested that a string line be run for the first row installed.

Remember to always position the first mat such that the under-lapping flanges are open and ready to follow the same line Water Runoff Considerations

Consideration of water run-off is particularly important when dealing with large compound areas. In this regard, it is important to consider building up the subsurface of an area to prevent low spots within the Xtreme Mattings matrix, where water may gather. Fill dirt or gravel may be brought in or other site preparation work can be done in advance of the matting installation. Some thought should be given to the amount of water runoff expected from a large area and the ability of the surrounding area to handle the water that runs off of the work pad.

4.2a Site Layout Configuration

Our matting can be fastened together to cover large surface areas to be used as worksites or drilling rig pads. Installation will begin with the basic staggered method used in the double width longitudinal road configuration. In this case, begin by laying one mat at the outside corner of the proposed site, nearest to the access road. The mat should be aligned with the edge of the site so that pad, when constructed, covers the appropriate square area and won't have to be moved or reassembled. In other words, layout and mark the site beforehand so that you can maintain proper alignment of the mats.

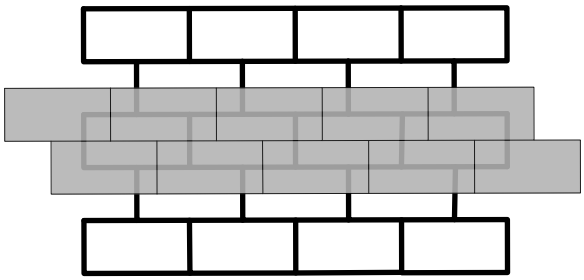


Begin matting your site by laying a large mat lengthwise along the x axis. Follow the number sequence to maintain the staggered pattern. As you lay the mats outward from the corner you've just created, begin at the x axis and work up and back toward the y axis [as seen in the sequence 3,4,5, & 7,8,9,10,11].

Keep the x and y axis perpendicular with a string or landmark to ensure that the mats will align properly for an easy, secure fit with the locking pins.

By laying the mats from the corner outward, you will be able to work on the matted surface and have more room to maneuver.

4.3 Bouyant Bridging Platform - Used With Wood Access Matting



In soft bearing conditions such as marsh or swamp land, where you need to build an access road, our matting system can be used to create the bouyant bridging platform that will compliment a wood access matting design.

Our mats have a bouyant load bearing capacity of 1040lbs (470kgs) per mat in water, which means when a load of 1040lbs (470kgs) is placed on top of a mat floating on water, it will remain bouyant flush to the surface of the waterline.

When building this system, we recommend stagering the mat design as shown in the above diagram to achieve the maxium load bearing capacity required in extremly soft soil bearing conditons.

4.4 Double Stacking Mats

Though generally not necessary, it is possible to double stack layers of our matting to create an ultra-strong access pad over very soft ground. Standard installation procedures should be applied for both layers, except that seam lines should be staggered between the top layer and the bottom layer, providing additional strength and loading capabilities.

4.5 Mat Deflection & Precaution about bridging

The mats are not designed for bridging or spanning gaps. The mats are intended to be used with a sub-grade or underlying surface of some sort, no matter how soft. Our mats are designed to have the ability to conform to inconsistencies of any surface; this means that the mats are slightly flexible by themselves and increasingly more flexible with additional conjoined mats. To match the undulations and irregularities of the ground,

4.6 Soft-Soil Installation

When the location you are matting permits only working from the mats themselves, you must place the mats sequentially in front of the loader while the loader rests on the previously placed mats. In this case, the installers must stand in front of the loader on a previously laid mat and thread the positioning bar through the mats to align them. The installers must remain in view of the equipment operator at all times, particularly during this type of installation.

5. Maintenance

The Xtreme HDPE Rig Mats are relatively maintenance free; however keeping the mats clean can keep work-site morale high and contribute to a safe and successful project.

5.1 Surface Precaution

Personnel should take the same safety precautions when working on matting system as they would at any other work site. If the mats become slick with mud during heavy rainfall or if ice forms during cold weather, sand can be spread on the mat surface to aid traction in special situations. After snow has accumulated on the mat surface, a snow-plow or shovel can be used to clear the mats. Make sure that the direction the plow travels minimizes the impact against any protruding edges. Examine the road or work site to see the pattern of bumps that naturally occurs as the mats are overlapped and joined. Plow with the grain, not against it in order to maintain the integrity and condition of the mats.

5.2 Cleaning & Decontaminating the Mats

Our matting system is constructed from high density plastic material which prevents absorption of any contaminants into its structure and provides a barrier between the ground and mat surface. The mats can be steam washed or pressure washed to restore optimal traction, aid the removal process or to maintain a clean worksite. Oil, fuel or other contaminants can be contained and isolated on the mats for specialized remediation. The mats can then be washed and readied for the next project.

6. Specifications Chart

TRANSPORT QUANTITIES	
20ft ISO Container	20 Mats
40ft ISO Container	40 Mats
Flatbed Truck (48k)	50 Mats
Super B Truck(90k)	80 Mats

SPECIFICATIONS

Shipping Length	4.34m / 14.25ft	Internal Core	Solid Filled HDPE Closed Cell
Shipping Width	2.29m / 7.5ft	No. of Connectors	6 Open / 6 Threaded
Usable Length	4.11m / 13.5ft	Temperature Rating	-50^0 C / -58^0 F to 60^0 C / 140^0 F
Usable Width	2.06m / 6.75ft	Load Capacity	~ 56kg/cm2 / 828 PSI / 582 Ton/m2
Area	8.46m2 / 91.13ft2	Observed Comp. PSI	Over 70kg/cm2 / 1000 PSI
Thickness	100mm / 4in	Static Dissipative	Yes
Weight	385kg±10kg / 860lbs ±22lbs	UV Protection	Yes
Material	High Density Polyethylene	Flammability Rating	UL94HB
Color	Yellow	Life Expectancy	15+ Years

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