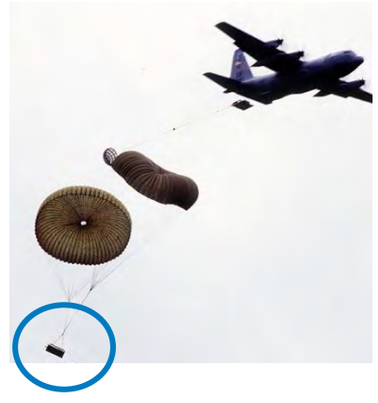
Assembly Procedures For 36 by 36 Layout CDS



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Website for more in formation:

1) https://www.qrdc.com/library/real-reusable-energy-absorbing-layer/
2) https://www.qrdc.com/

August 14, 2025

READ Me First

Conditional Warranty for REAL & RUSB

1) **QRDC provides a conditional warranty for a minimum of 35 airdrops. If REAL or RUSB experience failure related to aerial delivery with fewer than 35 airdrops, QRDC will replace any damaged parts at no cost. Customer is responsible for shipping costs.**

2) **Customers shall pay shipping costs for warranty replacement parts.**

3) **Conditional Warranty is void if recommended assembly, loading, or DZ recovery procedures are not followed.**

4) **Conditional warranty may be void if a customer does not follow the specified (i.e., what not-to-do list) guidelines during assembly, loading, or recovery from DZ (Drop Zone).**

Overview

1) General Assembly of REAL Modules

2) Tiedowns of REAL Modules

3) Mass Airdrop

4) Recovery Procedures

5) Open Discussion and Q/A

36 by 36 CDS Layout

Assembly Procedure

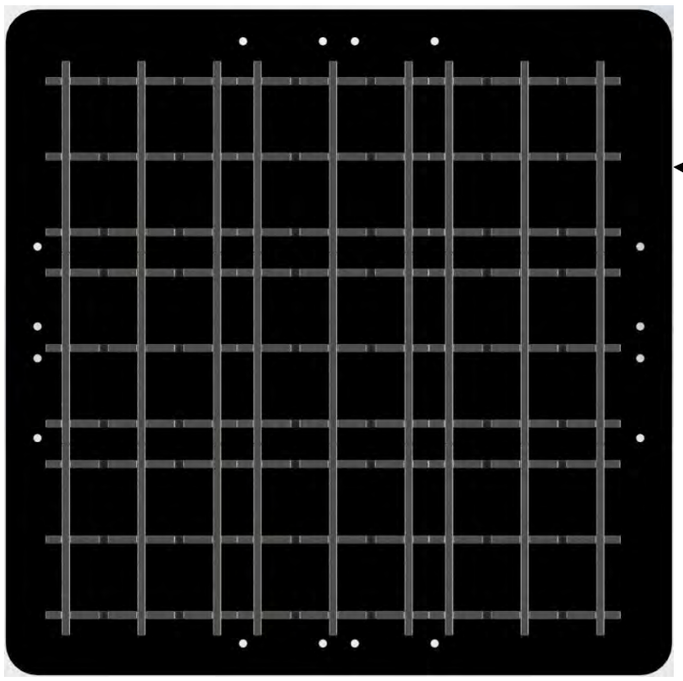
Weight of Product Packages
CDS & LCLA Standard Load Capacity

Layout	Package ID	Parts Included in the Package					
		Part ID					
		REAL (3" height)			Belt42	RUSB03 Black	Weight [lb]
		06M12	23M126	04M06			
36x36	CDS3636S100BSbBe	9	0	0	1	1	123

S: Standard Load Capacity
B: with Belt

CDS3636100BS:
36 by 36 by 3”
Use Nine (9) REAL06M12

Standard Load
Capacity: 1,800 lbs
Weight (no belt): 116 lbs



Sketch of 9 REAL06M12

9 REAL06M12

12x12x3” module
REAL06M12

Actual image of 9 REAL06M12

Assembly Procedures for 36 by 36 CDS Layout using REAL and RUSB

REAL (Reusable Energy Absorbing Layer) assembly instructions for one CDS bundle.
It is assumed the REAL layout is 36”X36” at the center of the skid.
The entire assembly should take 12 to 15 minutes.

There are two options to assemble 36 by 36” layout.

For your package: Use Nine REAL06M12

Step - 1:

This is an optional step if the rigger likes to have a centered and balanced load.
Lay out the 48”x48” skid board without any REAL modules.

Measure and mark center point on skid board. Use this mark for your center module. This center mark will be useful when rebuilding the load.

Step - 2:

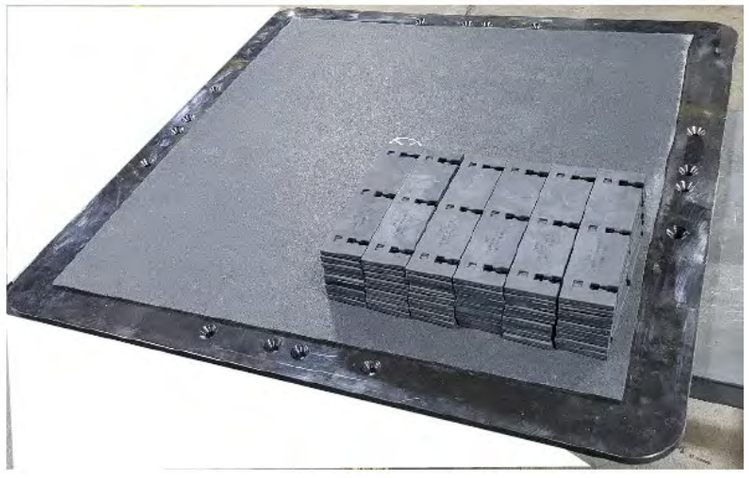
Unpack the REAL package and lay on the skid board.

Full image showing REAL package, for 1 CDS bundle, resting on skid board.

The lower image shows a closeup view of REAL package resting on skid board.

Step - 3:

Split the package into stacks of 6 REAL leaves (representing each REAL module (12” by 12” by 3”). Lay out REAL modules on skid board.
The actual color is black, or a color requested by customer.



Step - 4:

Start assembly of one REAL06M12 module.

The actual color is black, or a color requested by customer.

Step - 5:

Start with two REAL parts and attach as shown in this image. It would be helpful to use a hand/fist (or a hammer with elastic head) to pound the REAL into place. You want it to fit snuggly and be flat on the top and bottom.

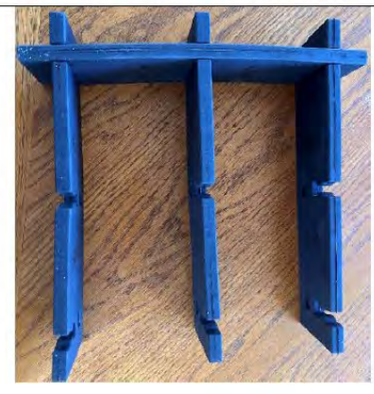
Step - 6:

Repeat Step - 5 for an additional 2 REAL leaves.
Now three REAL leaves are bridged with one part. Two views are shown.

Step - 7:

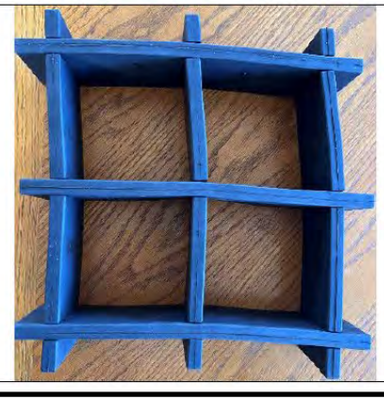
Flip over the assembly shown in Step - 6.

Two views are shown.



Step - 8:

Connect the remaining 2 REAL leaves as shown in the figure. Now one REAL06M12 module is assembled. This module has six (6) 12” leaves.



Assembling REAL06M12

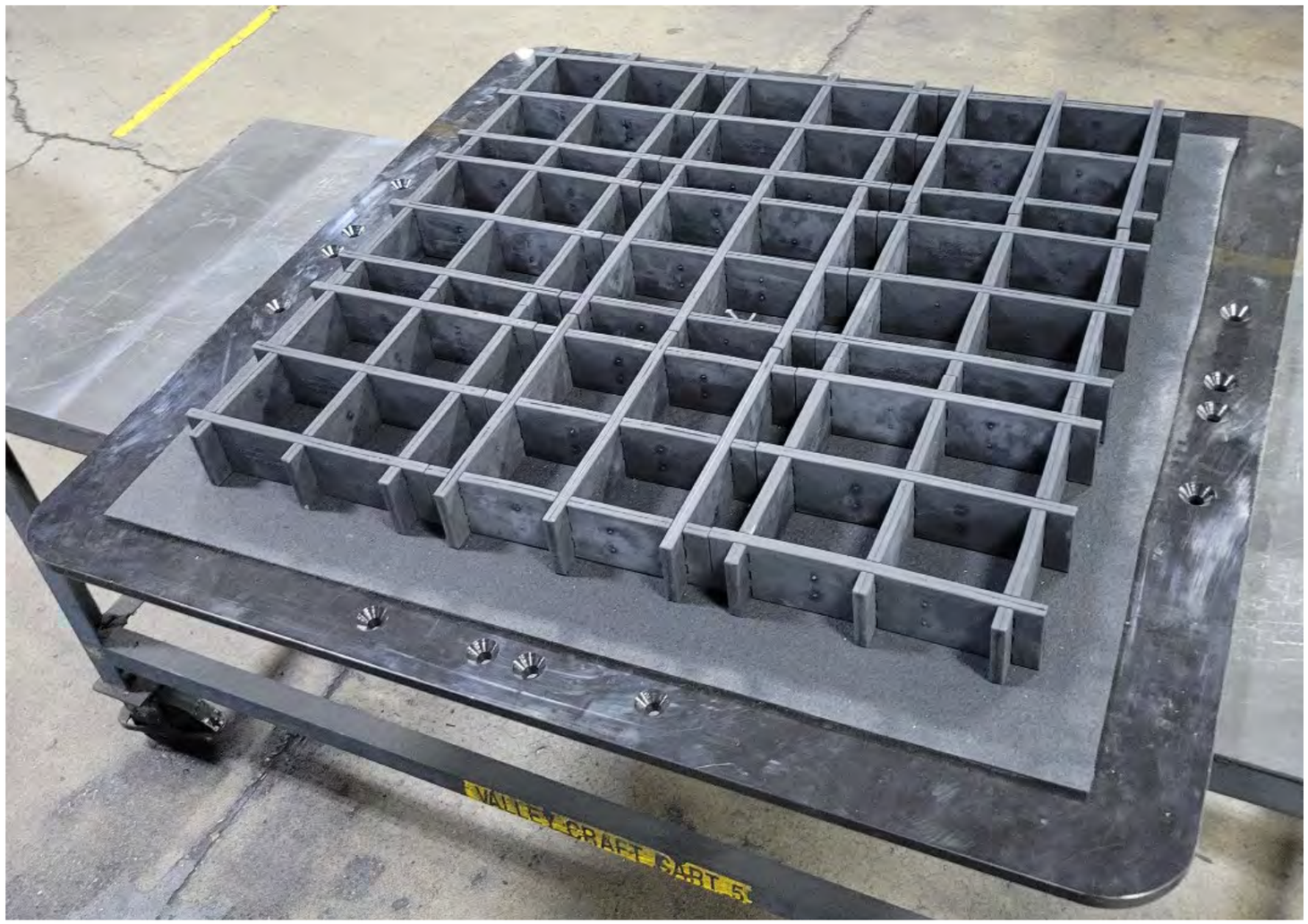
(Video is not available in PDF format)

To View the assembly video, use the below link on YouTube

https://www.youtube.com/playlist?list=PL-DXOhMVuaWY9YC3g2SbLwu56qvHx-pJD

Step 9:
Repeat steps 4 through 8 to assemble 8 more 12” REAL modules and lay them out on skid board as shown in this figure. You will have nine (9) 12” REAL modules for 1 CDS bundle. They should be evenly spaced from the edges.

Load Capacity: 1800 lbs



Step 10:

1) **Wrap the belt around the layout.**
2) **Tension the belt, overlap, and use the buckles to secure.**

The first image (Fig 1) shows tensioning the belt.

Works for 36X36”, 36X42”, 42X42”, & 24X42” Layouts.

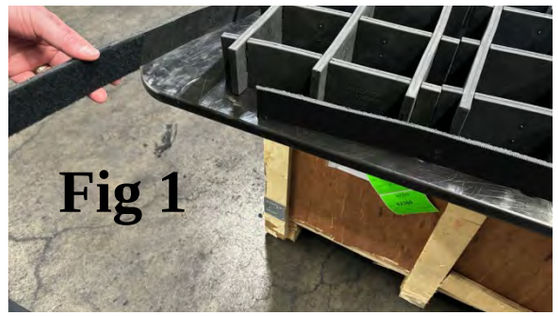


Fig 2

Fig 2 shows the belt and buckle.
Fig 2 (left side) shows the part of the belt sections overlapped.

Fig 3 shows the belt around the entire assembled layout.

Fig 3

As an example, this image shows 36X42” (not 36X36”) layout with belt.

The belt is long enough to work with
36X36”, 36X42”, 42X42”, & 24X42” Layouts.

It is recommended that you do not tighten the belt until load is placed on REAL layout.

Placed the belt around the assembly and tightened enough to barely touch the edges of REAL. Place the buckles in right locations ready for overlap.
Figures 4 and 5 show the zoomed section of the belt and buckle.

Fig 4

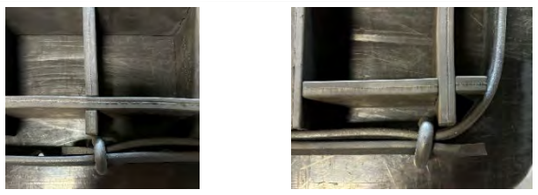
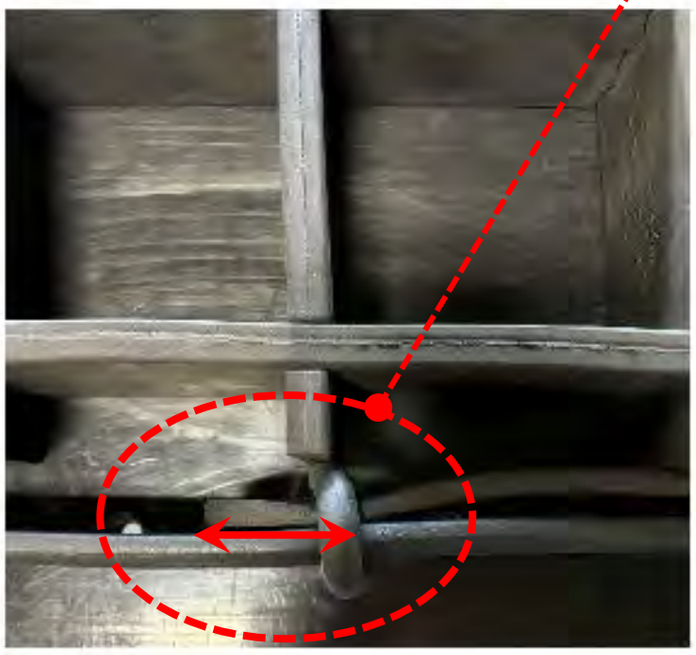


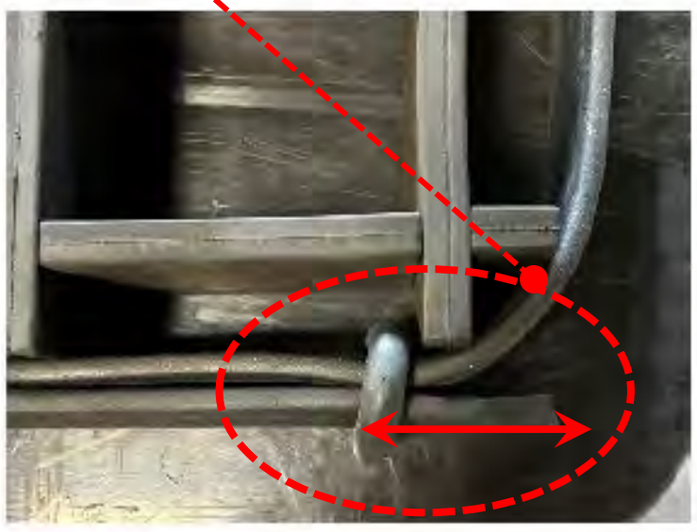
Fig 5

Zoomed images (Fig 5) of the belt overlap with buckle

The slack part of belt should not exceed 3 or 4”



3 or 4”

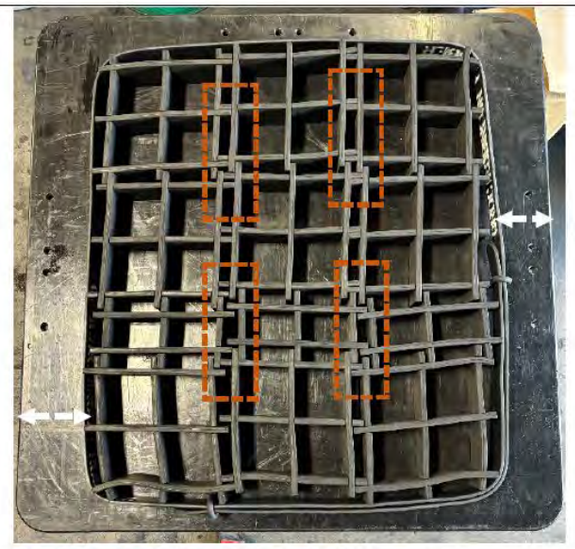


3 or 4”

Step 11: (Compacting)

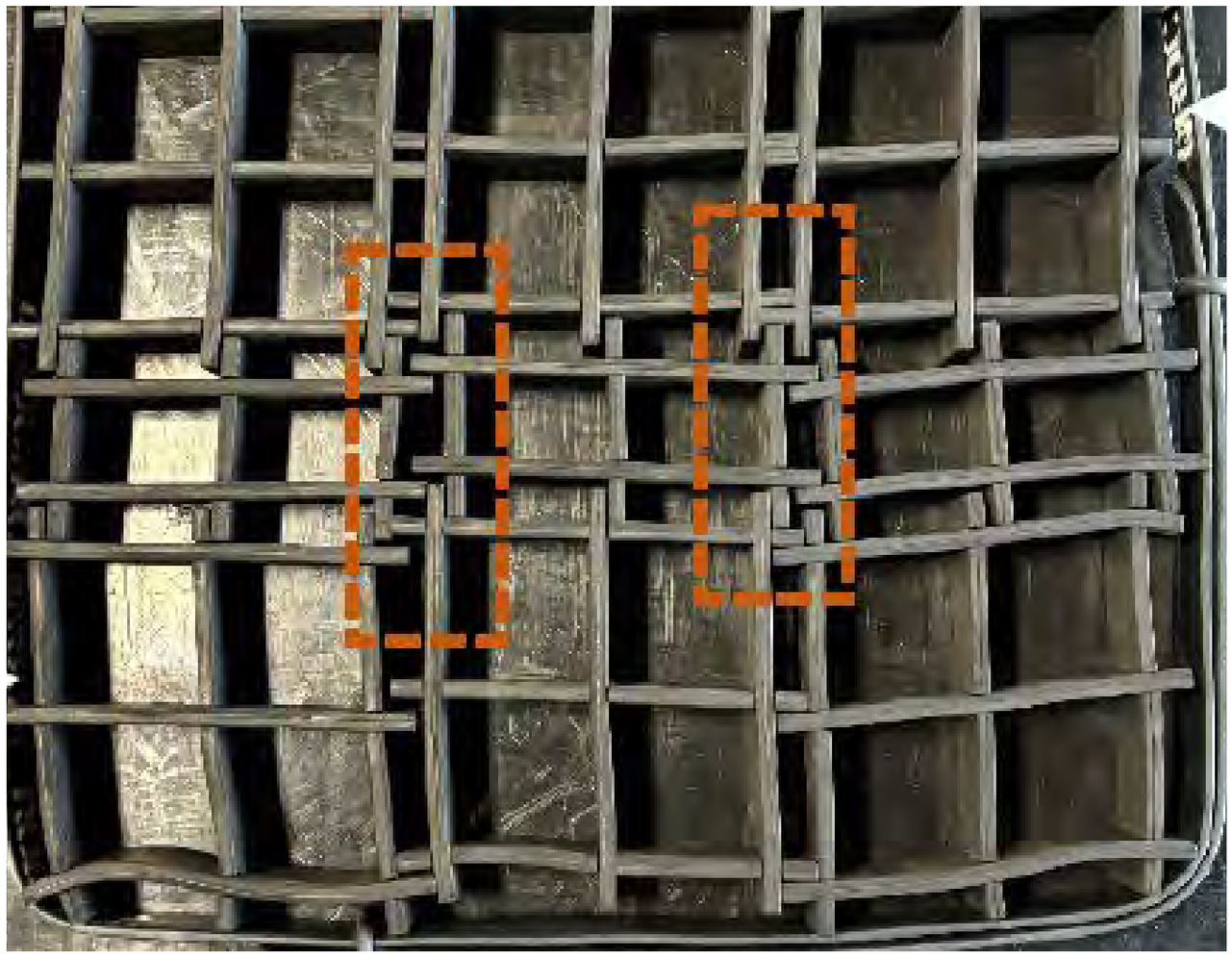
1) As an option, to further reduce any movement, one can interlock REAL modules as shown in the picture.

2) The images shown in orange boxes show sample areas where REAL modules are compacted (i.e., overlapped and interlocked).



3) This makes the layout smaller (by 3 inches) on all 4 sides, but it makes the layout much more stable once it hits the ground in an odd orientation, such as corners.

Zoomed image of interlocking REAL modules, shown in red boxes.



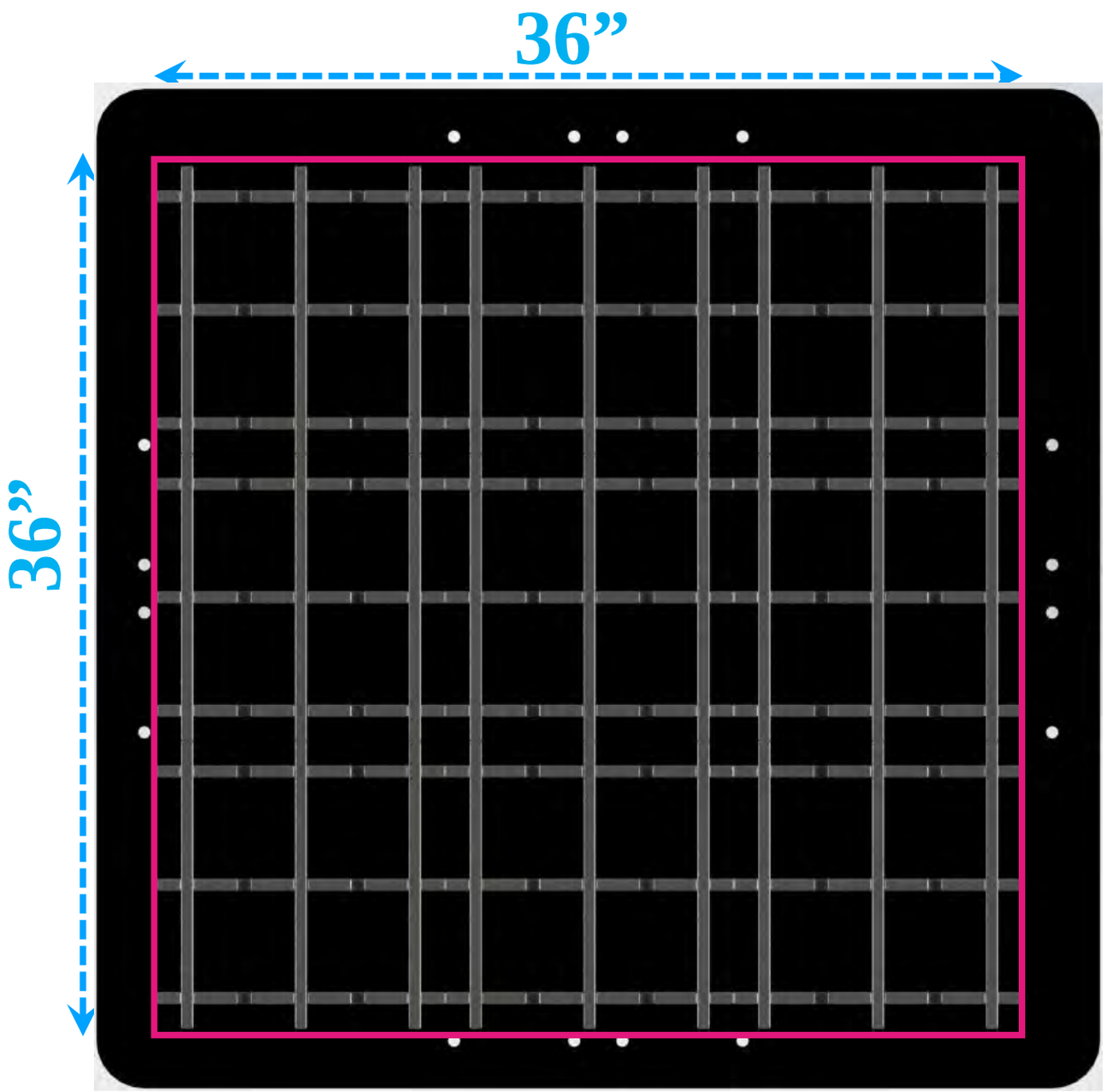
Step by Step Tiedowns

36X36” Layout using

Each RUSB needs

Nine (9) M12 modules

Step 1:
Complete REAL layout on RUSB plus belt



Legend

Pink: Belt

Light Gray: 9 REAL06M12

Black: RUSB

While Circles: Holes on 4 sides

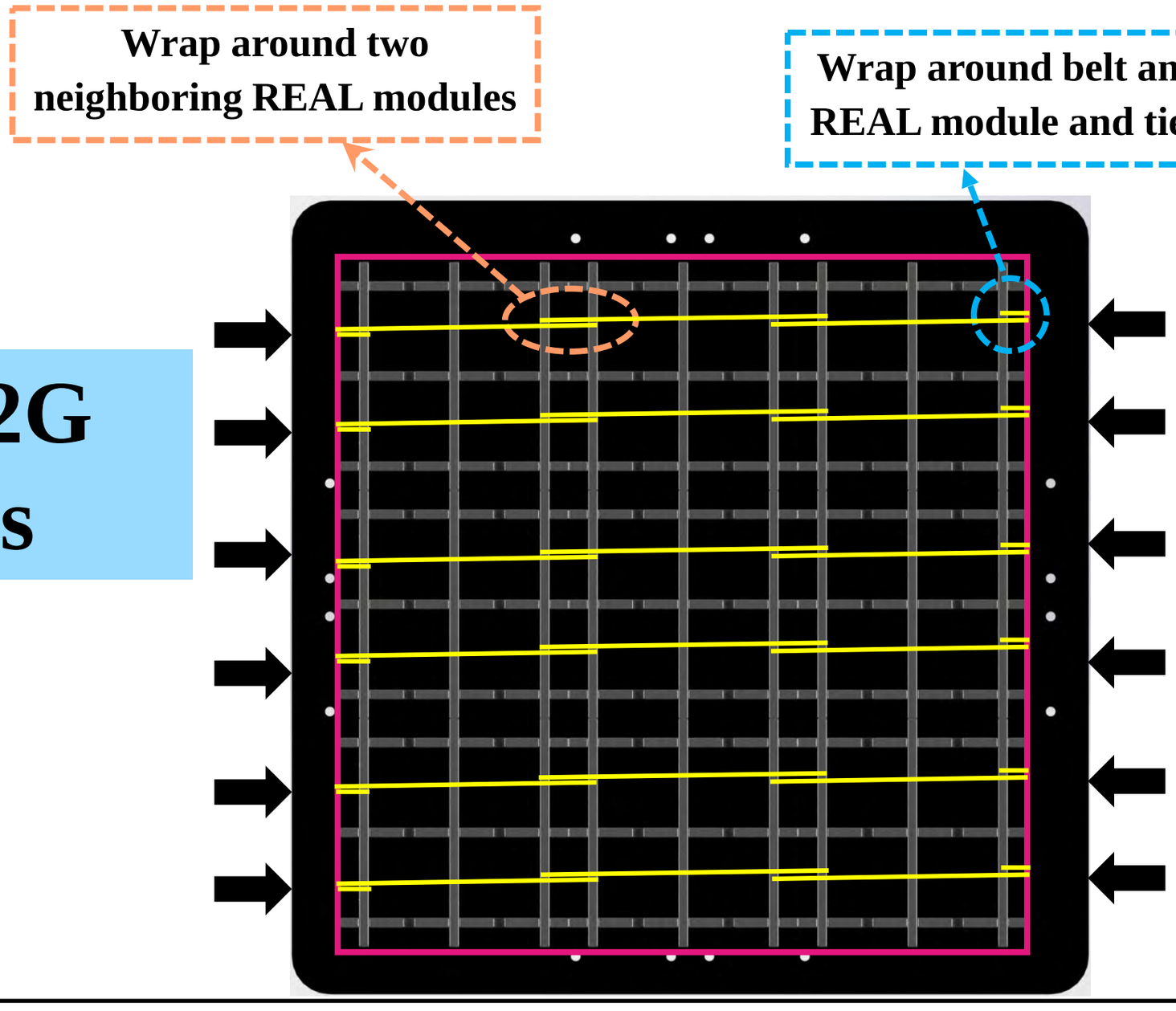
2G Ties Required:

You need twelve (12) 82” 2G ties along rows and columns

Step 2:

six (6) line tiedowns (rows) start from belt, connecting each REAL module until reaching belt on the other side. Both ends tie belt to REAL modules. REAL modules & Belt along the horizontal lines (yellow) are shown by arrows. Each 2G tie is 82".

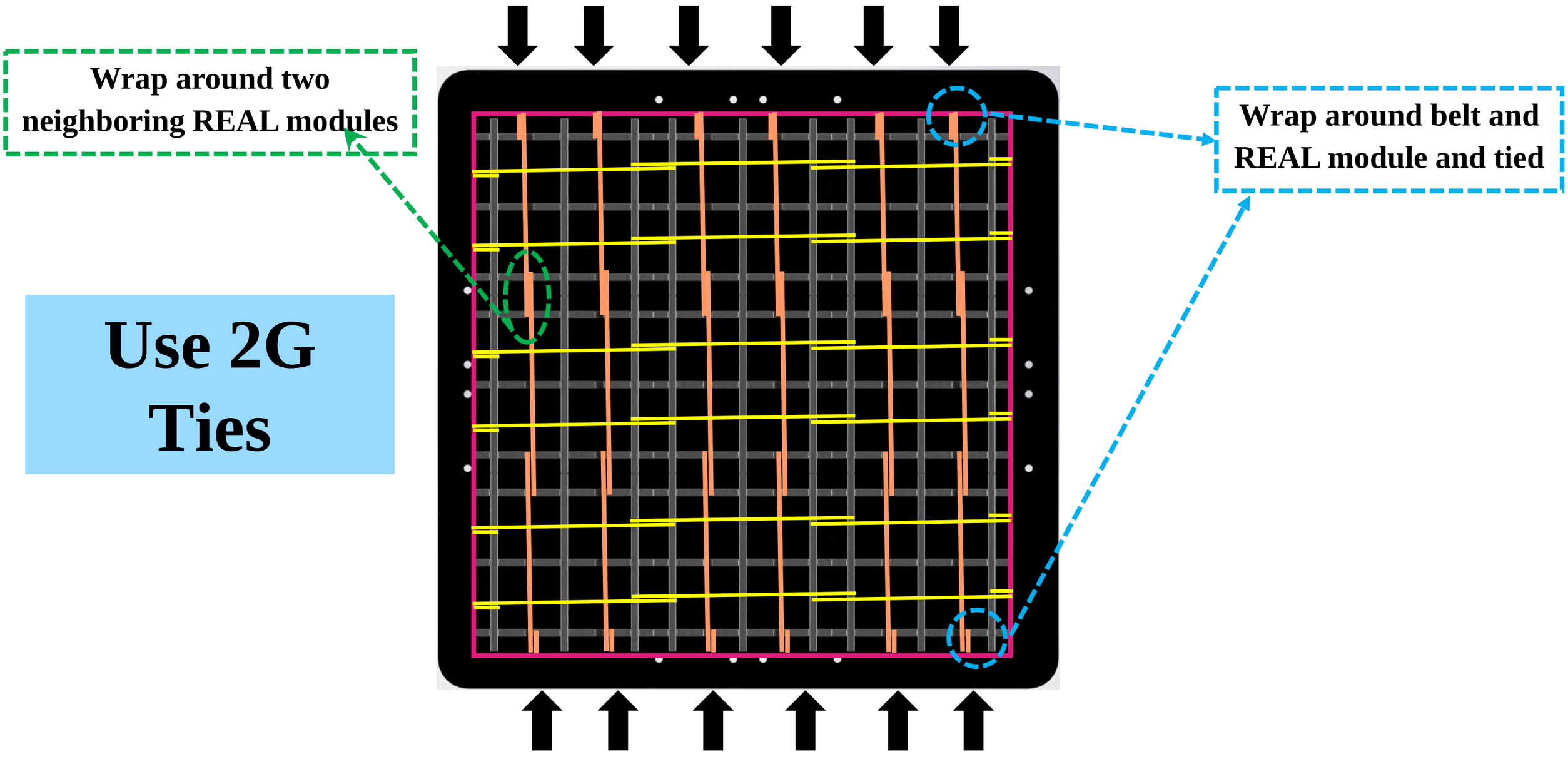
Use 2G Ties



Step 3:

six (6) line tiedowns (columns) start from belt, connecting each REAL module until reaching belt on the other side. Both ends tie belt to REAL modules. REAL modules & Belt along the vertical lines (Orange) are shown by arrows. Each 2G tie is 82".

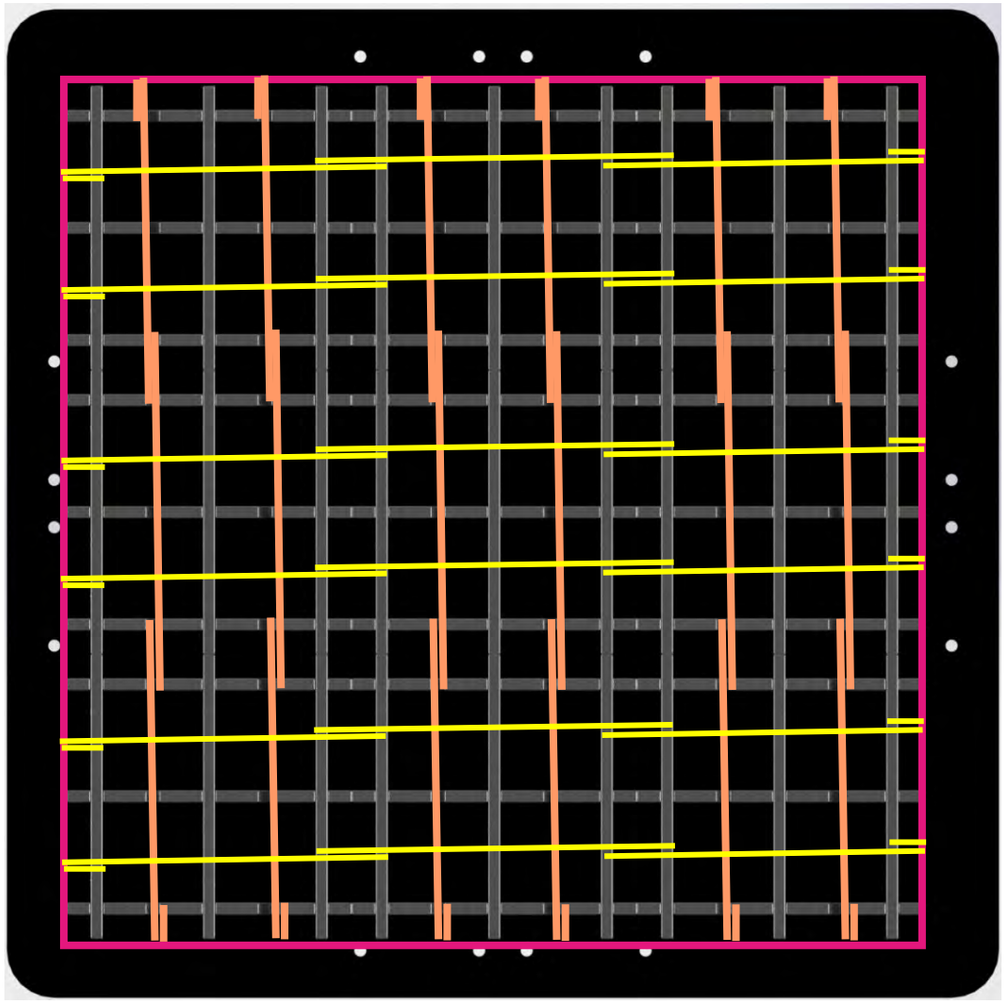
Use 2G Ties



Step 4 & Final (image):

After all line ties are completed, the finished layout should resemble the image shown below. There is no single method for these tiedowns. It is essential to ensure all modules are interconnected to make the layout one piece.

Use 2G Ties

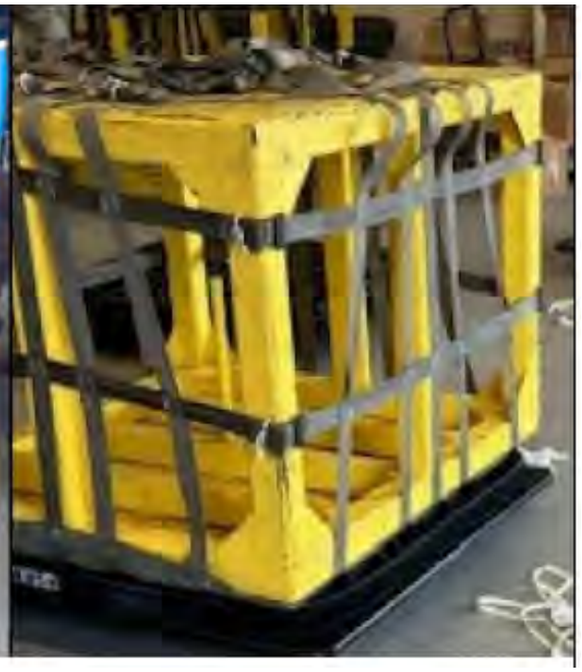


Step-17:

1) After the REAL assembly is completed and belt is placed around the assembly, apply load.
2) The load should be centered.
3) In this case, the load is a yellow steel cage (weighing 900 lbs). Load can be 4 barrels filled with water, weighing 600 to 800 lbs.
4) After load is applied, tighten the belt to the desired tension. Check to see if any of the REAL modules are buckled. If so, tension is too much.

Tip:

5) **Moving rubber (buckle) over rubber (belt) can be hard due to sticky friction. To move the buckle easier so the belt can be tightened, one can spray small amounts of silicone, graphite, or liquid soap under the buckles. Spraying water will help.**



Step-18:

1) Secure the load to RUSB using the standard method (4 qualified strings om each of the 4 sides).
2) Place a parachute on the top of the load.
3) After CDS bundle is inspected and approved, it is ready to be loaded in the airplane and be made ready for aerial delivery.

Things not to do during assembly

Noooo!

Not Recommended!

Recommended!

Mass Airdrop

Intermixing RUSB and Plywood in Mass Airdrop

1) It is noted that CDS or LCLA bundles using RUSB exit aircraft faster than plywood bundles.
2) If RUSB and Plywood bundles are used in mixed mass airdrop, it is strongly recommended, RUSB bundles exit first (placed closest to the exit door).
3) When intermixing RUSB and plywood bundles in mass airdrop, lead RUSB bundle as after most bundle.

AFSOC FCIF 25-112

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FLIGHT CREW INFORMATION FILE

AFSOC #	UNIT #	RELEASE DATE	UNIT POST DATE
A3V-25-112		14-Aug-25	

RESCIND DATE — UNTIL FURTHER NOTICE ☒

SUBJECT: Reusable Universal Skid Board Use on Unilateral CDS Training Loads

MDS	INDEX #	WING/GROUP	SQUADRON	SQUADRON	OTHER CMDS
MC-130J		1 SOW	1 SOS		ACC
		27 SOW	6 SOS		NGB
		193 SOG(G)	8 SOS		AFMC
		352 SOW	9 SOS		AETC
		353 SOW	14 WPS		
		492 SOW	15 SOS		
			18 SOTES		
			19 SOS		
			67 SOS		
			193 SOS(G)		

CREW POSITION

ALL	P	NAV	EWO	CSO	FCO	FE	LM	AG	SO	DSO
☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
TSO	**MCS**	**AMSO**	**MSO**	**FSO**	**SUAS**	**SMA**	**WSO**	**SW**		
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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4. User reports indicate the RUSB exits faster than a plywood skid board. To prevent malfunctions caused by bundle interaction among mixed RUSB and plywood skid boards, all bundles rigged with RUSB in a mass configuration will be loaded to exit the aircraft before any bundles rigged with plywood boards exit. If a bundle rigged with RUSB is the first to exit the aircraft--and until RUSB exit times have been fully evaluated and published--aircrews will subtract one second from the calculated CDS exit time to correct for faster exit. This corrected exit time will be overwritten into the aircraft's CARP computer or manually computed CARP.

Recovery Procedures

1) **REAL and RUSB are reusable aerial delivery products.**

2) **To last more than 35 to 100 airdrops, recovery procedures should be done with care. Handling should be different than a century-old 1-time use cardboard honeycomb.**

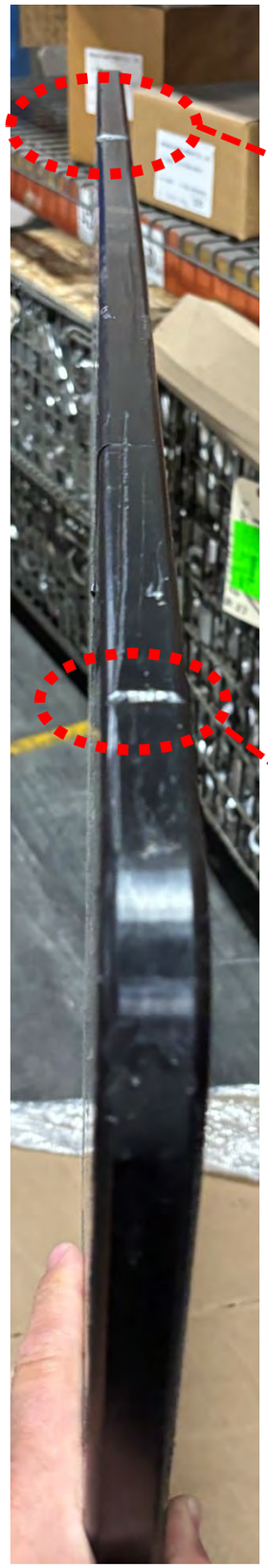
3) **After each drop, please make visual inspection for any popover or blowouts. If you see any, take pictures and send to QRDC. Your feedback is very important.**

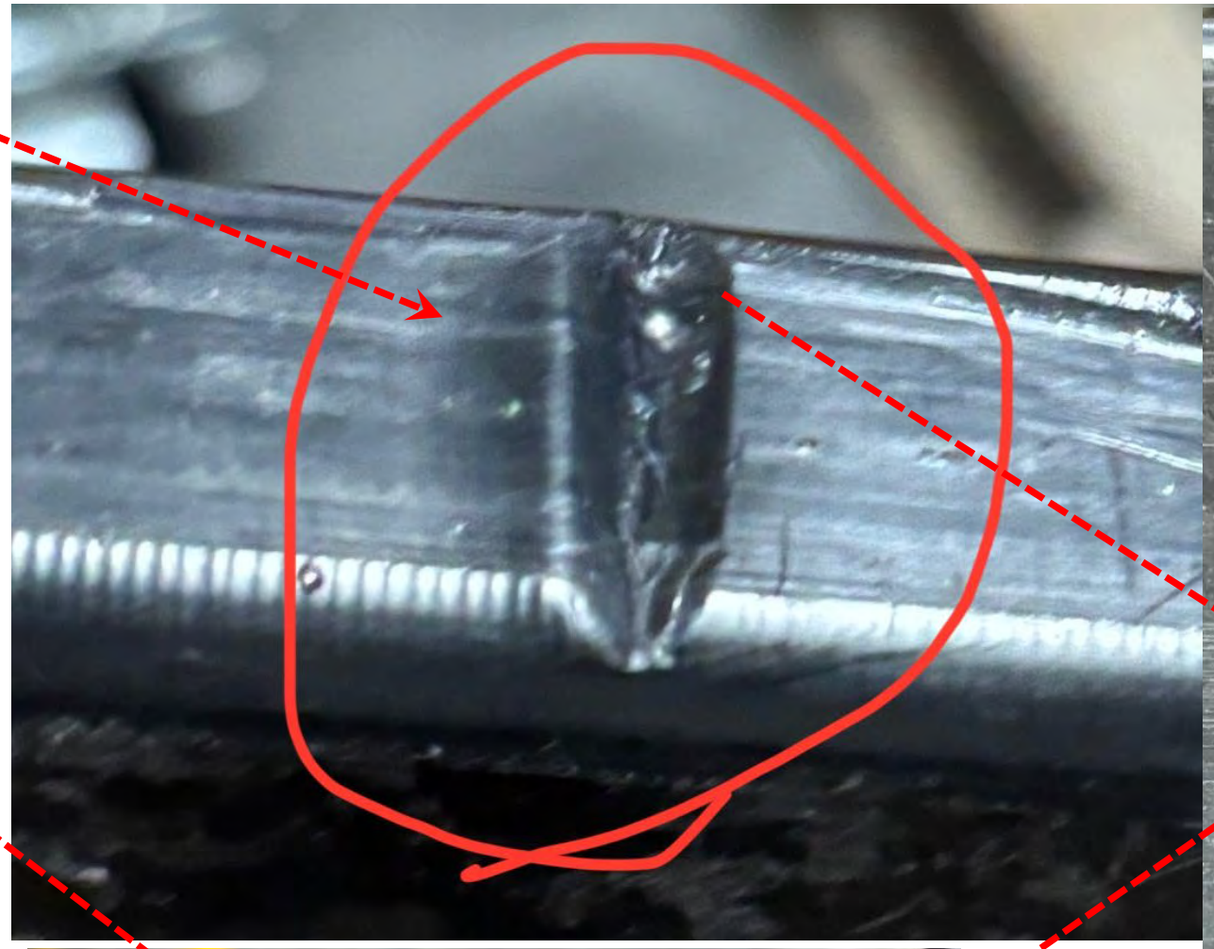
4) **Using Forklift: lift from under the skid board (RUSB) NOT on the top of skid board to avoid pinching REAL or squeezing the REAL layout.**

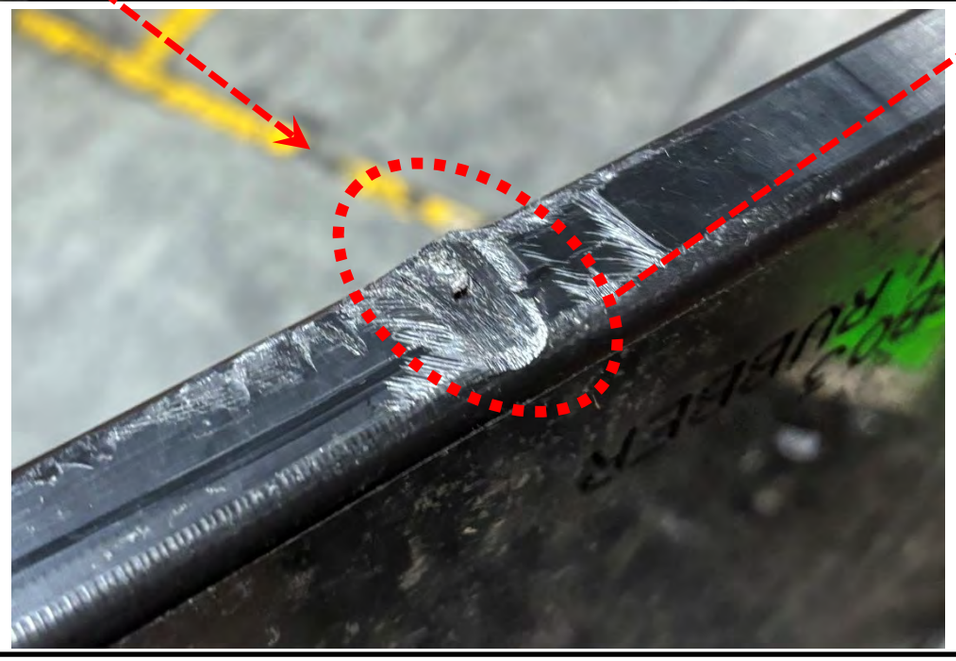
5) **Avoid pushing the forklift against RUSB edges.**

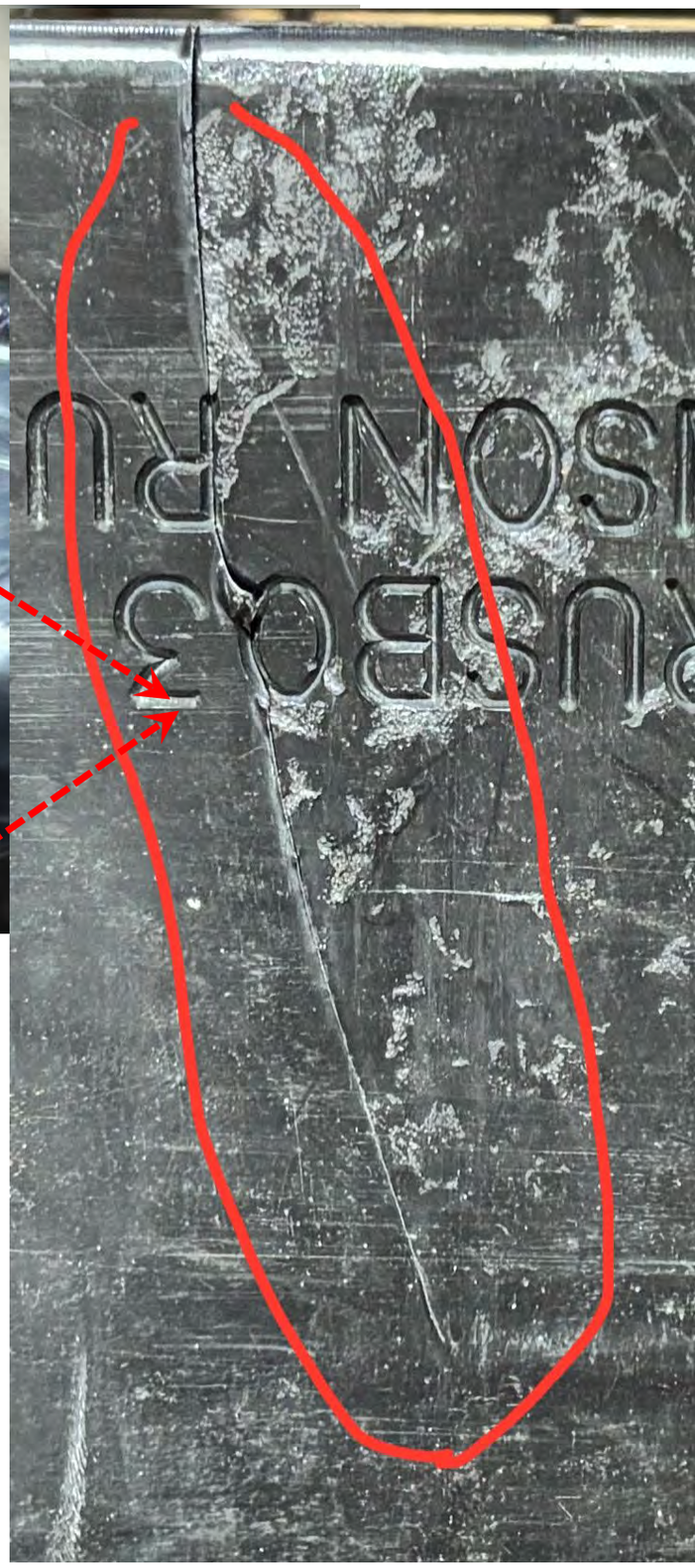
6) **Alternatively, role each CDS on a flatbed trailer.**

Example - Forklift Pressure shears RUSB & crack starts

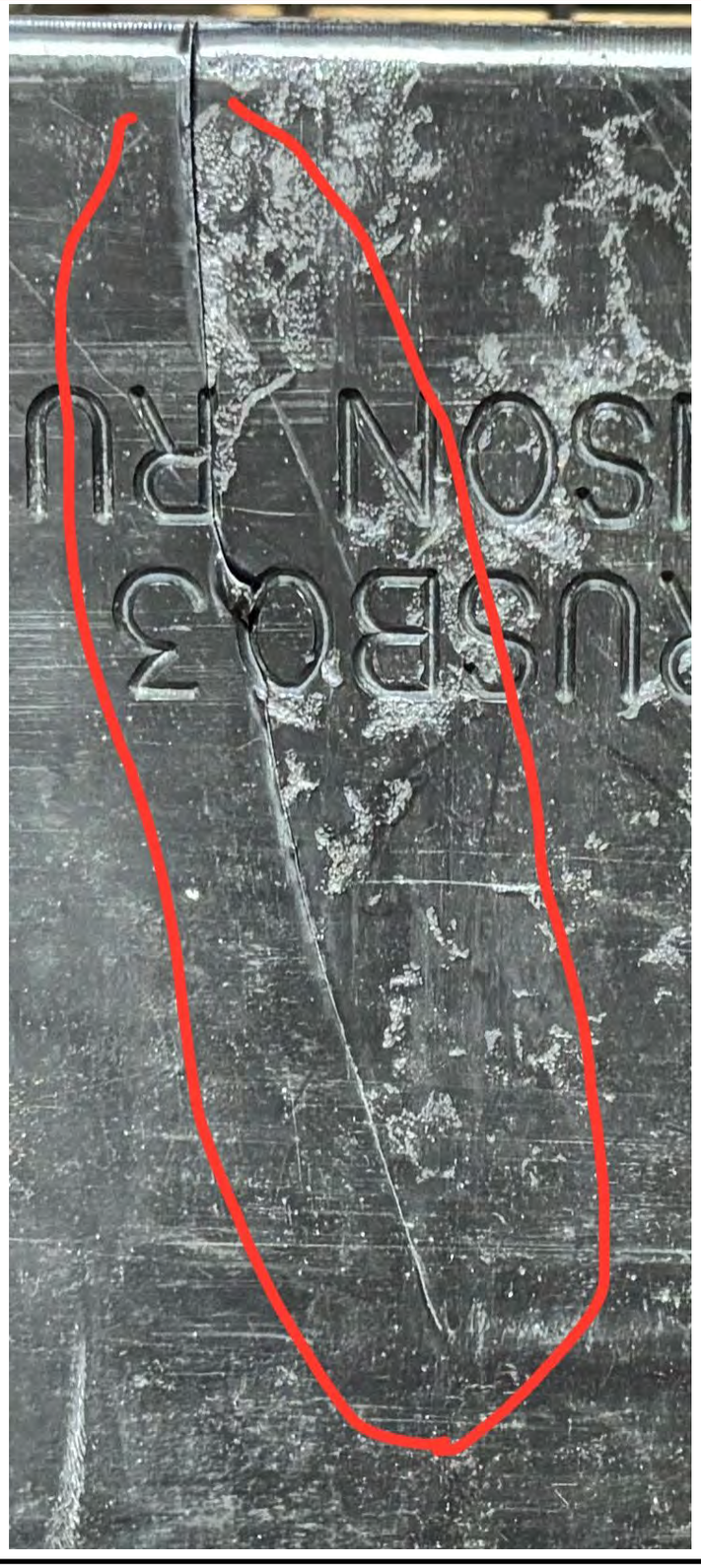








Example – Forklift Pressure shears RUSB & crack starts



Showing shearing effect cracking RUSB due to hard impact by forklift