

VERSION 5.0 - UPDATED 6 My 2025
Pyropack 3067 (MC100K) Assembly Instructions.

Read these instructions FULLY before starting any assembly.

What your finished product will look like before it is rotated into the optimal position.



General.

The Pyropack requires two people to effect safe assembly. Some of the components are heavy and may have sharp edges. Wear strong gloves when doing so (riggers gloves are ideal). Take extra care when lowering components into place so as to avoid trapped fingers.

If you have any doubts or questions please contact your supplier.

The only tool required for assembly is a 17mm ring-spanner. It is advisable to assemble close to the area it will be used. It can be man-handled over short distances otherwise the use of a pallet truck is recommended.

The unit must be used in the upright position. (It is hoped that future testing will allow it to be used such that it is on its side and that the door opens much like on a fridge. Doing this would aid access and prevent the need for raising the heavy door).

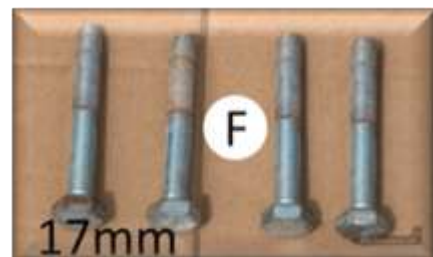
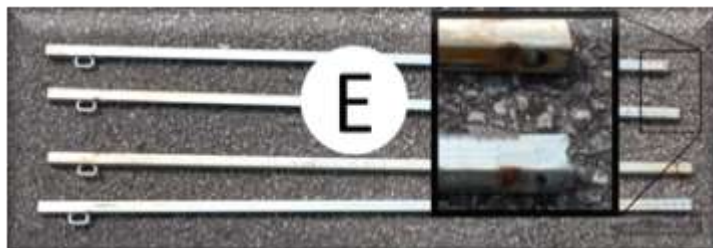
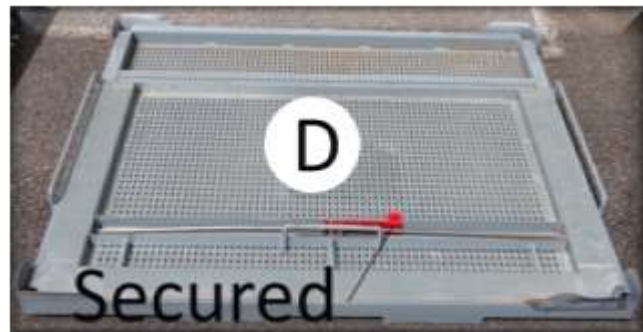
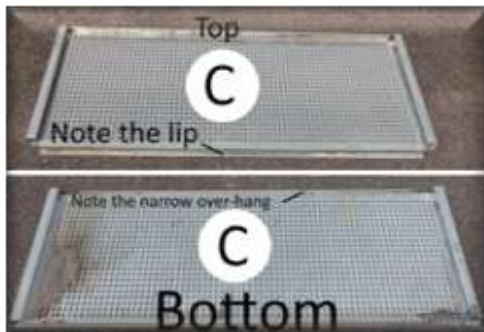
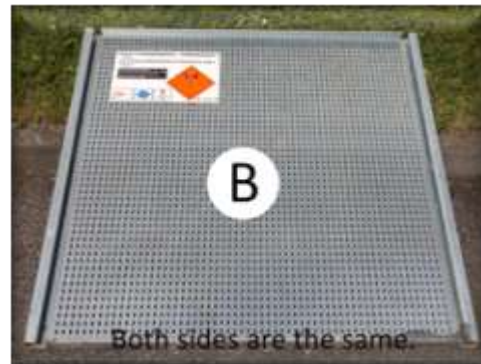
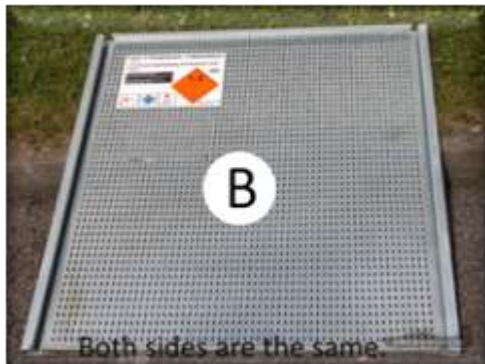
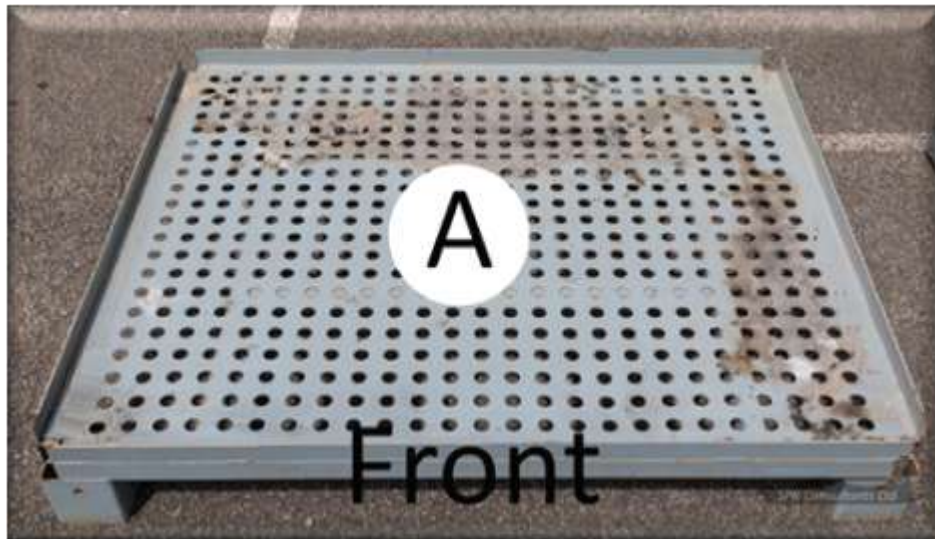
Building time with two people, a clear area to build and an understanding of the build process should take around 30 minutes per cage.

Component List.

Before starting the build ensure you have all of the component parts. Images of these are shown on the next page.

- PART A - Base unit x 1.
- PART B - Side panels x 2.
- PART C - Front and rear interlocking panels x 4 (Top and Bottom sections x2 of each).
- PART D - Access door top panel (pre-assembled with door) x 1.
- PART E - Interlock support bars x 4.
- PART F - 17mm locking bolts x 4.
- PART G - Declaration of Conformity.

Component parts.

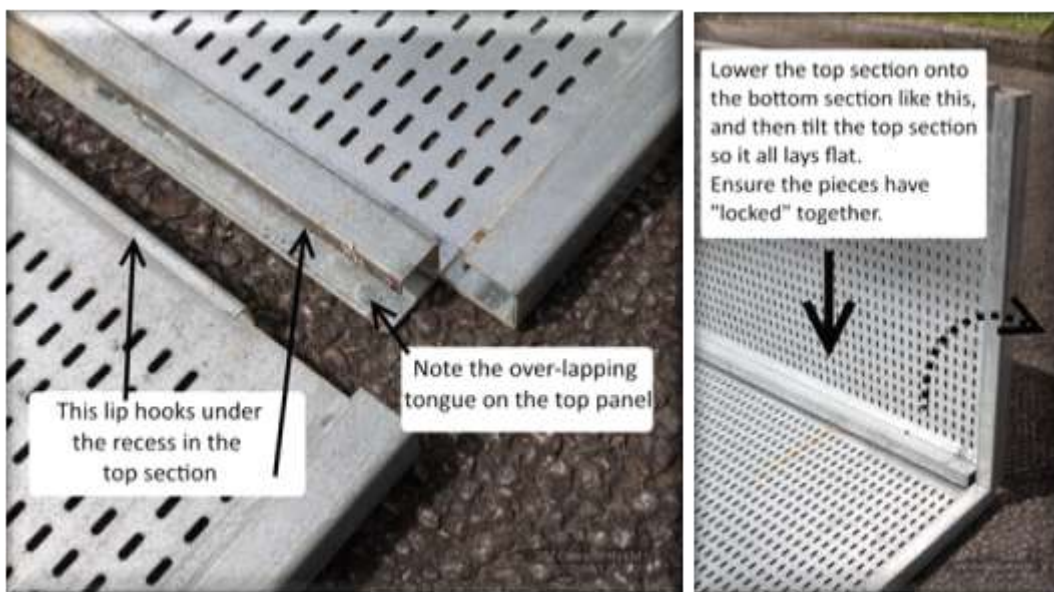


Points to note before you start.

The interlocking support bars (Part E) are installed early on in the process and their orientation is critical. Take extra care when inserting these as you may not realise that they are the wrong way round until the build is almost completed. When these bars are in place, and the top panel added, bolt (PART F) must be able to pass through the holes in the side of the top panel (PART D) and through the hole in the bar (PART E) and into the threaded area inside the top section (PART D).

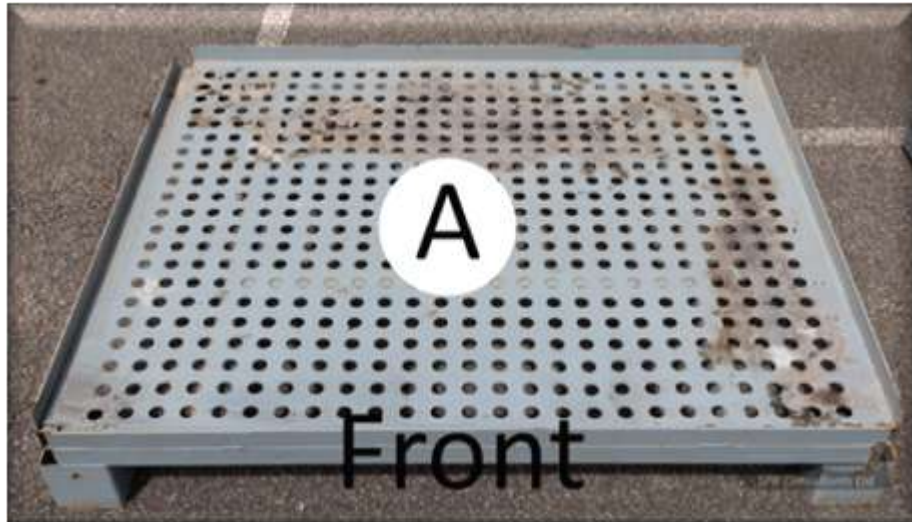


The front and rear panels (PART C) must be locked together before lowering into position. The over-lapping tongue will be on the outside face of the unit and pointing downwards.

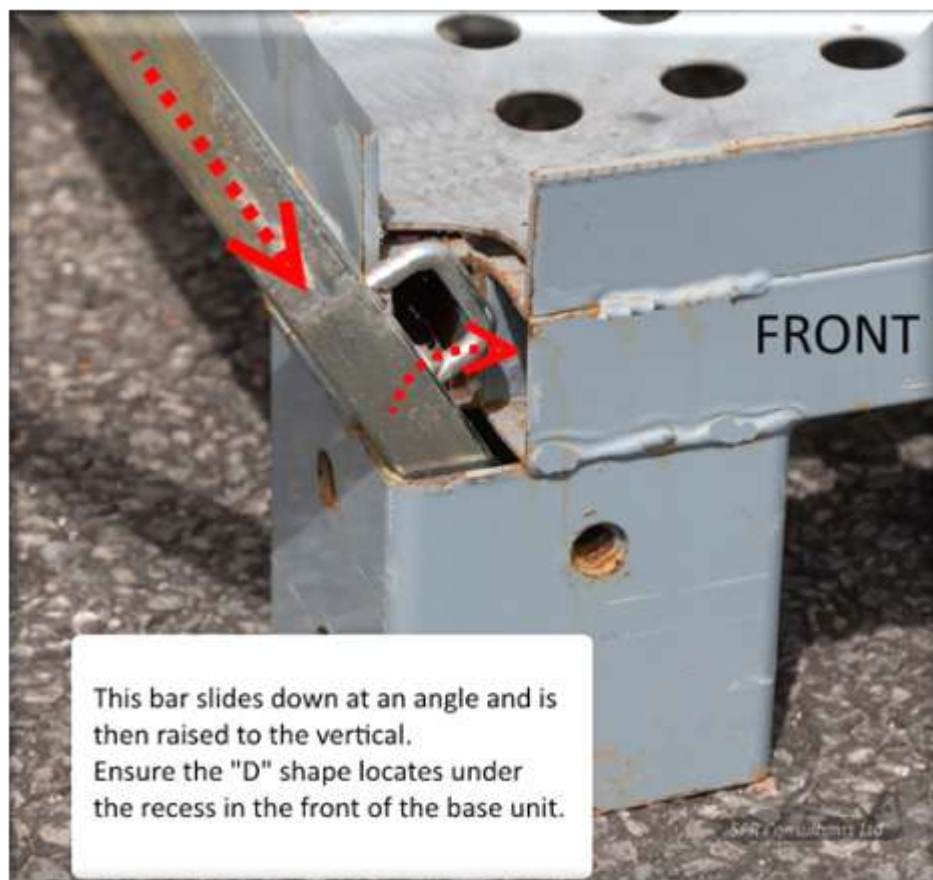


Step 1

Place the base unit (PART A) in a clear area and identify the front edge. The front is the longer of the dimensions.

**Step 2**

Take two of the interlock support bars (PART E) and insert the flanged end into the recesses at the sides of the base unit. Note the orientation of the threaded hole at the upper end of the bar. These holes should be in alignment with each other across the face of the unit.



Step 3

Take one of the lower front panels (PART C Lower) and lay it, face down, on the floor. Next take a front panel upper section (PART C Upper) and tilt it into the groove of the lower panel so that they are interlocked. Make sure the tongue overlap on the upper panel is pointing downwards. With both sections held together (it is a loose fit) lower the whole assembly down the support bars. You now have the front of the unit in place. Please keep a hold of this as it is not yet fully self-supporting and letting go may cause damage or injury.



Step 4

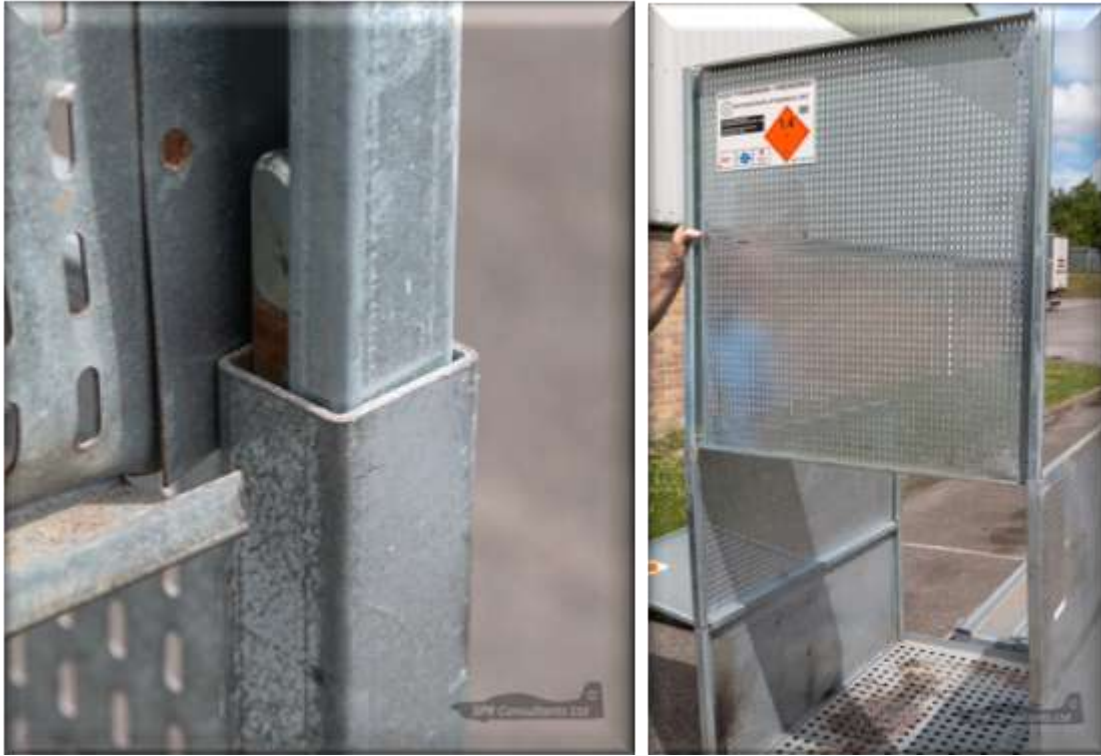
Repeat Steps 1 to 3 to create the back of the unit.

Note the holes in the support bars run parallel to the long sides of the base.



Step 5

Take one of the side panels (PART B) and lower it into place, sliding it in the groove of the front panel assembly and down the interlock support bar at the rear. It will only fit one way, the main panel being on the inner-most part of the unit. Once you reach this point the unit is fully self-supporting but please take care.

**Step 6**

This is a repeat of Step 5. Take the other side panel and fit it as for the previous one. Note how when it is all in place the upper part and the hole in the support bars are visible, standing up through the panels.



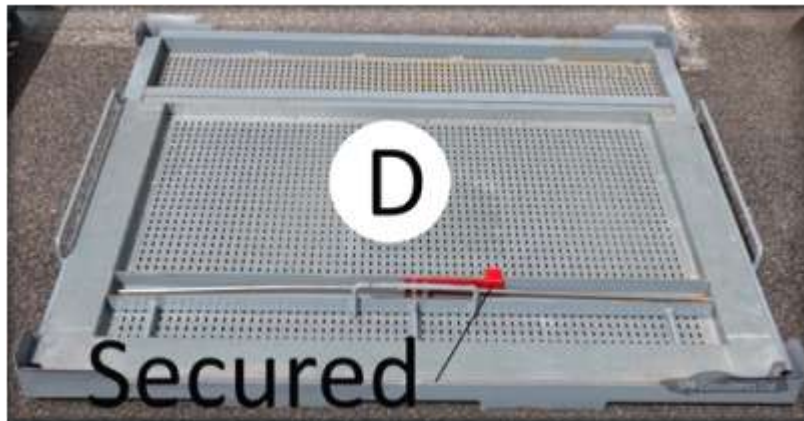
Step 7

Ensure that the upper door unit is secured.

To secure if it is not already: Raise the red lever fully to loosen the guide pins, pull the whole handle forward and then close the red lever. Doing this will lock the door assembly and avoid it inadvertently opening whilst fitting.

Now, carefully lift it onto your assembled cage.

The four protruding parts of the supports bars should locate into the underside of the top (PART D).



Step 8

If all has gone to plan then the final stage is to bolt the unit together. Using the 4 bolts (PART F) insert these through the holes in the upper door section and into the threaded holes of the interlock support bars (PART E). If these holes are not aligned then you will need to strip the unit down until you get to a stage where you can correct this error.

Under no circumstances must this unit be used in an unbolted state. These bolts are critical to its integrity and YOUR safety.



Step 9

The unit must be used so that the door is on the top for use. (It is planned that further testing will allow it to be used on its side).

Step 10

The final step is to ensure the unit secures properly. With the red lever raised, the whole handle assembly will track back and forth making the pins retract and protrude. The pins must locate into the holes of the door frame on the cage. The red handle cannot be lowered if these have not engaged.

Your cage is now assembled and ready for use.

Information for retailers

Frequently asked questions

What is the purpose of the cage?

The main purpose is to mitigate the effects that fireworks would cause if there was a fire at your store. Larger fireworks that are classified as 1.3G pose a greater hazard than 1.4G ones, hence they have a Hazard Type (HT) designation of HT3; in this form it reduces the amount that you can safely store. In simple terms, fireworks that are HT3 can, when correctly stored in these cages, can be deemed to be HT4, and can be treated in exactly the same way as any other HT4 item.

How heavy is this cage?

The assembled cage weighs approximately 150kg. It is made from welded galvanised steel.

How big is the cage?

When assembled the cage measures 1000mm x 1200mm x 1200mm.

Is it on wheels?

No. When empty it is fairly easy to manhandle if basic safety precautions are taken.

Do I buy the cage or is it on lease/hire?

Normally the cage is an out-right purchase, it is yours to keep. There is no harm in asking your supplier if they would consider a rental program for you.

Is the access door on the top of the cage?

Yes, access is through the door on the top of the assembled cage.



What can I store in the cage?

You can only store fireworks that are at, or below, the criteria that was applied to the cage during testing. The criteria are determined by the Net Explosive Content (NEC) of a tube or rocket, the Flash Powder content of any tube or rocket and the internal diameter of any tube in a shot-tube/roman candle type of product. If ANY item within the cage exceeds the criteria then the whole contents will be treated as the most hazardous item in there and you may well be in breach of your storage licence; more importantly you will be putting yourselves in greater danger.

What are the limits?

The limits are clear and absolute. **Only items that have been identified by your supplier** can be mitigated in the Pyropack and you must ensure that the following limits are adhered to.

- Where there are just the identified barrages in the cage then you must ensure that the total NEC does not exceed 60kg
- Where there are only the identified rockets in the cage then you must ensure that the total NEC does not exceed 30kg, and the FLASH NEC does not exceed 1.7kg.
- Where there is a mixture of Barrages and Rockets then the cage maximum NEC is reduced to 45kg. Of this no more than 30kg NEC can be from the rockets and the rocket FLASH NEC must remain below 1.7kg.

How do I know my items meet the requirements?

You don't: You will need to get this information from your supplier. Do not try to self-assess or guess a product's pyrotechnic composition.

AF Pyro Ltd and Bright Star Fireworks will give you clear information on their products and will state if a particular firework can or cannot be safely stored in the Pyropack 3067.



I have a similar cage but no Declaration of Conformity; can I apply the same rules?

No, most certainly not. A cage without a valid Declaration of Conformity offers no mitigation and you will most likely be in breach of the terms of your Storage Licence.

Do I still need a Storage Licence?

You must still comply with the Explosive Regulations 2014. If the amount of stock you hold is more than 5kg HT4 then a licence is required.

Do I need to tell the Local Authorities that I will be stocking HT3 items in my store but in the cage?

No, you do not but it is always worth being clear with the Local Authority inspectors, they are familiar with the limits on these cages and most will be able to give you good advice. The use of the cage is in reality no different to having product in pyromesh - you do not need to notify them of that fact. Just to clarify, qualifying items are only HT4 when they are stored in the cage and within the stipulated NEC limits. When you apply for a Storage Licence it is in your interest to seek one that covers the maximum quantity and type that your store is capable of holding.

My Local Authority say I cannot use this cage as the items revert to HT3 when I take them out to make a sale, is this correct?

No, this issue has been resolved. Although they are technically correct it does not prevent you from making a sale. Your Risk Assessment should have a section covering how you conduct this process safely. It has been clarified with the Health and Safety Executive and detailed below:

"Mitigation in the Pyropack is effective when the access door is closed and securely fastened, therefore apart from loading and unloading the access door must be closed and securely fastened using the locking mechanisms provided."



Do the items need to be kept inside their UN cartons whilst in the cage?

YES. Items must be stored within the Pyropack inside closed UN Cartons.

Am I limited to just one cage?

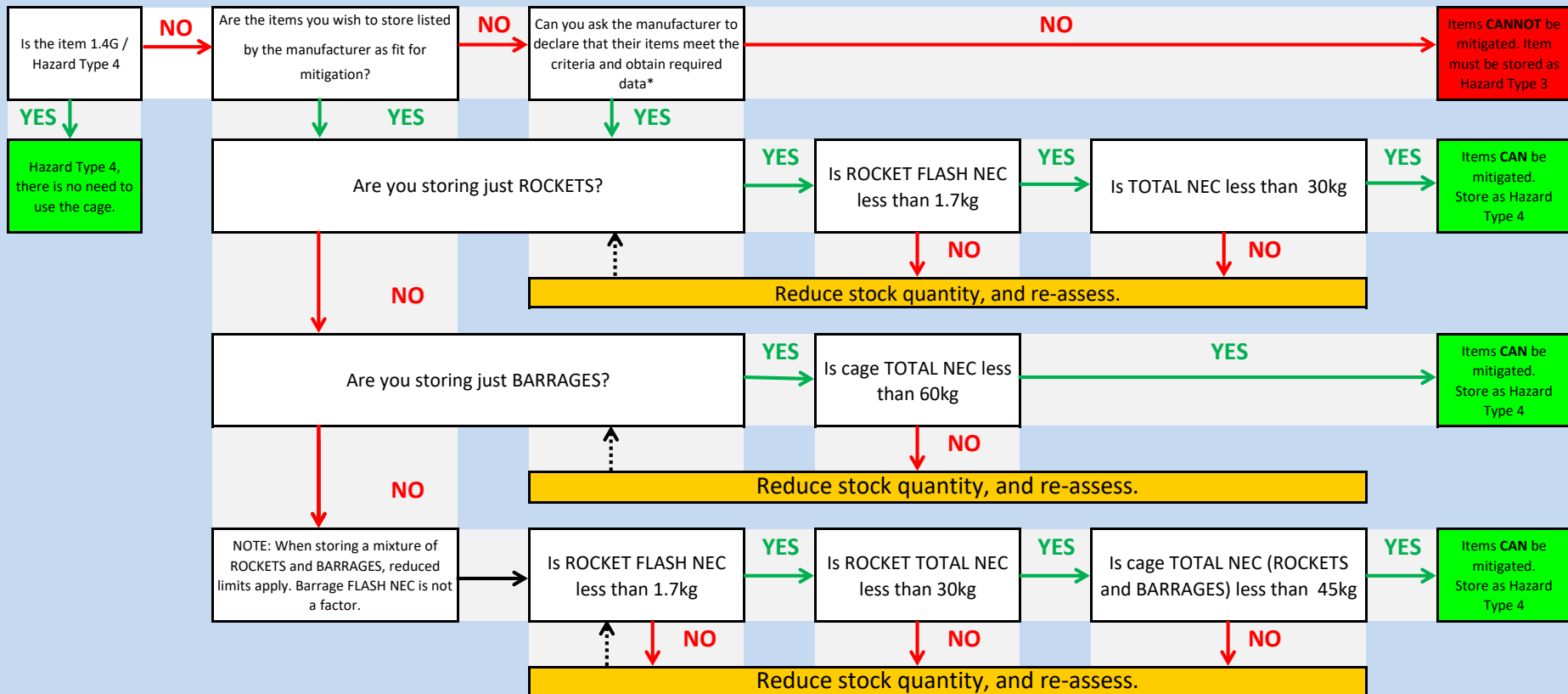
No, you can have as many as you want provided you do not exceed the terms of your Storage Licence and that individual Pyropack limits are not exceeded.

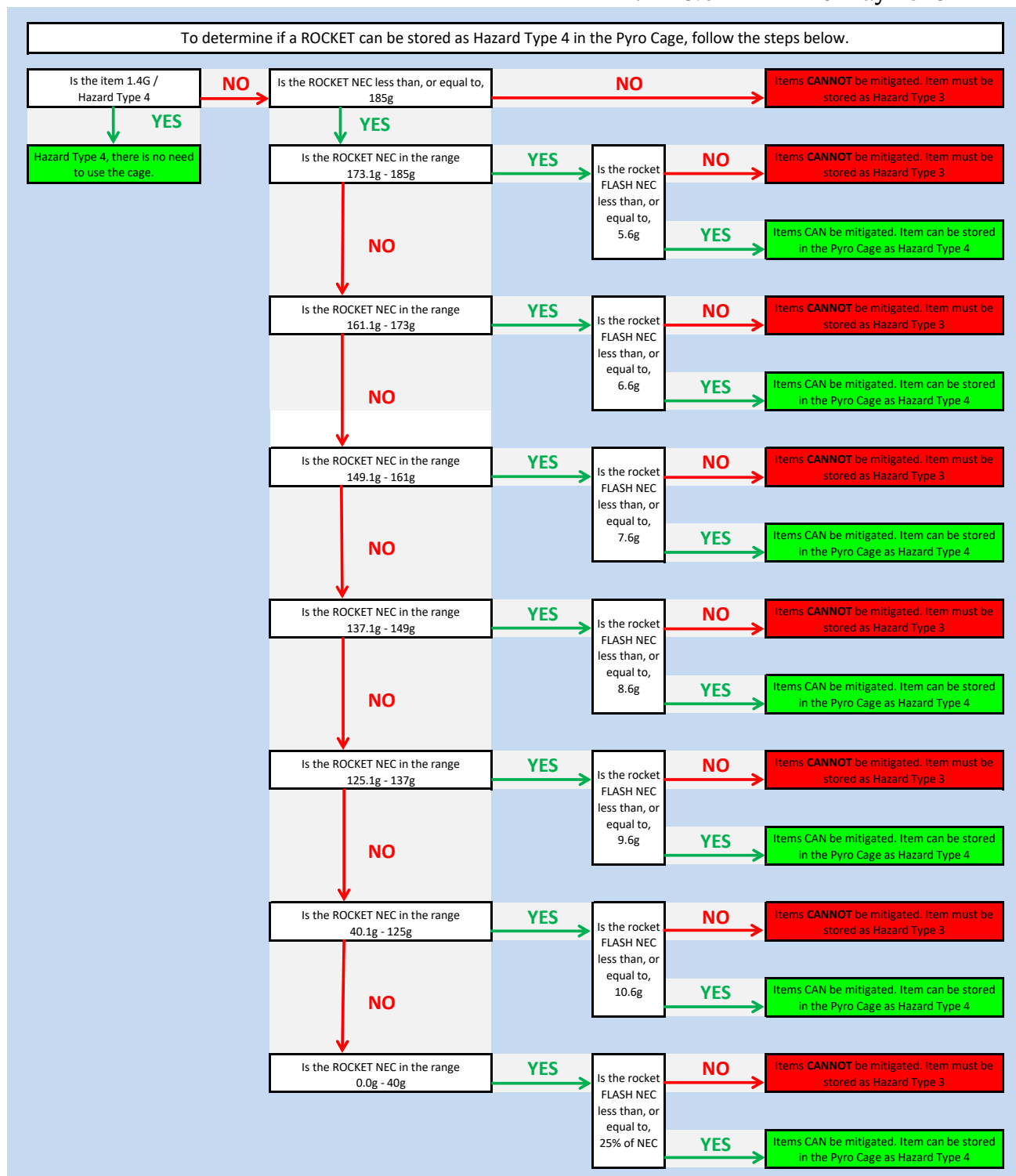
If I have any further questions, who do I ask?

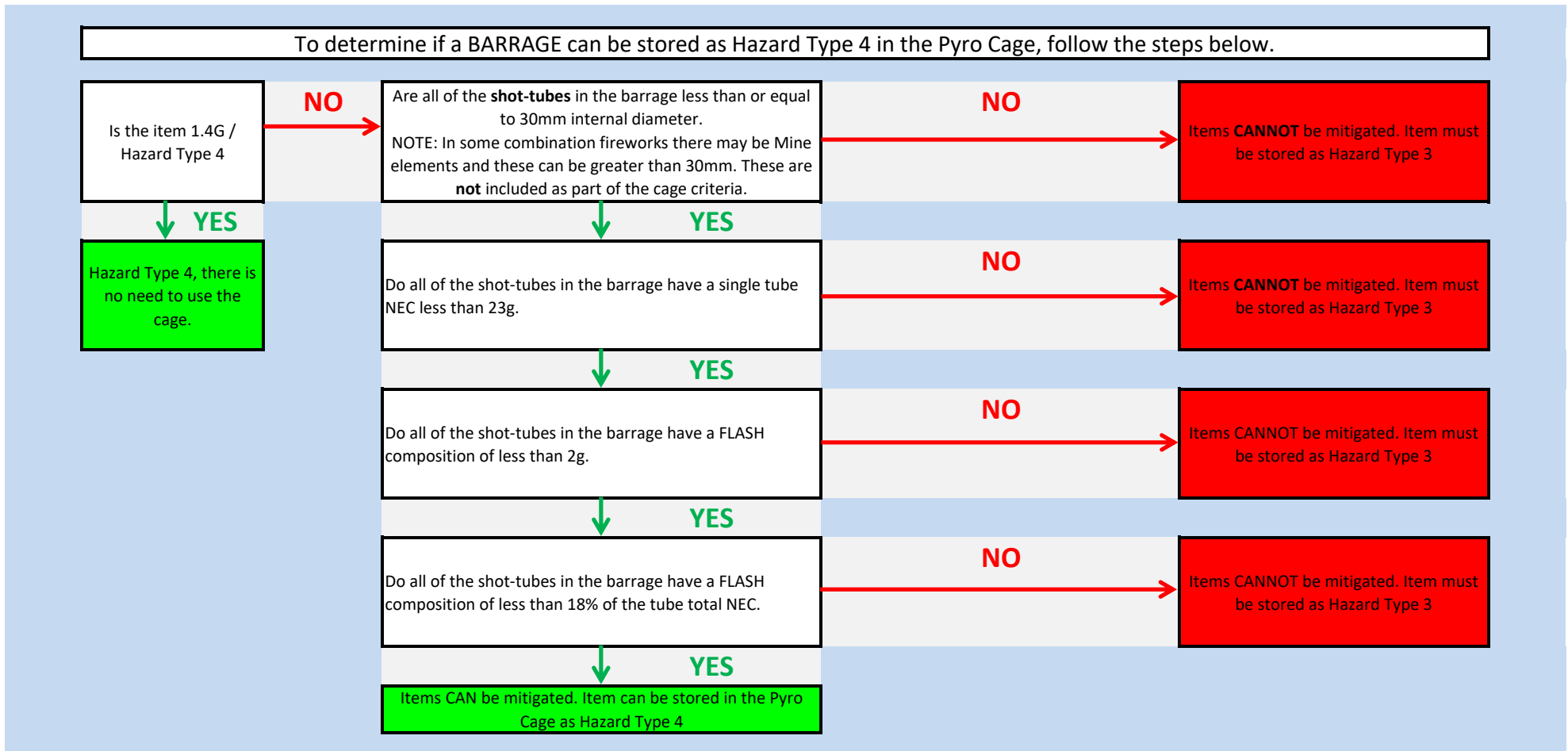
If you have any questions about the Pyropack then please contact Bright Star Fireworks.

Bright Star Fireworks UK Ltd : 01765 640740

*To determine if a product can be mitigated if not already listed then you will need a declaration from the manufacturer that it meets the criteria. You will also need the item's NEC and, for rockets, the Rocket Flash NEC.







Pyropack MC100K and mitigation of other suppliers' fireworks.

It has come to our attention that other companies are stating that our pyro cage can be used to mitigate the full range of their products. Just to be clear and for the avoidance of any doubt it is up to them to provide you with a written statement that the product they are supplying does in fact meet the criteria for storage mitigation and they MUST provide you with the item's Net Explosive content, tube diameter, flash content/flash percentage.

By doing this you have the correct information to ensure you do not overstock the cage and fall in breach of the terms of the storage licence you hold. It will be you that gets prosecuted, not them.

Their product MUST meet the criteria laid down in our declaration of conformity.

- Barrages MUST be less than or equal to 30mm tube diameter
- Individual tubes MUST NOT exceed 23g NEC
- Individual tube MUST NOT exceed 2g FLASH NEC or 18% NEC whichever limit is reached first.
- Rockets of NEC 0g-40g per rocket, the FLASH NEC must be less than or equal to 25% NEC
- Rockets of NEC 40.1g-125g per rocket, the FLASH NEC must be less 10.6g.
- Rockets of NEC 125.1g-137g per rocket, the FLASH NEC must be less 9.6g.
- Rockets of NEC 137.1g-149g per rocket, the FLASH NEC must be less 8.6g.
- Rockets of NEC 149.1g-161g per rocket, the FLASH NEC must be less 7.6g.
- Rockets of NEC 161.1g-173g per rocket, the FLASH NEC must be less 6.6g.
- Rockets of NEC 173.1g-185g per rocket, the FLASH NEC must be less 5.6g.
- Rockets of NEC 185.1g or greater CANNOT be mitigated.

The PyroPack can only be deemed to mitigate the above qualifying product if:

- The total NEC for barrages only is less than 60kg.
- The total NEC for rockets only is less than 30kg AND the FLASH NEC is below 1.7kg
- The total NEC for rockets and barrages in the same cage is less than 45kg where the total for the rockets is below 30kg AND the FLASH NEC is below 1.7kg

It is YOUR responsibility to remain within these limits.

You therefore need a signed declaration from the supplier stating that their product as they have listed on your order meets the requirements. They will need to provide you with ALL of the information required above so that you can be confident in having safe storage. A simple statement saying that a product is safe IS NOT GOOD ENOUGH. If they cannot provide this information then DO NOT trust what is said. It is YOU, as the licence holder, who will be prosecuted. It is YOU who will have to declare this on all future firework licence applications, and it is YOU who may lose the ability to obtain a storage licence in the future.

If you have any questions please give me a call.

Kind regards

Steve 01765 640 740



Supplementary Information on *Bright Star products:
The following Hazard Type 3 (1.3G) items can be stored in the
Pyropack and their Hazard Type mitigated to Hazard Type 4.

Item Number	Description	Carton NEC(kg)	Carton Flash NEC(kg)
2311	Airhawk	1.80	0.15
2315	Warhawk	3.60	0.30
2361	Flying Pigs	2.04	0.16
2365	Sonic Sidewinder	2.54	0.08
2368	Silly Cow	1.98	0.18
2399	Quantum Break	2.66	0.28
2400	Warhawk 2	3.36	0.24
2402	Spooky Spirits	2.16	0.18
3105	Black Saturn	3.00	0.30
3106	Black Saturn 2	3.00	0.30
2419	Juggernaut	3.07	n/a
2423	Pandora's Box	3.46	n/a
2424	Voodoo	0.95	n/a
2429	Apocalypse	1.49	n/a
2430	Sorcerer's Shadow	1.62	n/a
2435	Crackdown	0.98	n/a
2356	Thunder Strike	2.88	n/a

*There may be other item that can be mitigated in these cages but these are variants of the above.
Speak to your supplier if you need more information.



Supplementary Information on *CUBE products:
**The following Hazard Type 3 (1.3G) items can be stored in the
Pyropack and their Hazard Type mitigated to Hazard Type 4.**

Item Number	Description	Carton NEC(kg)	Carton Flash NEC(kg)
329	ZEUS	2.205	N/A
330	APOLLO	2.933	N/A
331	ATHENA	1.396	N/A
331	POSEIDON	1.832	N/A
3001	RAGING BULL	2.910	N/A
3002	UNTAMED WARRIOR	1.369	N/A
3003	FURIOUS	2.400	N/A
3004	GALAXY DEFENDER	1.992	N/A
3006	GORILLA	1.920	N/A
3007	MERCENARY	2.976	N/A
3009	BOSS NASTY	2.704	N/A
3011	NIGHT REAPER	2.762	N/A
3012	LEGION	1.000	N/A
3016	GHROME	1.980	N/A
3017	HELL RAISER	1.996	N/A
3018	BEACH BANGERS	1.924	N/A
2001	SUPER WHIRL	2.820	0.14
2002	TRAIL MAKER	3.169	0.21
2003	UNIVERSAL	4.247	0.31
2004	AMAZING	5.779	0.40
2005	FABULOUS	3.922	0.27
2007	HAWK SLAYER	2.520	0.20

*There may be other item that can be mitigated in these cages but these are variants of the above.
Speak to your supplier if you need more information.

Produced on behalf of Bright Star Fireworks UK Ltd and Cube Fireworks

NEW ITEMS FOR 2025

The following Hazard Type 3 (1.3G) items can be stored in the Pyropack and their Hazard Type mitigated to Hazard Type 4.

Item Number	Description	Carton NEC(kg)	Carton Flash NEC(kg)
2485	SCREAMING BANSHEE	1.28	0.13
2486	WEAPON-X	0.86	0.06
4000	THE KRAKEN	1.97	N/A
4001	SOUL REAPER	1.93	N/A
4004	ANARCHY	2.08	N/A
4006	SHEER LUNACY	2.04	N/A
4008	STORM CHASER	1.93	N/A
4010	END BARRAGE	3.84	N/A
4011	A CURSE UNLEASHED	2.76	N/A
4011	B TRULY OUTRAGEOUS	2.76	N/A