SHAKESPEARE
Solutions are in the Science

Shakespeare 327-N

Foldable VHF antena

New for 2024

327-N Foldable VHF

What is the issue?

SHAKESPEARE
Solutions are in the Science

Antennas are long and pointy

What is the issue?

SHAKESPEARE
Solutions are in the Science

Antennas are long and pointy

What is the issue?

Antennas are long and pointy

Couriers and shipping companies prefer boxes

What is the issue? – For our Customers

Antennas are long and pointy

Couriers and shipping companies prefer boxes

What is the issue? – For our Customers

Antennas are long and pointy

Couriers and shipping companies prefer boxes

They do not like TUBES

What is the issue? – For our Customers

Antennas are long and pointy

Couriers and shipping companies prefer boxes

They do not like TUBES

What is the issue? – For our Customers

Antennas are long and pointy

Couriers and shipping companies prefer boxes

They do not like TUBES

What is the issue? – For our Customers

Antennas are long and pointy

Couriers and shipping companies prefer boxes

They do not like TUBES

This causes a price premium with all couriers

What is the issue? – For our Customers

For some of our lower cost product, the shipping for ONE unit is more than the cost of the antenna

This of course is very restrictive when it comes to supporting our customers with products.

Shakespeare is a manufacturer of high-quality antennas, but the volume markets are in a price sensitive area,

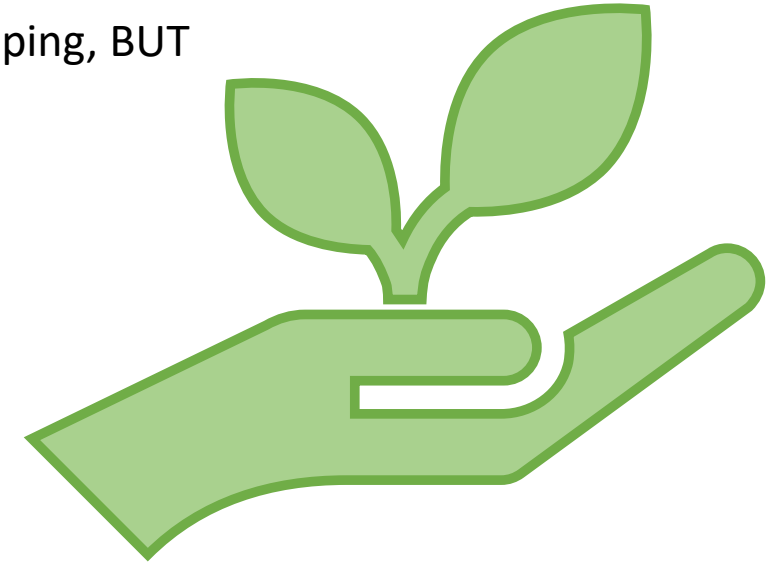
Shakespeare is keen to support this market

By making this change – there will be up to a 50% carriage saving per antenna

What is the issue? – Being Green

Another key aspect Shakespeare is keen to improve on is our Carbon Footprint / environmental impact

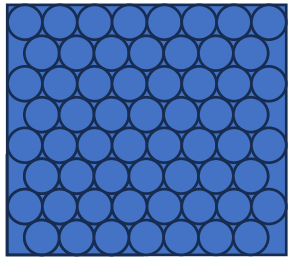
Packing antennas in Tubes may be the easiest way to secure the product for shipping, BUT



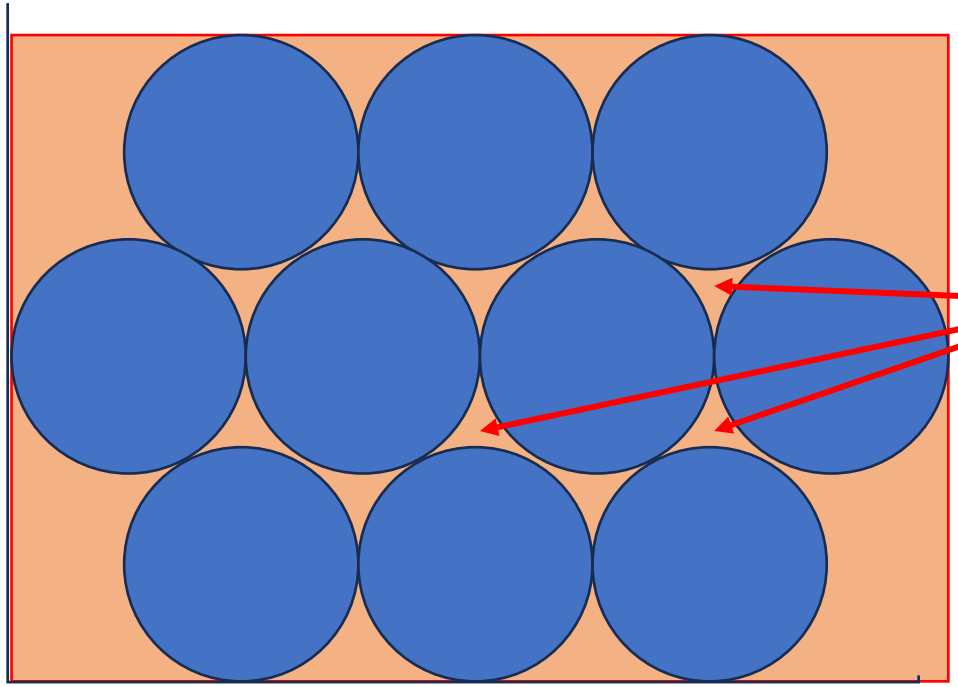
It is far from an efficient way of shipping.

This product will be in a triangular box.

What is the issue? – Being Green



What is the issue? – Being Green



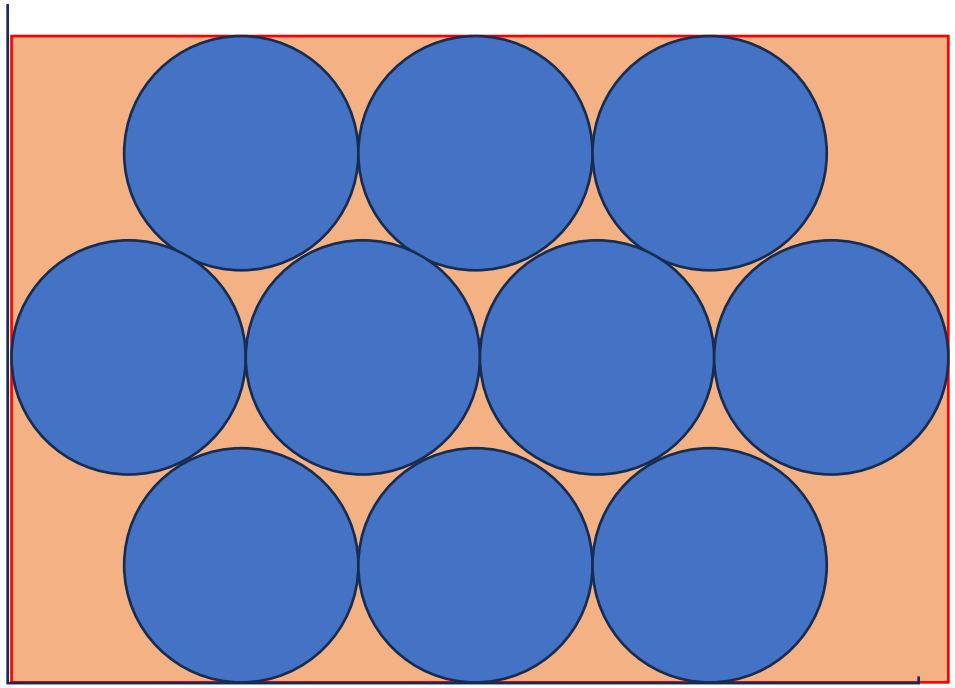
Cylinders only pack with a density of around 80%

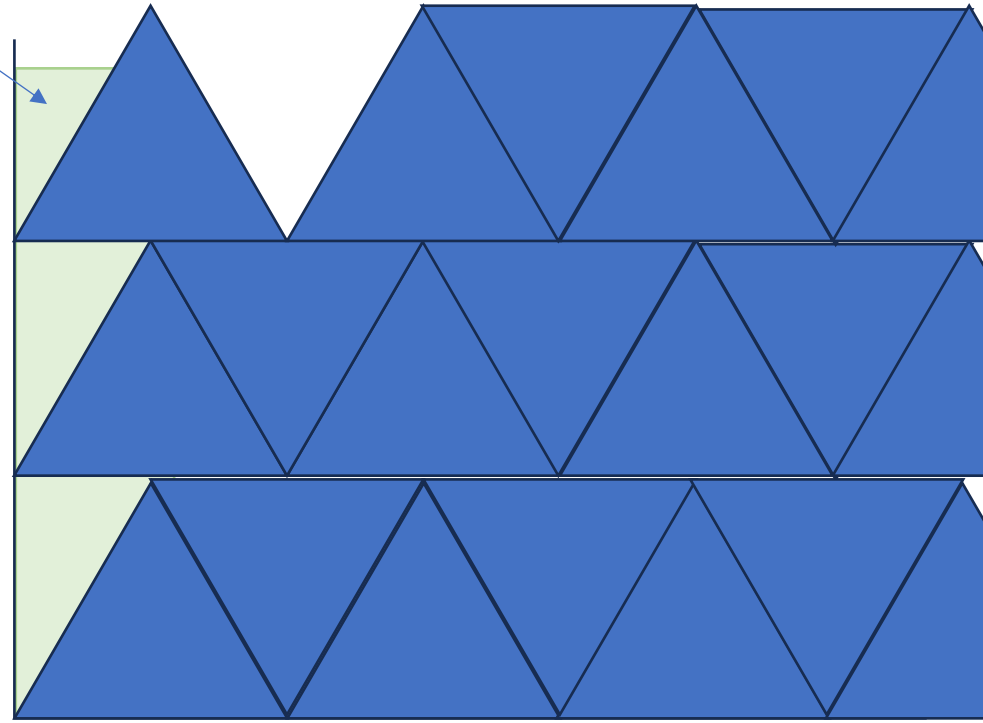
There is a lot of wasted space

What is the issue? – Being Green

SHAKESPEARE
Solutions are in the Science

Traingles pack with >90% efficincy





What is the issue? – Being Green

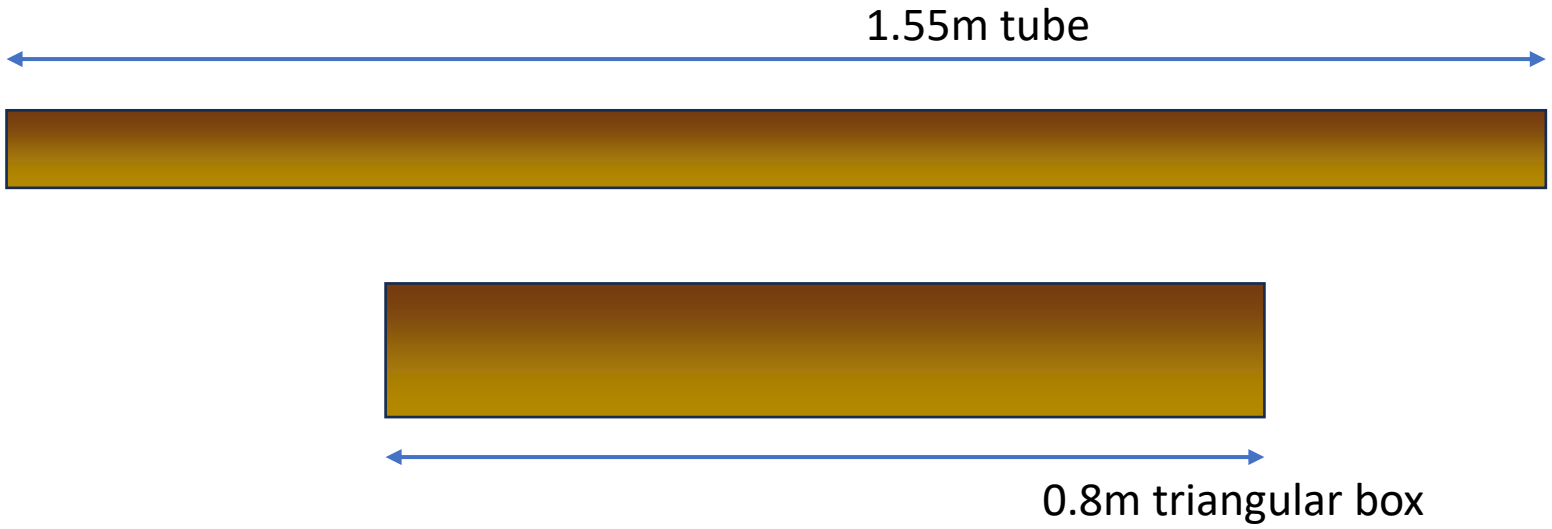
Just by packing efficiency we are 10% better!

But there is also VOLUME reduction

What is the issue? – Being Green

Just by packing efficiency we are 10% better!

But there is also VOLUME reduction



What is the issue? – Being Green

Length on 155cm (l)

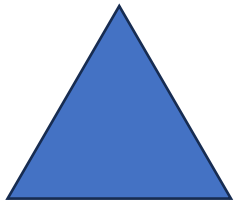
8cm diameter

Total Volume = πr^2 x l

Total Volume = 3.14 x 4 x 4 x 155 = 7800cm^3

The single part, tubed antenna takes up a volume of 7800cm^3

What is the issue? – Being Green



8.7cm Height

10cm width

Length on 80cm (l)

Total Volume = ½ h x w x l

Total Volume = ½ x 8.7 x 10 x 80 = 3400cm3

The two part, folded antenna takes up a volume of 3400cm^3

What is the issue? – Being Green

1500 Tubed antennas = 1500 x 7800cm3 11.7m3

In 2023 we had an order for 1500 units of this style antenna

1500 folded antennas = 1500 x 3400cm3 = 5.1m3 More than twice as efficient

What is the issue? – Being Green

1500 Tubed antennas = 1500 x 7800cm3 11.7m3

In 2023 we had an order for 1500 units of this style antenna

1500 folded antennas = 1500 x 3400cm3 = 5.1m3 More than twice as efficient

What is the issue? – Being Green

SHAKESPEARE
Solutions are in the Science

With the reduction in volume we will be saving on CARBON Impact

- Based on shipping a 20’ container to the Middle East from the UK – the total Carbon is 627Kg

GHG emissions as CO2e (TTW) Climate impact	[Tonnes] TSSea ship
Truck	0.0089
Sea ship	0.6185
Sum:	**0.6274**

© EcoTransIT.org

From KN Website

- The total volume of the container ~ 30m^3
- On the previous page order for 1500 units We are saving 5.1m3 which is a 1/6th
- The new packing way would save 105kg of carbon impact on that order

We sell over 15,000 of these style antennas a year globally – there is a potential over a **tonne** of carbon to be saved

Benefits

SHAKESPEARE
Solutions are in the Science

The major benefits of this design areas below,

- Reduced sizes – Freight savings
- Reduced sizes – using less warehouse space
- No Plastic used in packaging! As we move into a plastic tax environment

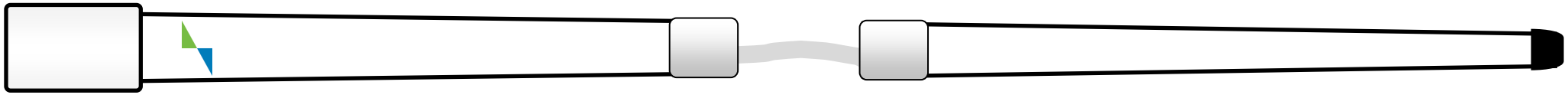
  As from 2023 all plastic packaging is subject to tax rates. This antenna will have ZERO Plastic Packaging.
- No End user electrical assembly – No chance for failure
- No Reduction in performance or extra losses verses standard unit

Key Markets

- The antenna will be beneficial for the OEM and high-volume market globally
- With Shakespeare now having 3 depots around the world – using this model will greatly reduce high volume costs and space
- The antenna is from our CLASSIC range – so not promoted as top performer, but a strong robust antenna for everyday use
- This style is perfect for offering as part of a bundle of products – Currently, antenna shipping hikes the price if bundled in any way.

SHAKESPEARE
Solutions are in the Science

327-N Foldable VHF



Part Number :	**327-N**
Freq :	**156-162MHz** (<1.3:1 @ 159MHz)
Length :	**1.5m**
Gain :	**3dB**
Cable length :	**6m**
Connector :	**PL-259**
Packaged size :	**0.8m / 0.4kg**

Conclusions

The origins of the project was to listen to our customer needs – Which remains a priority in Shakespeare

The nature of our products is not conducive with the modern ‘reduced freight/ environmentally friendly’ world

At Shakespeare we have created a whole new product – which potentially could branch out into more styles

The product have ZERO reduction in performance verses its fixed length version

The product sees no price increase verses its fixed length version

The 327-N is categorically the best performing reduced height 3dB antenna – because we have NO EXTRA LOSSES

All original goal targets ACHIEVED