

„Simplify, then add lightness...“
...Colin Chapman, Founder of Lotus

Ultra Lightweight Aircraft Galley SU Container

Designed to be 500 to 600 grams lighter than competition

www.ltcontainer.com



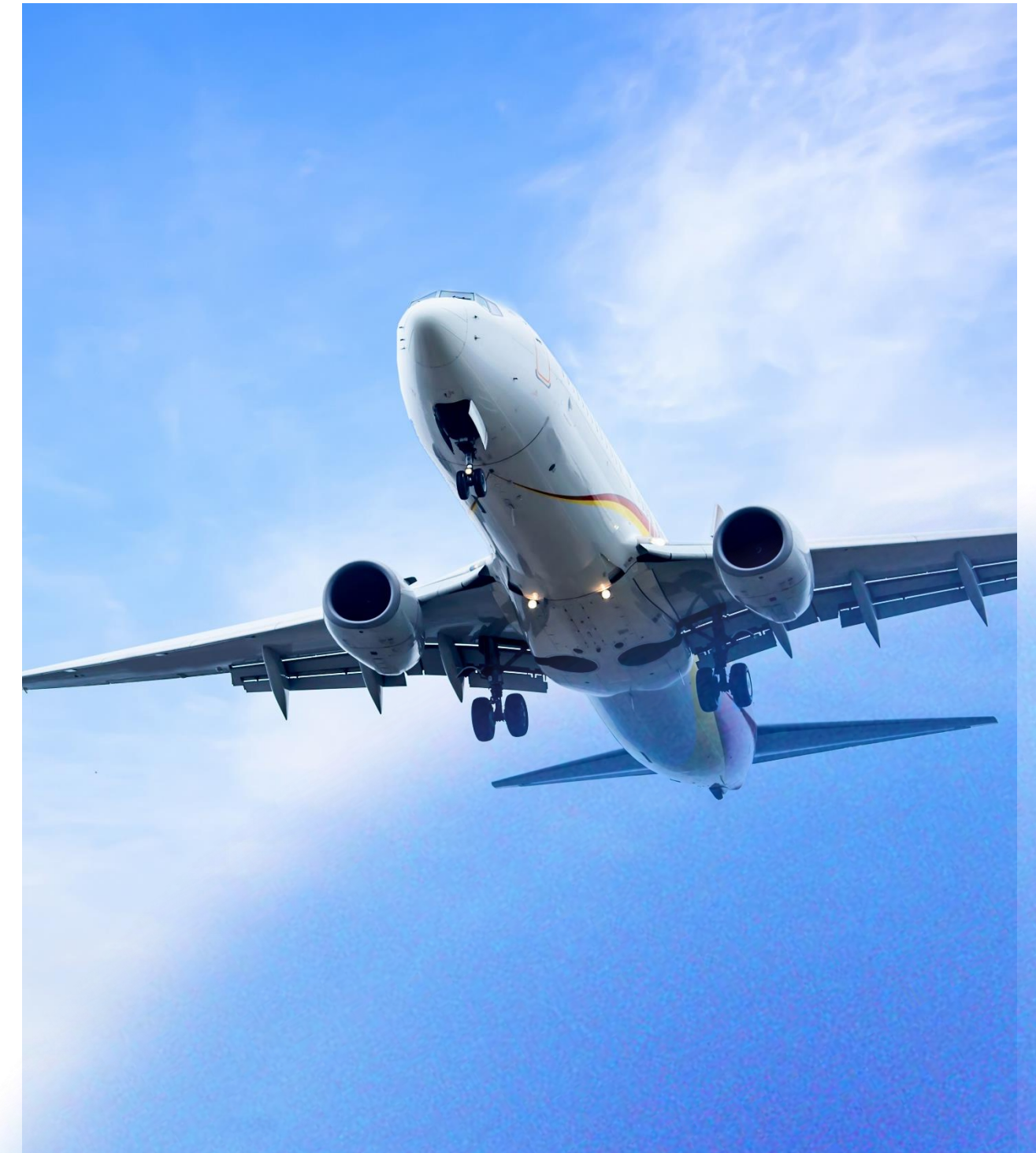


Problems

- 01 Prices for Kerosine are constantly increasing

- 02 End customer expectations (comfort, multimedia) drive aircraft weight increase

- 03 Sustainability targets in terms of CO2 reduction constantly tighten



Value Proposition

- 01 We need more innovation within the aircraft industry to support sustainability targets
- 02 We need to rethink aircraft interiors and design differently
- 03 We need to reduce weight wherever possible to support Kerosine consumption (reduce OPEX)

Aircraft Galley Container Innovation

Designed to be 500 to 600 grams lighter than competition



Benefits

- 01 **Weight saving of 600 gr/unit**
Typical S/A Aircraft 20 Units equals 12 kg/aircraft
Typical Long Range Aircraft 50 Units equals 30 kg/aircraft
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- 02 **One standard frame with interchangeable container**
Standard frame stays in service whilst container is cleaned, filled etc.
Easy cleaning of the container
Multiple functions
Various colors, branding easily possible
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- 03 **Interchangeable with existing standard units**
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- 04 **Patent granted**



ULTRA LIGHTWEIGHT SU CONTAINER
HST PATENT

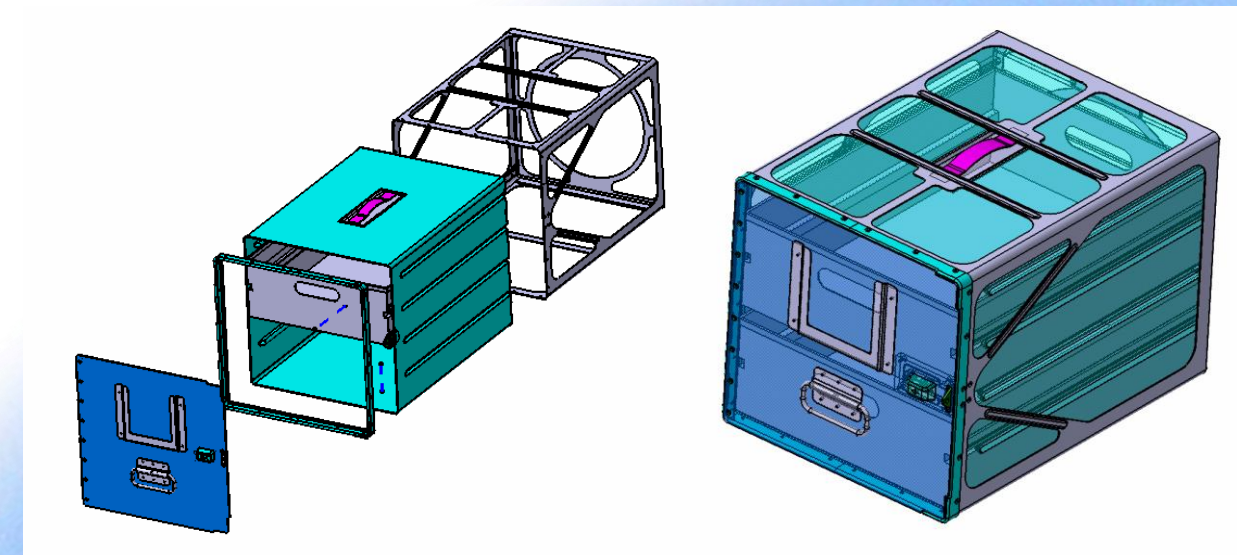
Features

Only 3 sub assemblies

01 Lightweight Stainless Steel or CRP frame (aluminum or carbon) **interface to galley**, standard for all versions.

02 Lightweight plastic injection **container**, variable accommodation to desired function (e.g. two drawers, RFID tracking), customization (e.g. company color).

03 Lightweight aluminum **door**, standard for all versions.

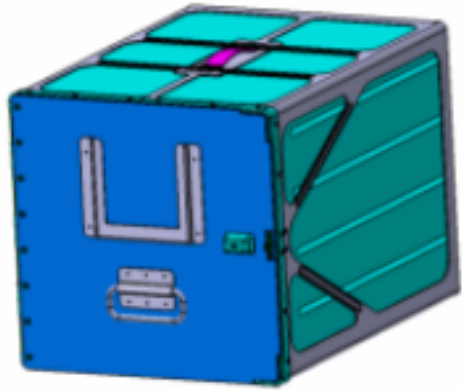



ULTRA LIGHTWEIGHT SU CONTAINER
HST PATENT

Dimensions

Weight saving of 620 grams/Unit compared to benchmark container

Standard Unit	"HST" PATENT	Benchmark
Height 278 mm	X	X
Width 294 mm	X	X
Depth 409 mm	X	X
Pitch 60 mm	X	X
Capacity	20 kg	20 kg
Net Weight	2,16 kg	2,78 kg

**ULTRA LIGHTWEIGHT SU CONTAINER
HST PATENT**

Cost Savings Calculation

Kerosine price

at 0,38 €/L (conservative, 2022 peaks at 1,23 €/L)

Average Kerosine consumption

3,64 L per passenger and 100 km (2019)

Reference Lufthansa

4,18 L per 100 passenger kilometers in 2020

Passenger average weight

75 KG

$$3,64 / 75 = 0,048 \text{ L}/100\text{KM}/1\text{KG}$$

Airbus A380 flight FRA-NYC

consumes 115.000 L Kerosine at 6200 KM and carries **178 containers on board**

A380 start weight is at 560 tons

thereof 325 tons Kerosine and 42 tons passenger weight (e.g. 555 pax x 75 KG, A380 passengers can peak at 820pax)

$$\begin{aligned}
 &115000 / 555 \\
 &= 207,2 \text{ L/pax (75 KG)} \\
 &207,2 / 75 = 2,76 \text{ L/KG} / 62 \\
 &= 0,045 \text{ L}/100\text{KM} \times 0,38\text{€} \\
 &= 0,017\text{€}/100 \text{ KM} \\
 &0,017\text{€} \times 62 \\
 &= \mathbf{1,05 \text{ €}/KG/flight} \\
 &\mathbf{FRA-NYC (one-way)}
 \end{aligned}$$

Estimation

120 flights/year (one-way)

$$1,05 \times 120 = 125,9 \text{ €} \times 2 =$$

251,9€/KG/YEAR

COST SAVINGS

Flight A380 FRA-NYC is chosen as example (long-range, more passengers)

Cost Savings Calculation

<p>Kerosine price at 0,38 €/L (conservative, 2022 peaks at 1,23 €/L)</p> <p>Average Kerosine consumption 3,64 L per passenger and 100 km (2019)</p>	<p>Reference Lufthansa 4,18 L per 100 passenger kilometers in 2020</p> <p>Passenger average weight 75 KG</p> <p>$3,64 / 75 = 0,048 \text{ L}/100\text{KM}/1\text{KG}$</p>	<p>Airbus A380 flight FRA-NYC consumes 115.000 L Kerosine at 6200 KM and carries 178 containers on board</p>
<p>A380 start weight is at 560 tons, thereof 325 tons Kerosine and 42 tons passenger weight (e.g. 555 pax x 75 KG, A380 passengers can peak at 820pax)</p>	<p>$115000 / 555 = 207,2 \text{ L}/\text{pax} (75 \text{ KG})$ $207,2 / 75 = 2,76 \text{ L}/\text{KG} / 62 = 0,045 \text{ L}/100\text{KM} \times 0,38\text{€}$ $= 0,017\text{€}/100 \text{ KM}$ $0,017\text{€} \times 62 = 1,05 \text{ €}/\text{KG}/\text{flight FRA-NYC (one-way)}$</p>	<p>Estimation 120 flights/year (one-way) $1,05 \times 120 = 125,9 \text{ €} \times 2 = 251,9\text{€}/\text{KG}/\text{YEAR}$ COST SAVINGS Flight A380 FRA-NYC is chosen as example (long-range, more passengers)</p>

178 containers on board
with **ULTRA LIGHTWEIGHT SU CONTAINER**

results in 107kg weight reduction

252€/KG/YEAR COST SAVINGS

results in **27 k€ cost savings/year**

Flight A380 FRA-NYC is chosen as example (long-range, more passengers)

Thinking forward...



Buy the product

**Produce at our
partner suppliers**



Invest exclusively

**Ramp up production
and sell to customers
globally**



Buy the patent

**Produce at own
production facilities**

Receive consultancy during transition of aircrafts to new containers

Contact us for more information...

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Thank you