

## For those airlines operating with temporary freighters, time is running out! The Cargo exemption is expiring! Get your Full Freighter Conversion without the need of an exemption NOW!





#### **B737-800 COMBI/Full Freighter Conversion = Matching Capacity with Demand**

**Patent Pending** 



 Most, if not all, Emergency Passenger to Cargo conversions are based upon <u>temporary</u> "exemptions"

This presentation is about a design based upon a **FULL STC** modification and **does not** rely on any temporary exemptions

## **COMBI/Fullfreighter Business Discussion Paper**

Until recently there was optimism that some degree of normalcy to PAX demand would return over the Summer Season and possibly into the Autumn Season as well.

As a result of this optimism toward passenger recovery the only real investments into the cargo business that passenger airlines wanted to make were short-term and low-cost solutions such as strapping cargo to seats or removing seats and strapping hand-loaded cargo to the floor mounted seat tracks. These are not viable long-term solutions, nor were they designed to be. Now airlines are looking for longer term revenue generating solutions in the range of one to three years.

"Global export orders are rising at a substantial rate, prompting to strong cargo volumes and a rise in demand, the International Air Transport Association (IATA) reported on September 9, 2020."

To meet this demand IFC has created both Full Freighter and COMBI designs applicable to B737, B757, B767, B777, A32X, A330 and 340 aircraft.

This presentation is for the 737-800 Full Freighter & COMBI configurations that allow the carriage of either all cargo or both PAX and Cargo in the main cabin simultaneously while meeting existing cargo and cabin service logistics, airworthiness requirements and is economical.

S&P Global reports that International Load Factors are at 28% in 2020 and it projects Load Factors of 50% in 2021, and 60% in 2022. In 2023, projections are only at 75-80% on these international routes.

Major commercial airlines have recently indicated that carrying cargo was the only part of their business making any money.

### **COMBI/Full Freighter Business Case Discussion Cont...**

The IFC COMBI and Full Freighter designs are longer term solution unlike the stop-gap hand-loaded solutions that have been used up until now and they are designed to be flexible enough to allow the right balance between PAX and Cargo that can be easily and quickly adjusted up or down to maximize the revenue of both.

The hand-loaded solutions available up until now rob the airline of its core competency: Carrying Passengers. But there aren't enough Passengers flying to make routes profitable. With the IFC COMBI and Full Freighter designs the passenger airline gets the best of both worlds. Maximum Cargo and passenger capacity that can be adjusted with demand.

With PAX Load Factors substantially down and cargo rates up, the IFC COMBI and Full Freighter designs offers passenger airlines a method to monetize all that unused capacity in the cabin. After months of research and design combined with planned stringent airworthiness testing, IFC has the best solution that can realize substantial cargo revenue with minimal capital investment.

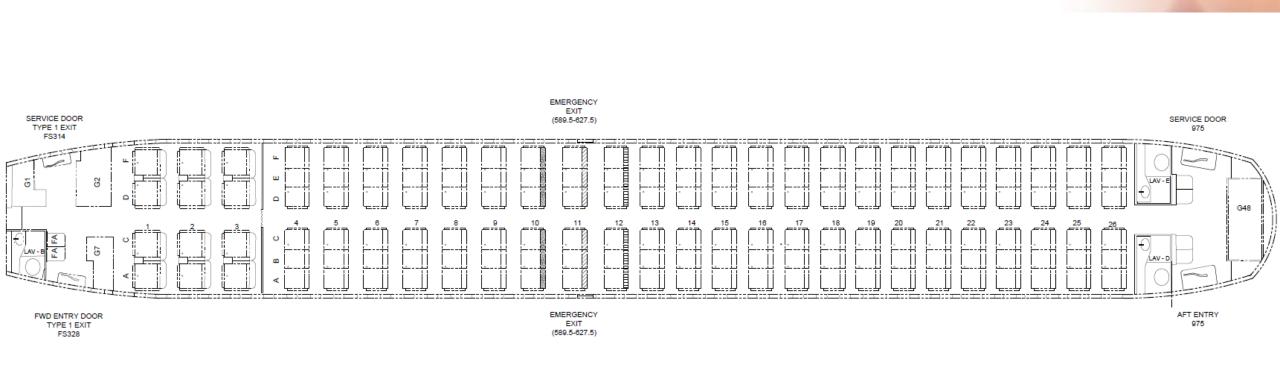
Like all new initiatives the key is making the business case while also meeting all the airworthiness requirements. Commercial airlines are now seeing that the severe drop of RPKs/RPMs as a result of COVID-19 is not a short-lived blip in their business, but a long-term reality. A viable business plan that involves the right approach to cargo can be the key to success in this new reality.

Low initial cost due to no major mods to the aircraft + available space + cargo demand + high cargo rates + IFC's design flexibility to reach the "sweet spot" of PAX/cargo mix = profitability for the airline.

## 737-800 Cargo Conversion

#### **Straight Forward Conversion: (No special & costly mods)**

- Use existing fleet or lease surplus passenger aircraft. No need to purchase aircraft and invest heavily in cargo modifications because the IFC design is easily installed and is reversible allowing a return to PAX service or a "lease return" configuration eliminating high capital expenditures.
- No requirement for costly and long lead time cargo conversion mods such as large cargo doors, strengthened floors, smoke detention and fire suppression because the IFC design transfers all those requirements into the IFC Cargo Modules and Systems.
- The IFC design allows for economical and fast PAX-to-Cargo and Cargo-to-PAX conversions.
  - > Remove and retain PAX seating, carpets, IFE and certain monuments from PAX cabin.
  - > Install IFC Standard Cargo Module structure in place of removed seats.
  - > Install IFC Cargo Monitoring and Fire Suppression system where applicable.

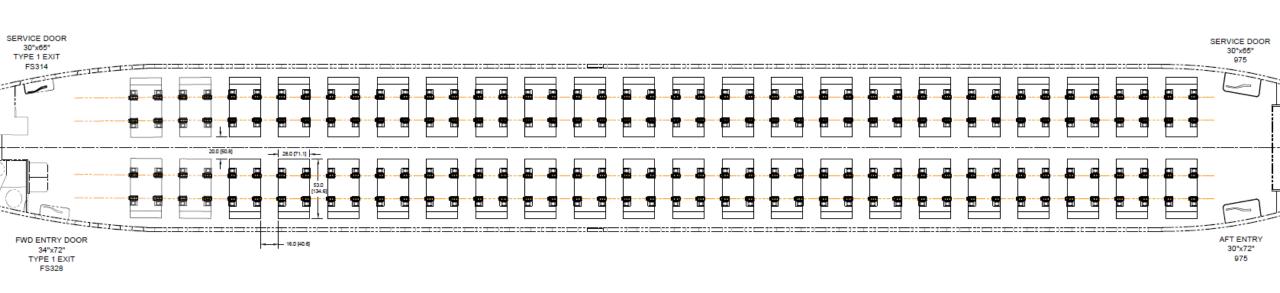


#### Typical Existing 737-800 Passenger Configuration

#### Typical, 737-800, 150 PAX Configuration

INFLIGHT

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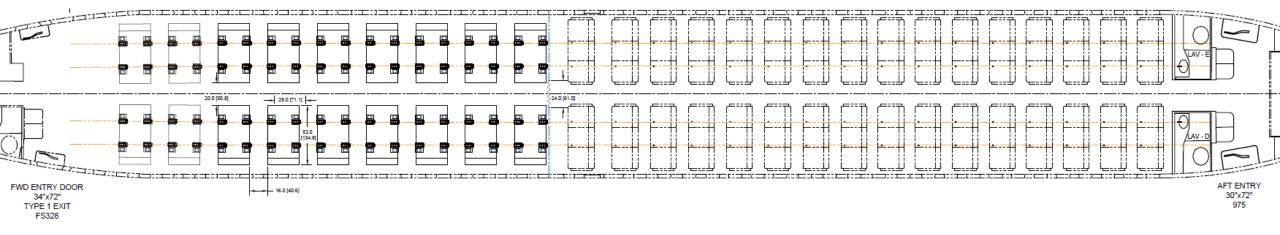
# B737-800 Full Freighter Configuration

#### 44ea. Standard Cargo Module Configuration

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### **B737-800 COMBI Configuration**



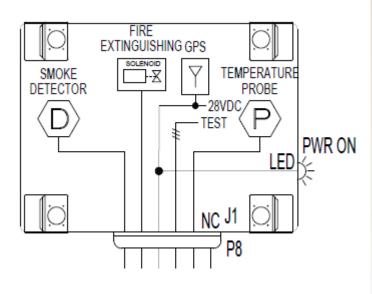
#### 96 Pax & 18ea. Standard Cargo Module Configuration

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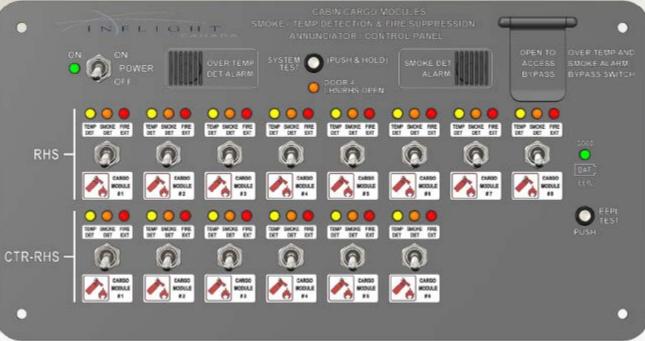
### Cargo Module Monitoring & Fire Suppression Systems

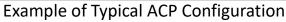
- Integration of Centralized
  Cargo Module Fire Detection &
  Suppression System:
  - Internal Temperature Monitoring
  - Smoke Detection System
  - Remote Fire Suppression
     System Activation



Example of Typical Cargo Module Electrical PAGE 10 Systems

- Annunciator/Control Panels at Cargo Monitor's stations.
  - Provides Light and Alarm for detection of Heat and Smoke in each individual Cargo Module.
  - Allows the remote activation of the Fire Suppression System to extinguish an identified fire in a specific Cargo Module.
  - Safety feature inhibits fire suppressant system when an annunciation of hi-temp or smoke is not present. By-pass switch overrides this feature.









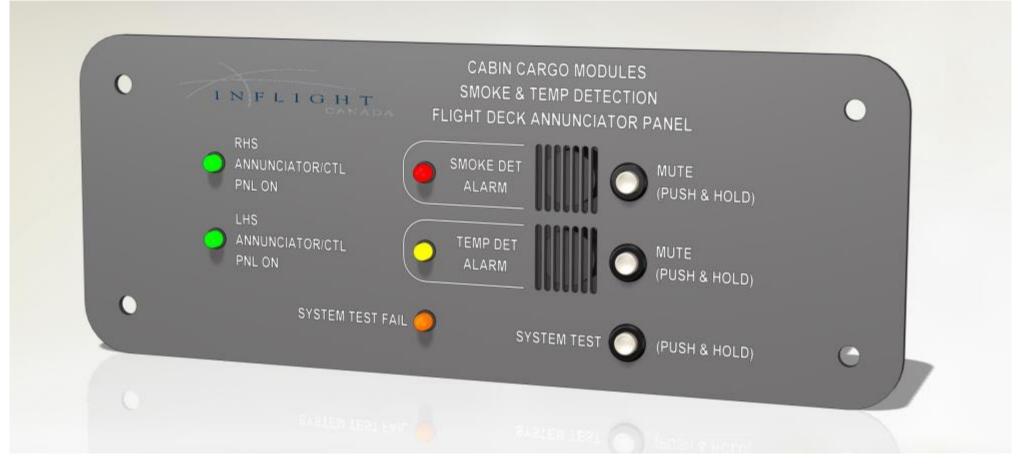
Detail of Bypass Switch w/ guard opened.

Patent Pending

### Cargo Module Flight Deck Safety Features

- Flight Deck Annunciator Panel.
  - Individual Power ON indicator per ACP.
  - System Test Switch/Failure Indicator
  - Cargo Module Smoke/Temperature Detection Alarm with ability to Mute.
  - Cockpit location based on specific aircraft space availability.



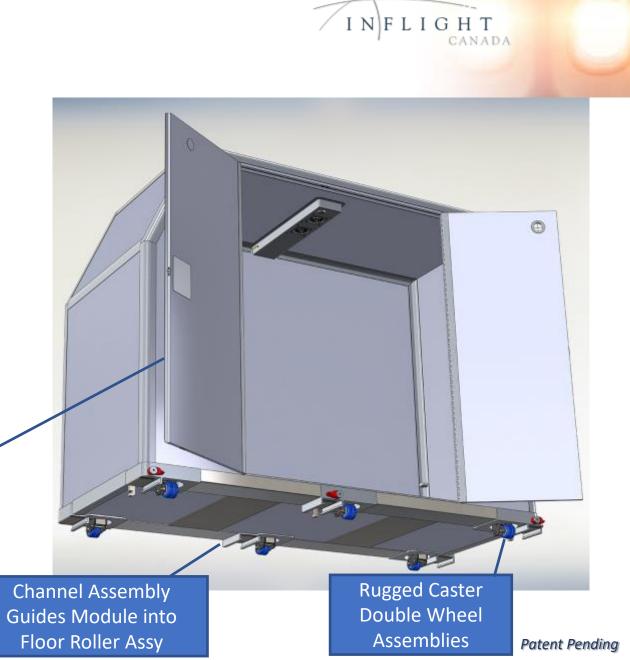


### Floor Cargo Module Structural Features

- Cargo Modules sized to optimize available space.
- Corners Contoured/Reinforced to survive typical cargo abuse environment.
- Multi-Point Door Latch.
- Provisions for Customs Seal & Padlock.
- Doors Swing 180 Degrees to facilitate loading.

180 degree door swing, both doors

• Locking wheels for stability during loading.



### Floor Cabin Cargo Module Configuration





## **Designs In Process**

- A330-200 COMBI
- A330-200 Full Freighter
- A330-300 COMBI
- A330-300 Full Freighter
- A340-600 COMBI
- A340-600 Full Freighter
- A310-300 Full Freighter
- B777-200 COMBI
- B777-200 Full Freighter
- B777-300 COMBI
- B777-300 Full Freighter
- B767-300 Full Freighter
- B767-400 COMBI
- B787-8/-9/-10 COMBI
- B737-800 COMBI (This Presentation)
- B737-800 Full Freighter (This Presentation)
- A319/A320/A321 COMBI
- A319/A320/A321 Full Freighter
- B757-200 Full Freighter
- B757-300 COMBI



#### **\*\*** Refrigerated Cargo Modules **\*\***

For the anticipated COVID-19 world wide vaccine distribution IFC is presently designing Refrigerated Cargo Modules that shall maintain between 2C –to-8C and can be powered by any typical warehouse local power, any aircraft power or any typical vehicle power.

These features preclude and eliminate any special requirements such as costly and large ramp equipment to off-load cargo, (local galley truck and fork-lift is sufficient), refrigerated warehouses and ground distribution vehicles making it possible to operate into any aircraft around the world and reach the most remote medical clinic.

## For Detailed Information Contact;



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