



International Civil Aviation Organization
South American Regional Office

Second Virtual Meeting of Civil Aviation General Directors of the South American Region on the Response to COVID-19

(Lima, Peru, 22 May 2020)

VM2/DGAC - WP/15

21/05/2020

ISOLATION CAPSULE FOR THE TRANSFER OF SUSPECTED COVID-19 PATIENTS

(Presented by Venezuela)

SUMMARY

This working paper requests an alternative biosafety model applied on board aircraft by CONVIASA, thus making an effective contribution to reducing the spread of SARS-CoV-2.

In view of the epidemiologic emergency caused by COVID-19 and in face of the immediate need of airlines to start safe operations in the context of this pandemic, creative and feasible ideas must be implemented, such as the isolation capsule for the transfer of passengers suspected of having this disease.

The proposed project reinforces the isolation protocol established for in-flight aircraft, while generating confidence among passengers for faster reactivation of commercial flights.

1. INTRODUCTION

1.1 Coronaviruses (CoV) are a large family of viruses that cause diseases that may present signs and symptoms similar to those of a common cold, to serious complications in advanced stages, expressed in a generalised hyper-inflammation process caused by the new SARS-CoV-2 that causes the COVID-19 disease. This disease has been considered a public health disease of international concern and declared a pandemic by the World Health Organization (WHO).

1.2 In response to COVID-19, most States have applied measures of social distancing between individuals, closure of schools and businesses, quarantine in specific geographical areas of high epidemiological risk, and restrictions to domestic and international flights. These measures will be adjusted to a greater or lesser degree based on the evolution of the disease, all will surely require more and better epidemiologic control of aviation processes involved in the transport of passengers, with minimum risk.

1.3 Airlines need to resume operations as soon as possible, mainly due to their critical financial situation, and also to help recover the global economy through strong connectivity, following the recommendations of WHO and other recognised organisations to mitigate the spread of the disease, without unnecessarily restricting air transport. To this end, we need solutions that will surely come from the promising hands of the medical sciences in a time frame that, according to experts, ranges between the medium and long term, through vaccines, reliable biological screening tests, and a specific medical treatment, all of which will be available at a time when the aviation industry will probably be facing an even more critical situation.

1.4 This pandemic is testing democratic institutions, social dynamics, and the economic structures of States. But it also poses a big challenge to commercial aviation, as an economic development pole of any nation, which will require a huge joint effort to overcome. Accordingly, it is necessary to urgently reactivate this industry, while ensuring it does not become a significant vector for spreading COVID-19.

1.5 This working paper represents the effort made by the civil aviation industry of Venezuela and CONVIASA to present a feasible alternative project to guarantee the transfer of passengers that may present a symptom or are suspected of COVID-19, following the biosafety protocol offered by the ozonated isolation capsule in the Airbus 340 commercial aircraft fleet.

2. DISCUSSION

2.1 It would be ideal to be able to travel in a 100% sterilised aircraft (free of contaminants), with no risk of infection. In practice, this is unlikely, especially since it is occupied by a large number of people confined in a closed space. In order to reduce the risk of infection when restarting flights in times of COVID-19, airlines and health organisations will require: minimum personal protection equipment (PPE), such as face masks of approved quality, temperature measurements before boarding, health screening (health control) prior to the flight, and personal distancing measures between passengers inside the aircraft, which would leave many seats blocked during the crisis. Even then, it is likely that a passenger may show some sign or symptom associated to a disease, which would force the cabin crew to activate the protocol defined for such case, namely isolation of the passenger within the aircraft.

2.2 The isolation procedure is a protection measure inside the aircraft, requiring a physical space selected to that end, very close to the disembarkation door, with a lavatory to be exclusively used for this contingency. The passenger suspected to be ill will receive biosafety instructions from the assigned cabin personnel and will be provided with complete PPE (isolator suit, face mask, gloves and cap) of mandatory use during isolation to protect the rest of the people on board the aircraft. And, if necessary, the first aid kit will be used in accordance with ICAO Annex 6, paragraph 6.2.

2.3 The selected confinement space in an area of the aircraft must be provided with an airtight sealing device called “isolation capsule for the transfer of passengers suspected of being infected with SARS-CoV-2” as a reliable way of protecting the rest of the people in the flight from becoming infected with the disease.

2.4 Once the emergency on board has been controlled, the captain shall notify air traffic control, in accordance with the provisions of ICAO Annex 9, of any suspected case of communicable disease, in order to activate the emergency protocol at the airport and to coordinate immediate medical care with the corresponding public health authorities.

2.5 The crew must be duly trained and have first aid procedures in place for handling passengers suspected of being infected with the SARS- CoV virus in case of an emergency evacuation, and have safe access to oxygen masks located in the USP when needed. The crew must be trained in the use and operation of the isolation chamber on board to ensure the integrity of all passengers.

2.6 The engineering of the isolation capsule is proprietary to the airline, using materials and equipment that meet the required aviation safety standards to ensure the granting of the certificate by the aeronautical authority approving its use. It has a disinfection device to be used once the aircraft is on the ground and all occupants have disembarked. It consists of a generator of ozone gas (O₃), which is a proven bactericide of industrial and home use, for disinfecting all physical structures in the capsule that are potentially contaminated with SARS-CoV-2 or any other germ.

3. **SUGGESTED ACTION**

3.1 The Virtual Meeting of Civil Aviation General Directors of the SAM Region is invited to:

- a) take note of the information contained in this paper;
- b) study the feasibility of the project, in accordance with the standard protocols for a possible public health emergency in flight; and
- c) support the industry through this and other measures to expedite the safe return of air operations in the South American Region.

- END -