

## Safe Deployment Door (Beacon Drop Chute)

### **Safe Aerial Deployment Door**

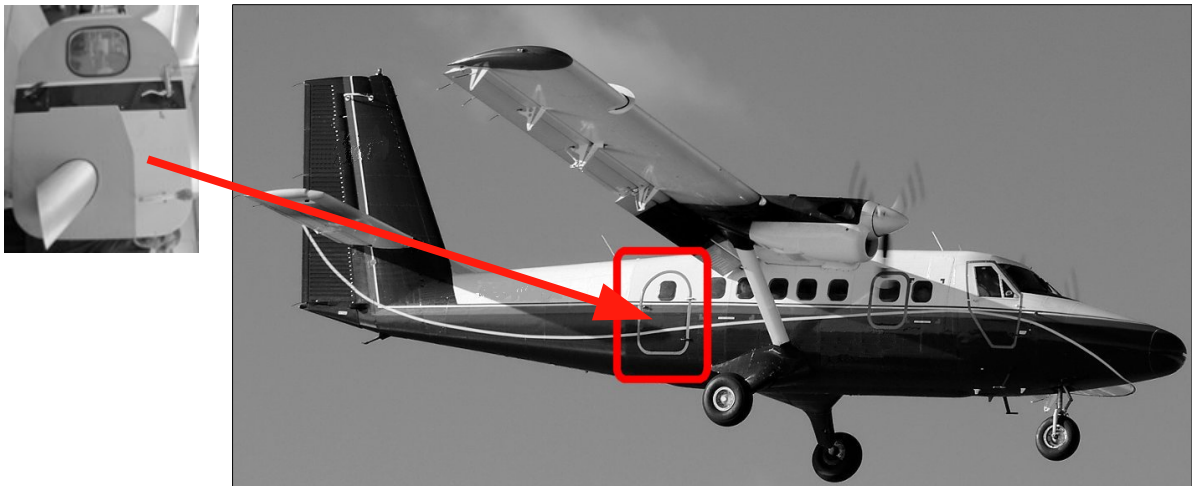
Canatec coordinated the design, fabrication, testing, and certification of a specially adapted safe deployment door. This door is interchangeable with the aft starboard passenger door of the Viking Air Limited DHC-6 (Twin Otter) series 200 and series 300 airplane.

The Type Certificate is held by Infinion Certification Engineering Inc., of Medicine Hat, Alberta, Canada. Canatec Environmental Limited, of Calgary, Alberta, Canada, owns the only known production unit.

The purpose of the Safe Deployment Door is to permit the air drop of cylindrical payloads without risk to on-board personnel. The door is never opened out at any time in flight.

Our firm commissioned the design for dropping position beacons onto remote Arctic sea-ice. The beacons measure 15-17 cm diameter and 1 m length. The air stream against the deployed payload opens a parachute to slow the speed of descent. A special Canatec mechanism releases the parachute on landing impact so that wind drag does not interfere with beacon drift readings.

Although originally conceived for deployment of long-life position beacons, the safe deployment door is suitable for dropping of any 17 cm diameter payload.

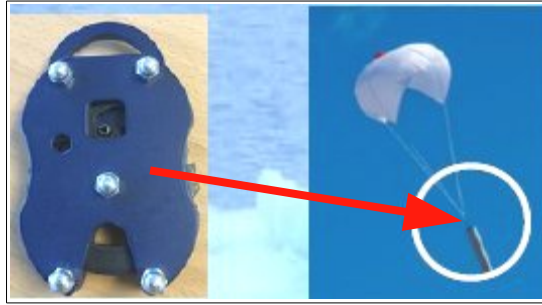


**Above, how the Safe Deployment Door works.**

## Type certificate of Canatec's Safe Deployment Door (Beacon Drop Chute)

	Transport Canada Transports Canada
<i>Department of Transport</i>	
<b>Supplemental Type Certificate</b>	
<b>This approval is issued to:</b>	<b>Number:</b> C-LSA13-058/D
Infinion Certification Engineering Inc.	<b>Issue No.:</b> 2
Box 20040 RPO Kensington	<b>Approval Date:</b> March 27, 2013
Medicine Hat, Alberta	<b>Issue Date:</b> March 27, 2014
Canada T1A 8M4	
<b>Responsible Office:</b>	Prairie and Northern
<b>Aircraft/Engine Type or Model:</b>	VIKING AIR LIMITED DHC-6 SERIES 200, DHC-6 SERIES 300
<b>Registration/Serial No.:</b>	C-FDGV/154, C-FBBV/311, C-FWLG/731, C-GIED/600, C-GJDE/471, C-GNFZ/719
<b>Canadian Type Certificate or Equivalent:</b>	A-82
<b>Description of Type Design Change:</b>	Installation of Beacon Drop Chute
<b>Installation/Operating Data, Required Equipment and Limitations:</b>	
Installation of the Beacon Drop Chute is to be done in accordance with Transport Canada Civil Aviation (TCCA) approved Installation Instruction EO-1485-01, Issue 1 dated December 30, 2012, or later TCCA approved Issue.	
Operate in accordance with TCCA approved Flight Manual Supplement FMS-1485-01, Issue 1 dated December 31, 2012, or later TCCA approved Issue.	
Limitation: Landplane Only - not evaluated for use with floats.	
Basis of Certification - 14 CFR 23 effective February 1, 1965 for the following: 23.1, 23.21, 23.29, 23.143, 23.251, 23.301, 23.303, 23.305, 23.307, 23.321, 23.337, 23.561, 23.601, 23.603, 23.605, 23.609, 23.613, 23.615, 23.619, 23.625, 23.783, 23.785, 23.807, 23.1301, 23.1413, 23.1501, 23.1505, 23.1541, 23.1563, 23.1581, 23.1583, and 23.1585 plus 23.867 at amdt 23-7.	
- End -	
	<b>Conditions:</b> This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated <b>will not</b> adversely affect the airworthiness of the modified product.
	
	T.C. Clark, DAR 326 For Minister of Transport
	

## Drop Chute Release



Non-explosive mechanical device that automatically releases drop-chute from payload upon hitting ground. For 10-20 kg payloads. Used where an attached drop-chute could be a hindrance to payload on ground.

Demonstration video at: [www.youtube.com/watch?v=qMWTewW8kGA](http://www.youtube.com/watch?v=qMWTewW8kGA)

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