

SECTION 2

Helicopters**CAT.IDE.H.100 Instruments and equipment — general**

(a) Instruments and equipment required by this Subpart shall be approved in accordance with Regulation (EC) No 1702/2003, except for the following items:

- (1) Spare fuses;
- (2) Independent portable lights;
- (3) An accurate time piece;
- (4) Chart holder;
- (5) First-aid kit;
- (6) Megaphones;
- (7) Survival and signalling equipment;
- (8) Sea anchors and equipment for mooring; and
- (9) Child restraint devices.

(b) Instruments and equipment not required by this Subpart that do not need to be approved in accordance with Regulation (EC) No 1702/2003 but are carried on a flight, shall comply with the following:

- (1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex 1 to Regulation (EC) No 216/2008 or CAT.IDE.H.330, CAT.IDE.H.335, CAT.IDE.H.340 and CAT.IDE.H.345; and
- (2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

(c) If equipment is to be used by one flight crew member at his/her station during flight, it must be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it must be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

- (a) the helicopter is operated in accordance with the operator's MEL; or
- (b) the operator is approved by the competent authority to operate the helicopter within the constraints of the MMEL.

CAT.IDE.H.115 Operating lights

(a) Helicopters operated under VFR by day shall be equipped with an anti-collision light system.

- (b) Helicopters operated at night or under IFR shall, in addition to (a), be equipped with:
- (1) lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;
 - (2) lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;
 - (3) an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations;
 - (4) navigation/position lights;
 - (5) two landing lights of which at least one is adjustable in flight so as to illuminate the ground in front of and below the helicopter and the ground on either side of the helicopter; and
 - (6) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

CAT.IDE.H.125 Operations under VFR by day — flight and navigational instruments and associated equipment

- (a) Helicopters operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:
- (1) A means of measuring and displaying:
 - (i) Magnetic heading;
 - (ii) Time in hours, minutes, and seconds;
 - (iii) Pressure altitude;
 - (iv) Indicated airspeed;
 - (v) Vertical speed;
 - (vi) Slip; and
 - (vii) Outside air temperature.
 - (2) A means of indicating when the supply of power to the required flight instruments is not adequate.
- (b) Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:
- (1) Pressure altitude;
 - (2) Indicated airspeed;
 - (3) Vertical speed; and
 - (4) Slip.
- (c) Helicopters with an MCTOM of more than 3 175 kg or any helicopter operating over water when out of sight of land or when the visibility is less than 1 500 m, shall be equipped with a means of measuring and displaying:
- (1) Attitude; and
 - (2) Heading.
- (d) A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for helicopters with an MCTOM of more than 3 175 kg or an MOPSC of more than nine.

CAT.IDE.H.130 Operations under IFR or at night — flight and navigational instruments and associated equipment

Helicopters operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

- (a) A means of measuring and displaying:
 - (1) Magnetic heading;
 - (2) Time in hours, minutes and seconds;
 - (3) Indicated airspeed;
 - (4) Vertical speed;
 - (5) Slip;
 - (6) Attitude;
 - (7) Stabilised heading; and
 - (8) Outside air temperature.
- (b) Two means of measuring and displaying pressure altitude. For single-pilot operations under VFR at night one pressure altimeter may be substituted by a radio altimeter.
- (c) A means of indicating when the supply of power to the required flight instruments is not adequate.
- (d) A means of preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to either condensation or icing.
- (e) A means of annunciating to the flight crew the failure of the means required in (d) for helicopters:
 - (1) issued with an individual CofA on or after 1 August 1999; or
 - (2) issued with an individual CofA before 1 August 1999 with an MCTOM of more than 3 175 kg, and with an MOPSC of more than nine.
- (f) A standby means of measuring and displaying attitude that:
 - (1) is powered continuously during normal operation and, in the event of a total failure of the normal electrical generating system, is powered from a source independent of the normal electrical generating system;
 - (2) operates independently of any other means of measuring and displaying attitude;
 - (3) is capable of being used from either pilot's station;
 - (4) is operative automatically after total failure of the normal electrical generating system;
 - (5) provides reliable operation for a minimum of 30 minutes or the time required to fly to a suitable alternate landing site when operating over hostile terrain or offshore, whichever is greater, after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;
 - (6) is appropriately illuminated during all phases of operation; and
 - (7) is associated with a means to alert the flight crew when operating under its dedicated power supply, including when operated by emergency power.
- (g) An alternate source of static pressure for the means of measuring altitude, airspeed and vertical speed.

- (h) Whenever two pilots are required for the operation, a separate means for displaying for the second pilot:
- (1) Pressure altitude;
 - (2) Indicated airspeed;
 - (3) Vertical speed;
 - (4) Slip;
 - (5) Attitude; and
 - (6) Stabilised heading.
- (i) For IFR operations, a chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.H.135 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.H.145 Radio altimeters

- (a) Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot, when operating:
- (1) out of sight of the land;
 - (2) in a visibility of less than 1 500 m;
 - (3) at night; or
 - (4) at a distance from land corresponding to more than three minutes at normal cruising speed.

CAT.IDE.H.160 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

CAT.IDE.H.165 Additional equipment for operations in icing conditions at night

- (a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.
- (b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.H.170 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.H.175 Crew member interphone system

Helicopters shall be equipped with a crew member interphone system when carrying a crew member other than a flight crew member.

CAT.IDE.H.180 Public address system

- (a) Helicopters with an MOPSC of more than nine shall be equipped with a public address system, with the exception of
- (b).

(b) Notwithstanding (a) helicopters with an MOPSC of more than nine and less than 20 are exempted from having a public address system, if:

- (1) the helicopter is designed without a bulkhead between pilot and passengers; and
- (2) the operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers' seats.

CAT.IDE.H.185 Cockpit voice recorder

(a) The following helicopter types shall be equipped with a cockpit voice recorder (CVR):

- (1) all helicopters with an MCTOM of more than 7 000 kg; and
- (2) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 1987.

(b) The CVR shall be capable of retaining the data recorded during at least:

- (1) the preceding two hours for helicopters referred to in (a)(1) and (a)(2), when first issued with an individual CofA on or after 1 January 2016;
- (2) the preceding one hour for helicopters referred to in (a)(1), when first issued with an individual CofA on or after 1 August 1999 and before 1 January 2016;
- (3) the preceding 30 minutes for helicopters referred to in (a)(1), when first issued with an individual CofA before 1 August 1999; or
- (4) the preceding 30 minutes for helicopters referred to in (a)(2), when first issued with an individual CofA before 1 January 2016.

(c) The CVR shall record with reference to a timescale:

- (1) voice communications transmitted from or received in the flight crew compartment by radio;
- (2) flight crew members' voice communications using the interphone system and the public address system, if installed;
- (3) the aural environment of the flight crew compartment, including without interruption:
 - (i) for helicopters first issued with an individual CofA on or after 1 August 1999, the audio signals received from each crew microphone;
 - (ii) for helicopters first issued with an individual CofA before 1 August 1999, the audio signals received from each crew microphone, where practicable;
- (4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(d) The CVR shall start to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

(e) In addition to (d), for helicopters referred to in (a)(2) issued with an individual CofA on or after 1 August 1999:

- (1) the CVR shall start automatically to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power; and
- (2) depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

- (f) The CVR shall have a device to assist in locating it in water.

CAT.IDE.H.190 Flight data recorder

- (a) The following helicopters shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available:
- (1) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 August 1999;
 - (2) helicopters with an MCTOM of more than 7 000 kg, or an MOPSC of more than nine, and first issued with an individual CofA on or after 1 January 1989 but before 1 August 1999.
- (b) The FDR shall record the parameters required to determine accurately the:
- (1) flight path, speed, attitude, engine power, operation and configuration and be capable of retaining the data recorded during at least the preceding 10 hours, for helicopters referred to in (a)(1) and first issued with an individual CofA on or after 1 January 2016;
 - (2) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding eight hours, for helicopters referred to in (a)(1) and first issued with an individual CofA before 1 January 2016;
 - (3) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding five hours, for helicopters referred to in (a)(2).
- (c) Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.
- (d) The FDR shall automatically start to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.
- (e) The FDR shall have a device to assist in locating it in water.

CAT.IDE.H.195 Data link recording

- (a) Helicopters first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:
- (1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:
 - (i) data link initiation;
 - (ii) controller-pilot communication;
 - (iii) addressed surveillance;
 - (iv) flight information;
 - (v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;
 - (vi) as far as is practicable, given the architecture of the system, aircraft operational control data;
 - (vii) as far as is practicable, given the architecture of the system, graphics;
 - (2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and
 - (3) information on the time and priority of data link communications messages, taking into account the system's architecture.

- (b) The recorder shall use a digital method of recording and storing data and information and a method of readily retrieving that data shall be available. The recording method shall allow the data to match the data recorded on the ground.
- (c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.H.185.
- (d) The recorder shall have a device to assist in locating it in water.
- (e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in CAT.IDE.H.185(d) and (e).

CAT.IDE.H.200 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by the carriage of one combination recorder.

CAT.IDE.H.205 Seats, seat safety belts, restraint systems and child restraint devices

(a) Helicopters shall be equipped with:

- (1) a seat or berth for each person on board who is aged 24 months or more;
- (2) a seat belt on each passenger seat and restraining belts for each berth;
- (3) for helicopters first issued with an individual CofA on or after 1 August 1999, a safety belt with upper torso restraint system for use on each passenger seat for each passenger aged 24 months or more;
- (4) a child restraint device (CRD) for each person on board younger than 24 months;
- (5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat;
- (6) a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

(b) A seat belt with upper torso restraint system shall:

- (1) have a single point release; and
- (2) on flight crew seats and on the seats for the minimum required cabin crew include two shoulder straps and a seat belt that may be used independently.

CAT.IDE.H.210 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.H.220 First-aid kits

(a) Helicopters shall be equipped with at least one first-aid kit.

(b) First-aid kits shall be:

- (1) readily accessible for use;
- (2) kept up to date.

CAT.IDE.H.240 Supplemental oxygen — non-pressurised helicopters

Non-pressurised helicopters operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with the following tables.

Table 1

Oxygen minimum requirements for complex non-pressurised helicopters

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty and crew members assisting flight crew in their duties	The entire flying time at pressure altitudes above 10 000 ft.
2. Required cabin crew members	The entire flying time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
3. Additional crew members and 100 % of passengers (*)	The entire flying time at pressure altitudes above 13 000 ft.
4. 10 % of passengers (*)	The entire flying time after 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

(*) Passenger numbers in Table 1 refer to passengers actually carried on board including persons younger than 24 months.

Table 2

Oxygen minimum requirements for other-than-complex non-pressurised helicopters

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty, crew members assisting flight crew in their duties, and required cabin crew members	The entire flying time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
2. Additional crew members and 100 % of passengers (*)	The entire flying time at pressure altitudes above 13 000 ft.
3. 10 % of passengers (*)	The entire flying time after 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

(*) Passenger numbers in Table 2 refer to passengers actually carried on board including persons younger than 24 months.

CAT.IDE.H.250 Hand fire extinguishers

- (a) Helicopters shall be equipped with at least one hand fire extinguisher in the flight crew compartment.
- (b) At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.
- (c) At least one hand fire extinguisher shall be available for use in each cargo compartment that is accessible to crew members in flight.
- (d) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.
- (e) The helicopter shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

Table 1

Number of hand fire extinguishers

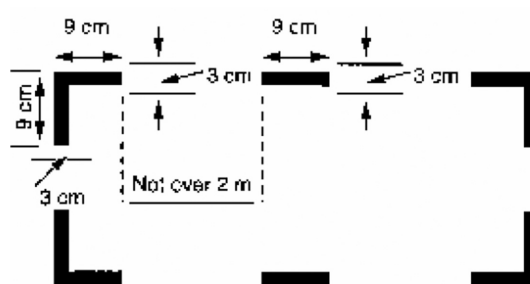
MOPSC	Number of extinguishers
7-30	1
31-60	2
61-200	3

CAT.IDE.H.260 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points

**CAT.IDE.H.270 Megaphones**

Helicopters with an MOPSC of more than 19 shall be equipped with one portable battery-powered megaphone readily accessible for use by crew members during an emergency evacuation.

CAT.IDE.H.275 Emergency lighting and marking

(a) Helicopters with an MOPSC of more than 19 shall be equipped with:

- (1) an emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter; and
- (2) emergency exit marking and locating signs visible in daylight or in the dark.

(b) Helicopters shall be equipped with emergency exit markings visible in daylight or in the dark when operated:

- (1) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;
- (2) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed.

CAT.IDE.H.280 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

(b) Helicopters operating in performance class 1 or 2 used in offshore operations on a flight over water in a hostile environment and at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed shall be equipped with an automatically deployable ELT (ELT(AD)).

- (c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.H.290 Life-jackets

- (a) Helicopters shall be equipped with a life-jacket for each person on board or equivalent floatation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when operated in:
- (1) performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;
 - (2) performance class 3 on a flight over water beyond autorotational distance from land;
 - (3) performance class 2 or 3 when taking off or landing at an aerodrome or operating site where the take-off or approach path is over water.
- (b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating:

- (a) in performance class 1 or 2 on a flight over water in support of offshore operations, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight, or when the estimated rescue time exceeds the estimated survival time;
- (b) in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight.

CAT.IDE.H.300 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

- (a) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;
- (b) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, shall be equipped with:
 - (1) in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate its ready use in an emergency;
 - (2) in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life-raft(s) having, the overload capacity sufficient to accommodate all persons on the helicopter;
 - (3) at least one survival ELT (ELT(S)) for each required life-raft; and
 - (4) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

CAT.IDE.H.305 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

- (a) signalling equipment to make distress signals;
- (b) at least one ELT(S); and
- (c) additional survival equipment for the route to be flown taking account of the number of persons on board.

CAT.IDE.H.310 Additional requirements for helicopters conducting offshore operations in a hostile sea area

Helicopters operated in offshore operations in a hostile sea area, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, shall comply with the following:

- (a) When the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight, or when the estimated rescue time exceeds the calculated survival time, or the flight is planned to be conducted at night, all persons on board shall wear a survival suit.
- (b) All life-rafts carried in accordance with CAT.IDE.H.300 shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation and trim characteristics were evaluated in order to comply with the ditching requirements for certification.
- (c) The helicopter shall be equipped with an emergency lighting system with an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter.
- (d) All emergency exits, including crew emergency exits, and the means for opening them shall be conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized and the cabin is submerged.
- (e) All non-jettisonable doors that are designated as ditching emergency exits shall have a means of securing them in the open position so that they do not interfere with occupants' egress in all sea conditions up to the maximum required to be evaluated for ditching and flotation.
- (f) All doors, windows or other openings in the passenger compartment assessed as suitable for the purpose of underwater escape shall be equipped so as to be operable in an emergency.
- (g) Life-jackets shall be worn at all times, unless the passenger or crew member is wearing an integrated survival suit that meets the combined requirement of the survival suit and life-jacket.

CAT.IDE.H.315 Helicopters certified for operating on water — miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

- (a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and
- (b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

CAT.IDE.H.320 All helicopters on flights over water — ditching

- (a) Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant airworthiness code when operated in performance class 1 or 2 on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed.
- (b) Helicopters shall be designed for landing on water or certified for ditching in accordance the relevant airworthiness code or fitted with emergency flotation equipment when operated in:
 - (1) performance class 1 or 2 on a flight over water in a non-hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed;
 - (2) performance class 2, when taking off or landing over water, except in the case of helicopter emergency medical services (HEMS) operations, where for the purpose of minimising exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water;
 - (3) performance class 3 on a flight over water beyond safe forced landing distance from land.

CAT.IDE.H.325 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

CAT.IDE.H.330 Radio communication equipment

- (a) Helicopters shall be equipped with the radio communication equipment required by the applicable airspace requirements.
- (b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.H.335 Audio selector panel

Helicopters operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.H.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Helicopters operated under VFR over routes that can be navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

- (a) communicate with appropriate ground stations;
- (b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and
- (c) receive meteorological information.

CAT.IDE.H.345 Communication and navigation equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks

- (a) Helicopters operated under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks shall be equipped with radio communication and navigation equipment in accordance with the applicable airspace requirements.
- (b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.
- (c) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.
- (d) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

CAT.IDE.H.350 Transponder

Helicopters shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.
