



Unmanned aircraft regulatory framework in the Czech Republic

CZECH AVIATION LAW – Act No. 49/1997 Coll. on civil aviation

Article 2 – Basic terms

(2) Aircraft shall be understood to mean equipment capable of deriving adequate force to support itself by reacting with the air in a way which does not depend upon the earth's surface.

For purposes of this act, a model aircraft whose maximum takeoff weight does not exceed 20 kg shall not be deemed to be an aircraft.

Article 52 – Operation of unmanned aircraft

Aircraft capable of flying on an unmanned basis may fly over the Czech Republic only with a Special Authorization to Fly issued by the Authority and in accordance with the conditions designated in the authorization. The Authority shall issue an authorization if no threat is posed to safe aviation in the airspace, structures or persons on the ground or the natural environment.

Article 56 – Commercial air transport

(1) Commercial air transport shall be understood to mean the transport of persons, animals, luggage, items and mails using aircraft for compensation.

(2) Commercial air transport may only be engaged in on the basis of a license issued by the Authority.

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Article 73 – Aviation work

Aviation work consists of activities for which an air operator utilizes an aircraft for employment activities for compensation. Aviation work is also understood to mean sightseeing flights, as well as the use of aircraft by an air operator for instructional purposes in flight schools and the activities of flight schools.

Article 74

(1) Aviation work may be carried out by a natural person with permanent residence or a legal entity headquartered in the Czech Republic on the basis of a permit. The Authority shall issue the permit on the basis of an application.

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Article 76 – Private aviation activities

(1) Private aviation activities shall be understood to mean flights undertaken by legal entities or natural persons for business or other purposes to which they have been authorized under special regulations.

(2) Private aviation activities may be carried out by natural persons with permanent residence or legal entities headquartered in the Czech Republic on the basis of a permit issued by the Authority. The Authority may issue a permit on the basis of an application, if the applicant fulfils the conditions designated in this act for aviation personnel and for the operation of aircraft needed for private aviation activities.

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CZECH AVIATION REGULATION L7 – Aircraft Nationality and Registration Marks

(implementation of ICAO Annex 2, issued by Ministry of Transport, including national specificities)

3. NATIONALITY, COMMON AND REGISTRATION MARKS TO BE USED

3.7 The registration mark is formed by:

- a) Three letters for powered aircraft;
- b) Four numbers for non-powered aircraft;
- c) The letter “X”, three numbers and one letter for unmanned aircraft.

CZECH AVIATION REGULATION L2 – Rules of the Air

(implementation of ICAO Annex 2, issued by Ministry of Transport, including national specificities (marked **CZ and in bold**) and additional national Attachments)

CHAPTER 3. GENERAL RULES

3.1 Protection of persons and property

3.1.1 Negligent or reckless operation of aircraft

An aircraft shall not be operated in a negligent or reckless manner so as to endanger life or property of others.

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3.1.9 Remotely piloted aircraft

A remotely piloted aircraft shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in Appendix 4.

CZ: An unmanned aircraft system which is excluded from the EASA competence by Annex II to Regulation (EC) No 216/2008 of the European Parliament and of the Council, as amended, and left in the national competence shall be operated in accordance with the conditions specified in Attachment X to this Regulation L2, unless otherwise specified in this Chapter for special unmanned aircraft system category.

3.1.10 Unmanned free balloons with payload

An unmanned free balloon shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in Appendix 5.

3.1.11 Prohibited areas and restricted areas

Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

CZ:

3.1.12 Unmanned free balloons without payload and unmanned captive balloons

An unmanned free balloon without payload and an unmanned captive balloon shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in Attachment R.



ATTACHMENT X. UNMANNED AIRCRAFT SYSTEMS

(Note: See Chapter 3, 3.1.9 of this Regulation)

1. Definitions

Terms used in this Attachment have the following meanings:

Autonomous aircraft. An unmanned aircraft that does not allow pilot intervention in the management of the flight.

Unmanned aircraft (UA). An aircraft which is intended to be operated with no pilot on-board.

Note: In the international context it is considered to be a master category of remotely-piloted aircraft, autonomous aircraft and model aircraft; for purposes of this Attachment, unmanned aircraft means all unmanned aircraft except of model aircraft with a maximum take-off mass lower than 20 kg.

Unmanned aircraft system (UAS). A system containing unmanned aircraft, control station and any other element necessary for the flight, as e.g. communication link and launch and recovery device. There may be more than one unmanned aircraft, control station or launch and recovery device within one unmanned aircraft system.

Model aircraft. An aircraft which is not able to carry a human being on board, which is used for competition, sport or recreational purposes, which is not equipped with any device that allows it to be flown automatically to a selected location and which in case of a free flight model aircraft is not controlled remotely during the flight otherwise than to terminate the flight or which in case of a remotely piloted model aircraft is during the flight time under direct radio-control of the pilot in his visual line of sight.

2. Scope

2.1 This Attachment sets binding national requirements for design, production, maintenance, modifications and operation of UAS that meet the criteria of Annex II of the European Parliament and Council Regulation (EC) No 216/2008 as amended and it is deemed to be a recommended practice for operation of model aircraft with maximum take-off mass lower than 20 kg.

2.2 By way of derogation from paragraph 2.1, provisions of section 7 (Airspace) apply also for model aircraft with maximum take-off mass lower than 20 kg.

Note 1: Regulations for operation of unmanned free balloons with payload are stated in Chapter 3 and Appendix 5. Regulations for operation of unmanned free balloons without payload and unmanned captive balloons are stated in Attachment R.

Note 2: Maximum take-off mass of UA and/or model aircraft means the mass including equipment, operational fluids, fuel and any load prior to take-off or if it has been issued by the Civil Aviation Authority CZ (CAA), the UA maximum take-off mass approved in the Special Authorization to Fly (SAF).

3. Safety

3.1 UA may be operated only in such a way that no threat is posed to the safety of air navigation, persons and property on the ground and to the environment.

3.2 The prohibition of threat posing to the safety of air navigation does not apply mutually between model aircraft, provided that prior agreement has been established between participating pilots and persons directly involved in the operation and provided that appropriate measures were taken to exclude safety threats to other air traffic and for protection of persons and property on the ground.

4. Visual control

Unless otherwise approved by CAA, the UA must be operated in the pilot's direct visual line of sight, i.e. in such a manner and to such a maximum distance that:

- a) the pilot during taxi and flight is able to maintain a continuous visual contact with the UA also without visual aids other than prescription glasses and contact lenses; and



- b) the pilot, and also an instructed person if employed, is able to monitor and evaluate the visibility, obstacles and surrounding air traffic.

5. Responsibility

- 5.1 The responsibility for the safe conduct of flight, including the pre-flight preparation and check, resides on the person that remotely pilots the UA (regardless of the flight control system automation level) or, in case of a model aircraft with maximum take-off mass lower than 20 kg that is not remotely piloted, on the person that launched it into the airspace (for the purposes of this Attachment further on referred to as “pilot”).
- 5.2 The pilot is responsible for ensuring that:
- a) the UAS is used only for the purpose to which it has been designed and produced or approved by the CAA; and
 - b) the UAS technical parameters and mode of operation is compliant with the requirements of this Attachment, unless otherwise specified by the CAA.
- 5.3 The UAS owner, operator or pilot shall enable an inspection of the UAS operation and airworthiness in the extent as required by the CAA.
- 5.4 The pilot shall record the flight information in the UAS logbook or equivalent document. The information shall contain date of flight, name of the pilot, aircraft registration mark, location of take-off and landing, flight time and total flight time, type of operation and any potential safety-related occurrence.
- 5.5 The UAS owner is responsible for the UAS continuing airworthiness.
- 5.6 The control of such an UA, for which the pilot must be registered at the CAA, shall not be transferred to any person who is not registered at the CAA:
- a) for the given type and model series or designation of the UA – if it is used for aerial work and private aviation activities;
 - b) for the given category (balloon, airship, helicopter, sailplane, propeller airplane, jet airplane) – if it is used for recreational-sport purposes.

6. Flight termination

- 6.1 An UA shall and a model aircraft of a mass between 0.91 kg and 20 kg should enable the pilot to intervene in the management of the flight or to terminate the flight if the conditions have the potential to cause safety corruption as referred in 3.
- 6.2 The pilot of a model aircraft with maximum take-off mass lower than 0.91 kg which is not remotely piloted, should perform a pre-flight check to ensure safe flight, including the local conditions evaluation and setting the appropriate flight time and characteristics of the flight.
- 6.3 An UA with maximum take-off mass higher than 0.91 kg must be equipped with a built-in safety system, which terminates the flight after a failure.
- 6.4 The use of automatic flight control systems does not relieve the pilot's responsibility for the safety of the whole flight.

7. Airspace

- 7.1 The flight of an UA and/or a model aircraft may be performed in following airspace only:
- a) in class G airspace (see Figure 1);
 - b) in the aerodrome traffic zone (ATZ) of a non-controlled aerodrome in compliance with the conditions set by the aerodrome operator and after coordination with the aerodrome flight information service (AFIS) or the aerodrome operator if the AFIS is not provided. Above the class G airspace, the flights in ATZ may be conducted only if the AFIS is provided. Flights of an UA and/or a model aircraft with maximum take-off mass lower than 0.91 kg may be performed in the ATZ even without coordination if they are conducted below 100 m AGL and below the aerodrome obstacle limitation surfaces (see Figure 1);



- c) in a control zone (CTR and MCTR) below 100 m AGL, except of a permission of the appropriate air traffic control unit and in the minimum horizontal distance of 5 500 m from the aerodrome reference point (ARP) of a controlled airport, except of aerial work and public airshows coordinated with the appropriate air traffic control unit and aerodrome operator. Flights of an UA and/or a model aircraft with maximum take-off mass lower than 0.91 kg may be performed in a control zone without coordination even in a smaller distance from the aerodrome if they are conducted below 100 m AGL and below the aerodrome obstacle limitation surfaces (see Figure 2);

unless the CAA approves otherwise.

- 7.2 During the operation of an UA and/or a model aircraft in the CTR and MCTR within a horizontal distance of more than 5 500 m from the ARP and at a height below 100 m AGL (and during the operation of an UA and/or a model aircraft with maximum take-off mass lower than 0.91 kg within a horizontal distance of less than 5 500 m from the ARP, at a height below 100 m AGL and below the aerodrome obstacle limitation surfaces), the provisions of the Regulation L 11 – Air Traffic Services requiring to obtain ATC clearance and continuous two-way communication with ATC and the provisions of the Czech Republic aeronautical information publication (AIP) requiring mandatory SSR transponder equipment, do not apply. During the operation of an UA and/or a model aircraft in the CTR and MCTR within a horizontal distance of less than 5 500 m from the ARP, (excluding operation of an UA and/or a model aircraft with maximum take-off mass lower than 0.91 kg below the aerodrome obstacle limitation surfaces), or at a height above 100 m AGL, the decision on the applicability of the abovementioned provisions is left at own discretion of the appropriate ATC unit.
- 7.3 The minimum flight heights requirements according to Chapter 4, 4.6 and Attachment O, 2.2.1 of this Regulation are not applied for operation of an UA and/or a model aircraft.
- 7.4 Flights of an UA and/or a model aircraft shall not be conducted in prohibited, dangerous, and in restricted, reserved and segregated areas activated by another user, except when the CAA permits.
- 7.5 The applicant for the use of airspace shall proceed in accordance with the procedures specified in AIP, ENR 1.1.9.
- 7.6 An autonomous unmanned aircraft shall not be operated in the common (non-segregated) airspace.

Note: For a pre-flight check, a practical map tool – AisView – can be used, available on the website of Aeronautical Information Service of the Air Navigation Services of the Czech Republic: <http://lis.rlp.cz>.

8. Buffer zones

Unless the CAA approves otherwise, pursuant to the prior consent of the appropriate administrative authority or delegated person, the UA flight shall not be conducted within the buffer zones defined by relevant legislation:

- a) along the surface traffic structures;
- b) along the routes of surface engineering infrastructures;
- c) along the routes of surface telecommunication networks;
- d) along the borders of specially protected areas;
- e) in the vicinity of water resources;
- f) in the vicinity of the objects important for national defense.

Above these buffer zones the UA flight may be conducted only in a manner ensuring that the buffer zone will not be intruded even under emergency conditions.

9. Meteorological minima

The UA flight may be conducted in class G airspace only clear of clouds and in other airspace class only in a minimum distance from clouds 1500 m horizontally and 300 m vertically. The provision 2.1.4 of Attachment O of this Regulation is not applied for UA operations.



10. Dangerous payload

An UA shall not be used for the transport of dangerous substances or devices that could cause a public safety threat. This provision does not apply to operational fluids in quantities adequate to the purpose of the flight.

11. Airdrops

An UA shall not be used for dropping objects during the flight except for public airshows and competitions, including the training for it, if appropriate measures against threats as referred in section 3 are applied.

12. Pilot movement

Unless the CAA approves otherwise, the pilot shall not move using any technical equipment during the UA flight time.

13. Airshows

An airshow of UA is subject to the CAA permission.

14. Other relevant legislation

The UA operation shall comply with all applicable law and regulations, especially:

Act No. 310/2006 Coll. on Security (Dual-use) Material Treatment;

Act No. 258/2000 Coll. on Protection of Public Health;

Act No. 356/2003 Coll. on Chemical Substances and Agents;

Act No. 185/2001 Coll. on Waste Treatment;

Act No. 133/1985 Coll. on Fire Protection;

Act No. 245/2001 Coll. on Water Resources;

Act No. 17/1992 Coll. on Environment Protection;

as amended, and with the Opinion of the Office for Personal Data Protection No 1/2013 on Unmanned and model aircraft use for data collection.

15. Propulsion

Pulse jet engine or rocket engine shall not be used for UA flight except of rocket propulsion to perform the take-off only.

16. Other conditions for UA operation

During the UA operation following conditions must be complied with (for enhanced transparency see Table Nr. 1 below, referred to as "table"):

- a) the UAS is subject to the CAA registration as in line 1 of the table;
- b) the pilot is subject to the CAA registration as in line 2 of the table;
- c) the pilot registration is conditioned by a proof of basic ability to safely control the UA and by a proof of theoretical knowledge in the extent required by the CAA as in line 3 of the table;
- d) the UAS operation is conditioned by Special Authorization to Fly (SAF) issued by the CAA as in line 4 of the table. The SAF substitutes the UAS certificate of airworthiness and presents a proof of the UAS registration. The SAF contains the list of registered pilots and substitutes a pilot license;
- e) the UAS aerial work or private aviation activities operation is subject to the specific CAA permission for such an operation as in line 5 of the table;



- f) an UA shall be marked with a fireproof identification label containing the name and phone number of the operator and with the registration mark if assigned, as in line 6 of the table;
- g) as in line 7 of the table and unless the CAA approves otherwise, the UA shall not:
 - i) approach to any person other than the pilot during take-off and landing at a horizontal distance of less than 50 m;
 - ii) approach to any person, vehicle or construction during flight at a horizontal distance of less than 100 m;
 - iii) approach to any congested area during flight at a horizontal distance of less than 150 m.

The limits listed under point i) and ii) do not apply to persons directly involved in the UA operation, provided prior agreement has been established between participating pilots and persons. In these cases appropriate measures against safety threats as referred in section 3 shall be applied.

The “safe” distance referred to in line 7 of the table means such a horizontal distance, which ensures that threats as referred in section 3, even in case of emergency, are eliminated.
- h) For the UAS operation third party liability insurance for caused damage shall be taken out for the minimum sum (limit of settlement) as in line 8 of the table;
- i) The UAS design, production and initial flight tests shall be supervised by the CAA or an authorized person according to established procedures as in line 9 of the table;
- j) An UA shall be equipped with a built-in flight termination fail-safe system which ensures flight termination after a failure of command and control link as in line 10 of the table;
- k) An applicant for the UA Special Authorization to Fly for other than recreation and sport purposes shall support the application with the UAS operating manual as in line 11 of the table;
- l) Occurrences related to UA operation are subject to reporting as in line 12 of the table.

17. Occurrences reporting

- 17.1 The obligation to report occurrences related to a UA shall apply to all UA with a design and/or operational approval (see Table 1).

Note: For the purposes of the provision 17.1, aircraft accidents, incidents or serious incidents are considered to be occurrences (for definitions of these terms, see Regulation L13).

- 17.2 A manner of occurrence reporting is established in 4.12 of Regulation L13.



Figure 1 and 2 legend:



Model aircraft with maximum take-off mass less than 20 kg



Unmanned aircraft (i.e. including model aircraft with maximum take-off mass more than 20 kg)

| | | | |
|--------------|---|------------|---------------------------|
| CTR | Aerodrome control zone | LKR | Restricted area |
| ATZ | Aerodrome traffic zone of uncontrolled aerodromes | LKP | Prohibited area |
| OP | Aerodrome obstacle limitation surfaces | LKD | Danger area |
| G / E | Airspace classification designation | TSA | Temporary segregated area |
| ARP | Aerodrome reference point | TRA | Temporary reserved area |
| AMSL | Altitude | AGL | Above ground level |
| | | LVV | Airshow |

- 1 Flights without coordination
- 2 Compliance with the conditions set by the aerodrome operator + coordination with the aerodrome flight information service (AFIS)
- 3 Compliance with the conditions set by the aerodrome operator + coordination with AFIS (if active)
- 4 Civil Aviation Authority (CAA) approval/permission
- 5 Flight clearance of the appropriate air traffic control (ATC) unit.
In addition, a continuous two-way communication and a SSR transponder may be required by ATC
- 6 CAA permission (or, for aerial work, coordination with ATC + coordination with the aerodrome operator).
In addition, a continuous two-way communication and a SSR transponder may be required by ATC
- 7 CAA permission (or, for aerial work, coordination with ATC + coordination with the aerodrome operator) + ATC flight clearance.
In addition, a continuous two-way communication and a SSR transponder may be required by ATC



CIVIL AVIATION AUTHORITY CZECH REPUBLIC

CZECH REPUBLIC UAS REGULATION – version 30.05.2013 – FOR INFORMATION PURPOSES ONLY

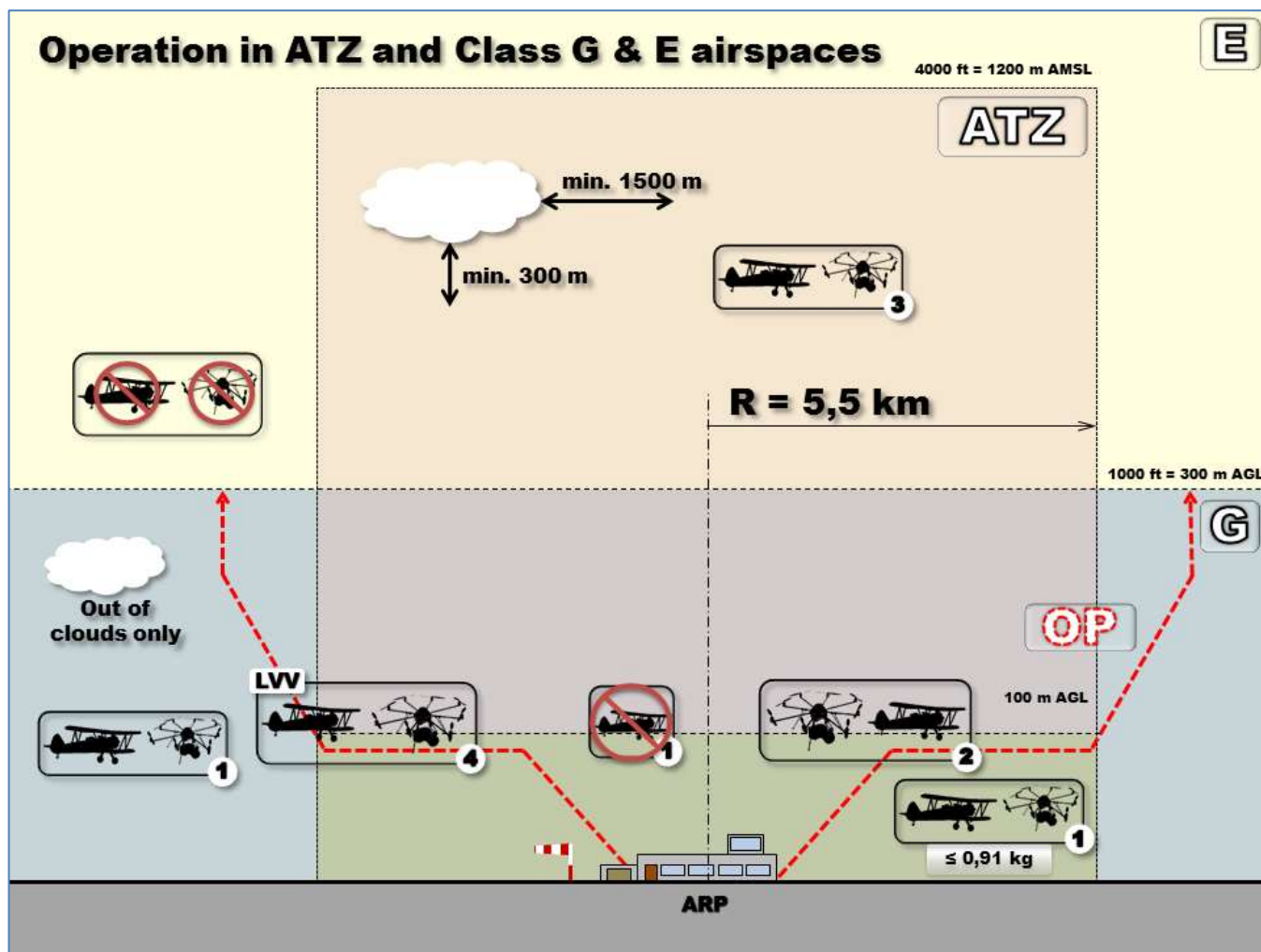


Figure 1

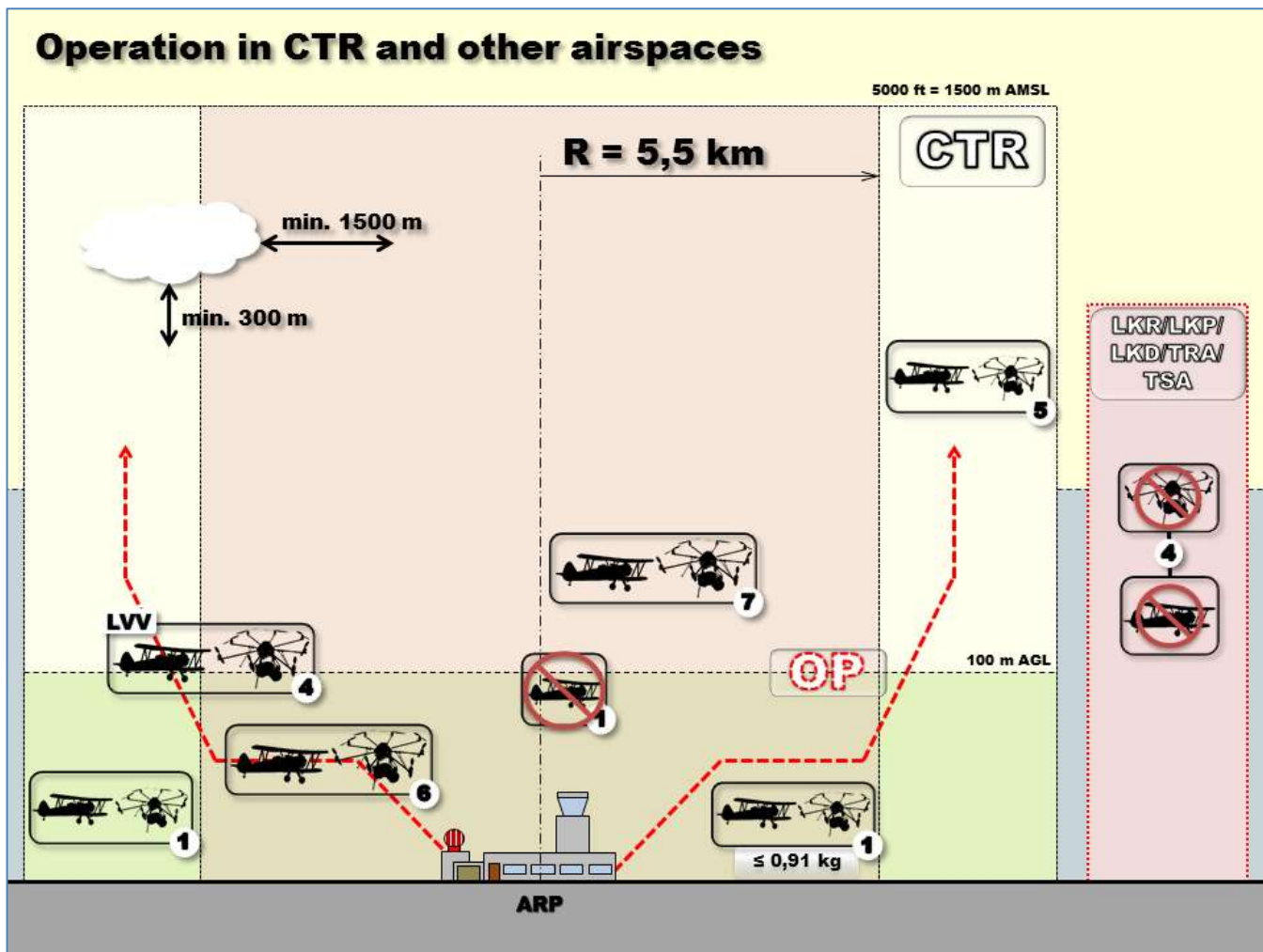


Figure 2



CIVIL AVIATION AUTHORITY CZECH REPUBLIC

CZECH REPUBLIC UAS REGULATION – version 30.05.2013 – FOR INFORMATION PURPOSES ONLY

Table 1 (Note: See section 16 of this Attachment)

| line | maximum take-off mass | ≤ 0.91 kg | | > 0.91 kg and < 7 kg | | 7 – 20 kg | | > 20 kg | | beyond line of sight (BLOS) operations |
|------|---|----------------------------|--|----------------------------|--|------------------------------|--|--|--|--|
| | | recreational / competition | commercial experimental research | recreational / competition | commercial experimental research | recreational / competition | commercial experimental research | recreational / competition | commercial experimental research | |
| 1 | aircraft registration | no | yes | no | yes | no | yes | yes | yes | yes |
| 2 | pilot registration | no | yes | no | yes | no | yes | yes | yes | yes |
| 3 | pilot competence test | no | yes | no | yes | no | yes | yes | yes | yes |
| 4 | special authorization to fly | no | yes | no | yes | no | yes | yes | yes | yes |
| 5 | aerial work or private aviation activities permission | N/A | yes | N/A | yes | N/A | yes | N/A | yes | N/A |
| 6 | identification label only/ ID label + registration mark | no / no | yes / yes | yes / no | yes / yes | yes / no | yes / yes | yes / no | yes / yes | yes / yes |
| 7 | min. distance (m) T/O-LDG / persons / congested area | safe | safe | safe | safe | safe, but minimum 50/100/150 | safe, but minimum 50/100/150 | safe, but minimum 50/100/150 | safe, but minimum 50/100/150 | safe, but minimum 50/100/150 |
| 8 | liability insurance: regular operation / airshow (millions CZK) | no / 0,25 | acc. to Regulation (EC) No 785/2004 ¹ | no / 1 | acc. to Regulation (EC) No 785/2004 ¹ | no / 3 | acc. to Regulation (EC) No 785/2004 ¹ | acc. to Regulation (EC) No 785/2004 ¹ | acc. to Regulation (EC) No 785/2004 ¹ | acc. to Regulation (EC) No 785/2004 ¹ |
| 9 | supervision | no | no | no | no | no | no | yes | yes | no |
| 10 | failsafe system | no | yes | yes | yes | yes | yes | yes | yes | yes |
| 11 | UAS operating manual | no | yes | no | yes | no | yes | no | yes | no |
| 12 | occurrences reporting | no | yes | no | yes | no | yes | yes | yes | yes |

¹ Regulation (EC) No 785/2004 refers to REGULATION (EC) No 785/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on insurance requirements for air carriers and aircraft operators