

# CZ and EU experience with 600kg OPT-OUT

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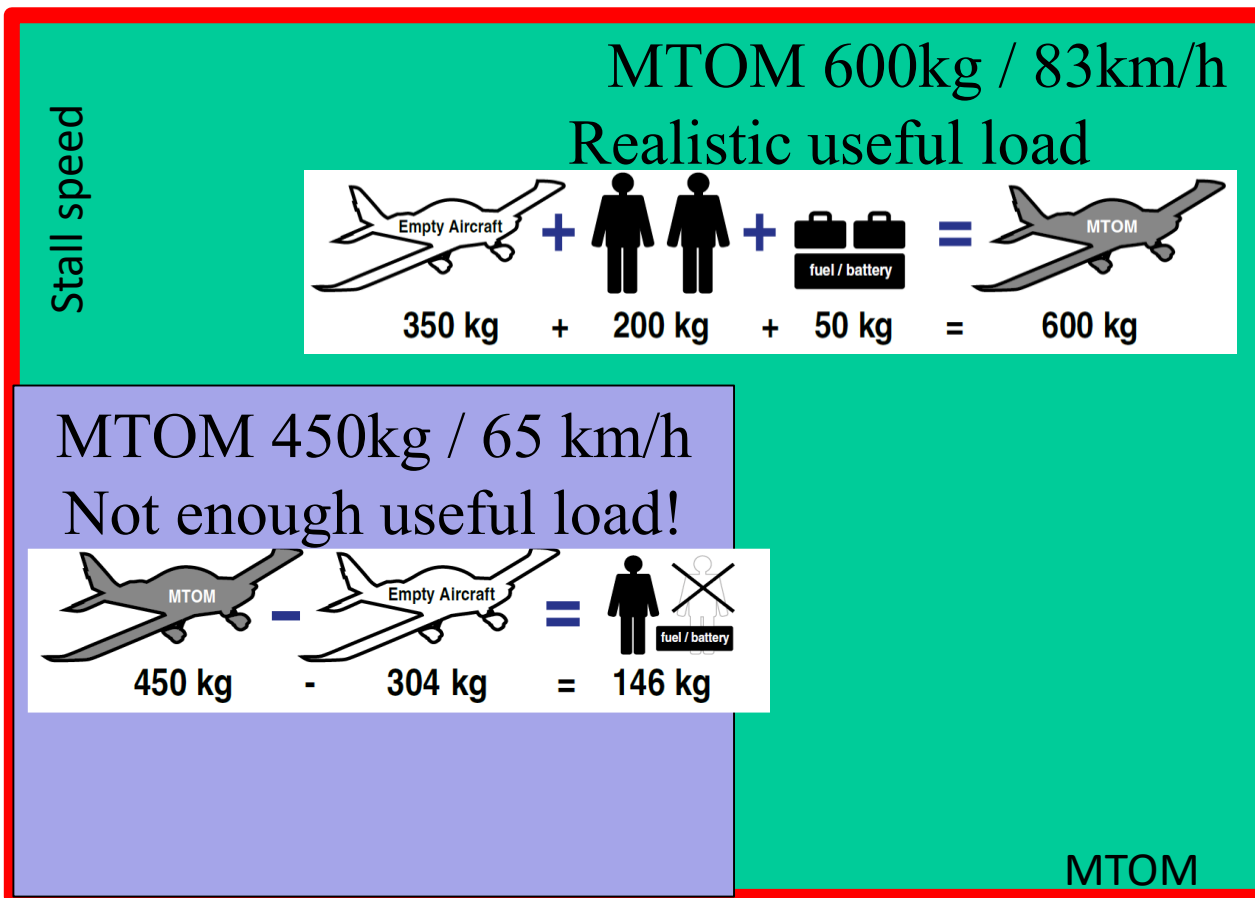
AERO 2022 Friedrichshafen  
29th April 2022

# Light Aircraft Association of the Czech Republic

- Light Aircraft Association of the Czech Republic is a competent authority for Certification, Licensing and Operation of ultralights (SFE) in the Czech Republic.
- This covers paragliding, powered paragliding, hang gliding, gyroplanes, helicopters, weight shift, UL gliders, 600kg aerodynamically controlled ultralight and ultralight balloons.
- In this respect it is unique in Europe.
- It has 7 194 members and registers 7 120 aircraft and 14 058 pilot licenses.

# 1. Historic problem of European Ultralights

- Not sufficient useful load.
- LAA ČR was together with German DULV and other EU aviation organisations one of leading forces for many years asking for change of Annex II limits to achieve realistic useful load.



# New EU Basic Regulation 2018/1139 of the EU Parliament and of the Council

This Regulation substitutes previous Basic Regulation 216/2008

Issued 2018-07-04, valid 2018-08-22

Annex I (II) practically stays without major changes

## **BUT:**

New Paragraph 8 at Article 2, gives Member States the option of exempting from the scope of the Basic Regulation the design, manufacture, maintenance and operation of:

**Aeroplanes: MTOM 600 kg (650kg sea), 2 seats, 45 knots (83km/h) stall speed at landing configuration**

**Rotorcraft: MTOM 600 kg (650kg sea), 2 seats**

**Gliders: MTOM 600kg, 2 seats**

Member States can simply notify the European Commission about the OPT-OUT.

Airplanes certificated under the Basic Regulation are not affected.

Manufacturers can choose whether to follow national or EU rules.

# New BR 2018/1139 - Paragraph 8 at Article 2

8. A Member State may decide to exempt from this Regulation the design, production, maintenance and operation activities in respect of one or more of the following categories of aircraft:

- (a) aeroplanes, other than unmanned aeroplanes, which have no more than two seats, measurable stall speed or minimum steady flight speed in landing configuration not exceeding 45 knots calibrated air speed and a maximum take-off mass (MTOM), as recorded by the Member State, of no more than 600 kg for aeroplanes not intended to be operated on water or 650 kg for aeroplanes intended to be operated on water;**
- (b) helicopters, other than unmanned helicopters, which have no more than two seats and a MTOM, as recorded by the Member State, of no more than 600 kg for helicopters not intended to be operated on water or 650 kg for helicopters intended to be operated on water;
- (c) sailplanes, other than unmanned sailplanes, and powered sailplanes, other than unmanned powered sailplanes, which have no more than two seats and a MTOM, as recorded by the Member State, of no more than 600 kg.

However, as regards the categories of aircraft referred to in the first subparagraph Member States may not take such a decision concerning aircraft in respect of which a certificate has been issued, or has been deemed to have been issued, in accordance with Regulation (EC) No 216/2008 or with this Regulation, or in respect of which a declaration has been made in accordance with this Regulation.

# New Regulation in CZ as result of BR 2018/1139

- This new Basic Regulation is giving the Member states the opportunity to „OPT OUT“ certain aircraft up to MTOM 600kg from the EASA regulations and regulate them on Member State level.
- The Czech Republic already done this.
- The related aviation regulation has been changed by the Ministry of Transport and Civil Aviation Department:
  - The Decree 108/1997 was modified to include new SFE characteristics
    - See:
    - sb0027-2019.pdf – this is the Decree 108/1997 - which in paragraph 24 defines the new characteristics of SFE
    - Decree-108-1997-ENG.pdf – this is „Google“ translation for quick information – relevant part of the document is paragraph 24 on page 5 and I made the text red for easy identification.
- The new LAA CR delegation of the performance of state administration in Sport Flying Equipment was issued on 2019-03-26 .
  - See:
  - 2019-Pověření-LAA.pdf - this is the scan of the original document which delegates the state power for Sport Flying Equipment (SFE) to the LAA CR
  - LAA-State-administration-2019.pdf – this is the „Google“ translation for quick information
- What is important that this documents defines what LAA CR is responsible for.
  - 2.b) Authorization to make Airworthiness review (certification)
  - 12. clearly stating that LAA CR is responsible for the duties as defined in our BTA.

# New Regulation in CZ - Decree 108/1997 was modified

12. Section 24, including the heading, reads as follows:

## § 24

### Characteristics of individual types of Sport Flying Equipment

(Re Section 81 (8) of the Act)

(1) The ultralight glider is a maximum of two seat aerodynamic, non-motorized aircraft whose take-off mass does not exceed the 600 kg.

(2) The powered ultralight glider is maximum two-seat ultra-light aircraft equipped with a propulsion unit whose maximum take-off mass does not exceeds 600 kg.

**(3) The ultralight aircraft is a maximum of two seat aerodynamic controlled aircraft whose stall speed does not exceed 83 km/h and the maximum take - off mass does not exceed 600 kg or 650 kg for ultralight airplanes that are intended for use on water.**

(4) The powered hang glider (trike) is maximum two-seater aircraft controlled by a change of center of gravity position with the possibility of additional aerodynamic control around one axis, whose stalling speed does not exceed exceeds 65 km/h and the maximum take-off mass does not exceeds 300 kg for a one-seat trike and 450 kg for a two-seat trike.

(5) The ultralight helicopter is a maximum of two seat aircraft with powered rotating lift surfaces with a maximum take-off mass of 600 kg or 650 kg in the case of ultralight helicopters if they are intended for use on water.

(6) The ultralight gyroplane is a maximum of two seat aircraft with rotating lift surfaces brought into movement by autorotation resulting from forward motion with a maximum take-off mass of 600 kg.

(7) The powered paraglider is maximum two-seater aircraft

(a) with an auxiliary engine on the pilot's back;

the maximum take-off mass does not exceed 270 kg and which allows take-off and landing from the feet of the pilot, or

(b) with a engine located on a chassis whose maximum take-off mass does not exceed 300 kg for a single-seat paraglider and 450 kg in a two-seat paraglider.

(8) The hang glider is a maximum of two seat non-powered aircraft whose take-off takes place by pilot running, by air-tow or winch and is controlled by changing the center of gravity position with the option of additional aerodynamic control around one axis, whose

Maximum empty weight without clamping device does not exceed 40 kg.

(9) The paraglider is a maximum of two seat non-motorized aircraft, whose lifting surface it is not determined by a rigid structure.

(10) A sports parachute is a device used for descending flight of a person from an airplane to the Earth's surface.


(11) The ultralight balloon is a maximum of two seat lighter than air non-powered aircraft with maximum a design volume not exceeding 1 200 m<sup>3</sup> in the case of hot air and 400 m<sup>3</sup> in the case of carrier gas.


(12) The ultralight airship is a maximum of two seat lighter than air powered aircraft with maximum a design volume not exceeding 1 200 m<sup>3</sup> in the case of hot air and 400 m<sup>3</sup> in the case of carrier gas.

(13) In the case of airframe mounted rescue parachute installation attached to a single-seat powered hang glider or single seat powered paraglider, the maximum values of take-off mass referred to in paragraphs 4 and 7 are increased by 15 kg. In the case of airframe mounted rescue parachute installation attached to a two seat powered hang glider or two seat powered paraglider, the maximum values of take-off mass referred to in paragraphs 4 and 7 are increased by 25 kg .

# New Regulation in CZ – new LAA CR delegation

- The new LAA CR delegation of the performance of state administration in Sport Flying Equipment

 Ministerstvo dopravy – Odbor civilního letectví  
nářeží Ludvíka Svobody 1222/12  
PO BOX 9, 110 15 Praha 1  
Č. j.: 56/2019-220-LPR/3

 Rozhodnutí nabylo právní moci  
dne 20. března 2019  
MgA. Mareš Mareš

**ROZHODNUTÍ**

Ministerstvo dopravy – odbor civilního letectví, jako věcně a místně příslušný správní úřad dle ustanovení § 88 odst. 1 písm. h) zákona č. 49/1997 Sb., o civilním letectví a o změně a doplnění zákona č. 455/1991 Sb., o živnostenském podnikání (živnostenský zákon), ve znění pozdějších předpisů, ve znění pozdějších předpisů (dále jen „ZCL“), a ustanovení § 11 odst. 1 písm. e) zákona č. 500/2004 Sb., správní řád, ve znění pozdějších předpisů (dále jen „SprR“),

na základě žádosti zapsaného spolku **Letecká amatérská asociace České republiky, se sídlem Praha-Dolní Měcholupy, Ke Kابلu 289/7, PSČ 102 00 Praha, IČ: 48 13 74 81, zapsaného ve spolkovém rejstříku vedeném Městským soudem v Praze, oddíl L, vložka 4483,** doručené Ministerstvu dopravy dne 20. března 2019, ve věci rozšíření pověření k přenesení výkonu státní správy ve věcech sportovních létajících zařízení dle ustanovení § 82 odst. 1 ZCL, **rozhodlo takto:**

Letecká amatérská asociace České republiky, se sídlem Praha-Dolní Měcholupy, Ke Kابلu 289/7, PSČ 102 00 Praha, IČ: 48 13 74 81, se

**pověřuje výkonem státní správy ve věcech sportovních létajících zařízení.**

1. Letecká amatérská asociace České republiky (dále jen „pověřená osoba“) vykonává činnost uvedenou v ustanovení § 83 odst. 1 ZCL pro následující druhy sportovních létajících zařízení:

- padákový kluzák,
- závěsný kluzák včetně závěsného kluzáku s pomocnou pohonnou jednotkou,
- ultralehký letoun,
- ultralehký kluzák,
- motorový ultralehký kluzák,
- motorový závěsný kluzák,
- motorový padákový kluzák,
- ultralehký vrtulník,
- ultralehký vírník a
- ultralehký balon

tak, jak je charakterizuje ustanovení § 24 vyhlášky Ministerstva dopravy č. 108/1997 Sb., kterou se provádí zákon č. 49/1997 Sb., o civilním letectví a o změně a doplnění zákona č. 455/1991 Sb., o živnostenském podnikání (živnostenský zákon), ve znění pozdějších předpisů, ve znění pozdějších předpisů.

## Odůvodnění

I.  
Dne 20. března 2019 obdrželo Ministerstvo dopravy – odbor civilního letectví v souladu s ustanovení § 82 odst. 1 ZCL žádost Letecké amatérské asociace České republiky ve věci rozšíření pověření k přenesení výkonu státní správy ve věcech sportovních létajících zařízení.

11. září 2018 nabylo účinnosti nařízení Evropského parlamentu a Rady (EU) ze dne 4. července 2018 o společných pravidlech v oblasti civilního letectví a o zřízení Agentury Evropské unie pro bezpečnost letectví, kterým se mění nařízení (ES) č. 2111/2005 (ES) č. 1008/2008, (EU) č. 996/2010, (EU) č. 376/2014 a směrnice Evropského parlamentu a Rady (ES) č. 552/2004 a (ES) č. 216/2008 a nařízení Rady (EHS) č. 3922/1991, které zavedlo nové kategorie SLZ, jež by chtěla pověřená osoba také spravovat. Vzhledem k této skutečnosti se Ministerstvo dopravy rozhodlo vydat žadateli zcela nové pověření k výkonu státní správy ve věcech sportovních létajících zařízení.

Vzhledem k tomu muselo ve výroku rozhodnutí deklaratorně konstatovat, že nabytím právní moci tohoto rozhodnutí pozbývá platnosti původní rozhodnutí o vydání pověření včetně rozhodnutí o jeho rozšíření.

Žadatel vykonává státní správu ve věcech sportovních létajících zařízení dlouhodobě a v rámci původního řízení o vydání pověření k jejímu výkonu řádně prokázal, že splňuje veškeré náležitosti požadované ZCL, tedy má pro ověřování letové způsobilosti v pověření uvedených druhů sportovních létajících zařízení a způsobilosti jejich uživatelů, včetně evidence a vydávání příslušných dokladů, odpovídající technické vybavení a způsobilý personál.

V souladu s ustanovením § 68 odst. 4 SprR podrobnější odůvodnění není třeba, protože se žadatelé vyhovuje v plném rozsahu. Vzhledem k výše uvedenému bylo rozhodnuto tak, jak je uvedeno ve výroku tohoto rozhodnutí.

## Poučení

Proti tomuto rozhodnutí lze dle ustanovení § 152 odst. 1 zákona č. 500/2004 Sb., správní řád, ve znění pozdějších předpisů, podat do 15 dnů ode dne jeho oznámení rozklad k ministru dopravy cestou Odboru civilního letectví tohoto ministerstva.

Lhůta pro podání rozkladu se počítá ode dne následujícího po doručení písemného vyhotovení rozhodnutí, nejpozději však po uplynutí desátého dne ode dne, kdy bylo nedoručeno a uloženo rozhodnutí připraveno k vyzvednutí.

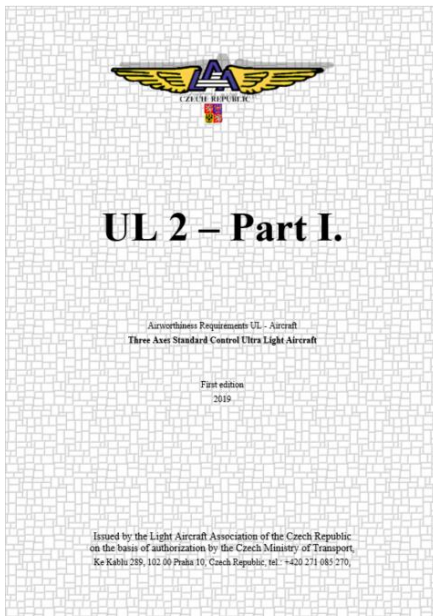
V Praze 25. března 2019





# New Regulation in CZ – new UL2 / 2019

- Finally the new Airworthiness code UL2/2019 was approved and it is valid from 2019-03-26 – so any new TC will be done based on this code.



UL 2, Part I. – Three Axes Standard Control UL Aircraft, 2019 edition, MTOW 600 kg

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## PART A – GENERAL

### 1. Purpose

This regulation defines minimum airworthiness requirements for the three axis standard control ultra light aircraft (UL) that has to be met so that the use of ultra-light aircraft for the defined purpose was troublefree and did not impair the air traffic safety as well as the third person safety.

### UL 2 § 1 Applicability

UL 2 § 45 This airworthiness requirement is applicable to the three axis standard control ultra light aircraft,

- 1) with a maximum certified take-off weight up to 600 kg including rescue system and
- 2) with a stall speed  $V_{so}$  according to UL 2 § 49 up to 83 km/h (CAS).

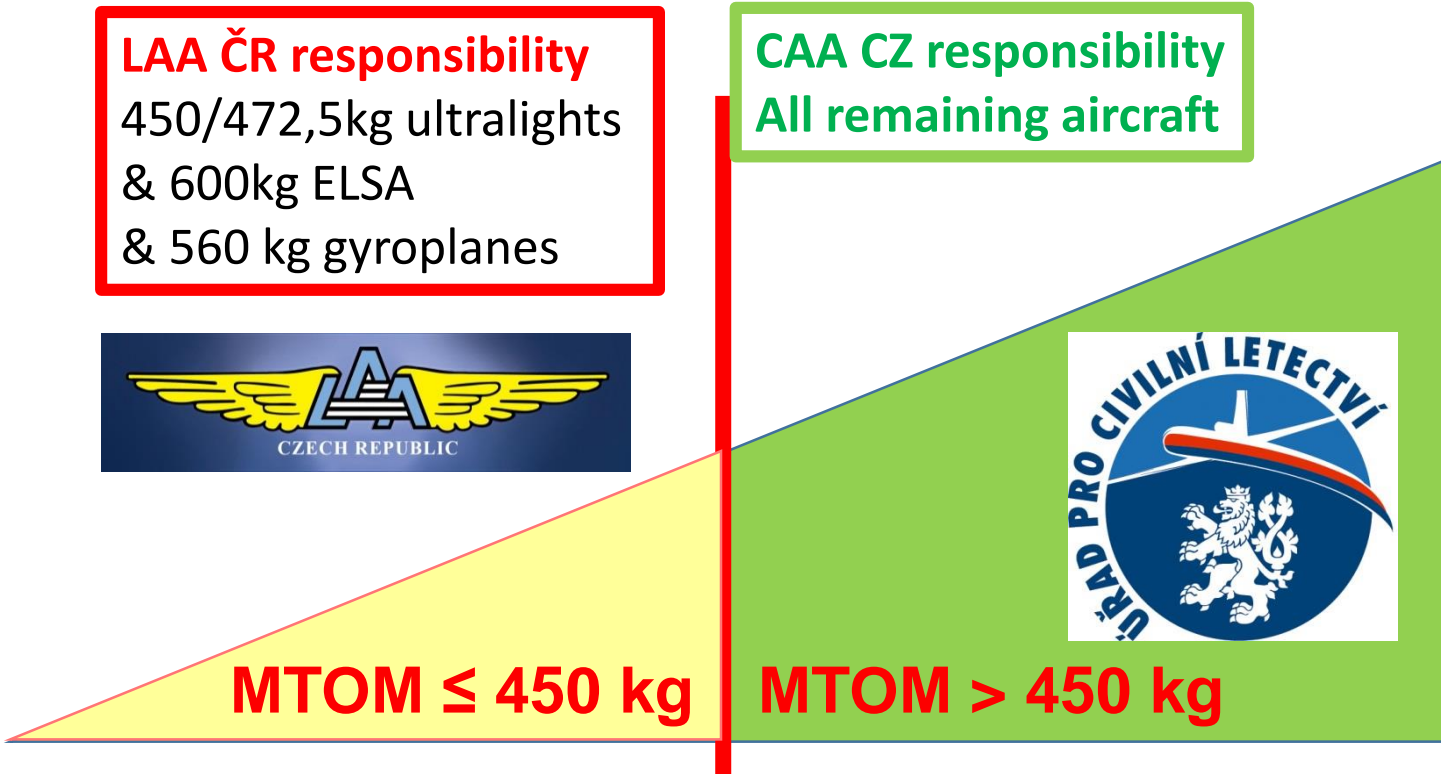
Ultra light aircraft operation excludes aerobatics, the permitted manoeuvres include:

- 1) any manoeuver necessary for normal flying,
- 2) flight mode up to  $\pm 30^\circ$  pitch angle relative to level flight including stall avoidance training,
- 3) steep turns up to  $60^\circ$  bank angle.

# Civil Aviation Administration in the Czech Republic

## ■ Before 2019-03-26

- Responsibility split between CAA CZ and LAA ČR based on the mass defined by Annex II of BR216/2008 paragraph e), f), g)



# Civil Aviation Administration in the Czech Republic

- **Since 2019-03-26**
- Responsibility split between CAA CZ and LAA ČR based on the delegation of the performance of state administration in Sport Flying Equipment from the Civil Aviation Department of the Ministry of Transport of the Czech Republic

**LAA ČR responsibility**  
Sport Flying Equipment

**CAA CZ responsibility**  
All remaining aircraft



**MTOM ≤ 600 kg**

**MTOM ≥ 600 kg**

# OPT- OUT in Europe – so far 10 countries announced it

01/09/2021

List of Art.2(8) of Regulation (EU) 2018/1139

1 of 1



Notification date	Status	MS	EASA reference	Art. 2(8)(a): non unmanned aeroplanes, 2 seats Max, 45 Knots MTOW 600/650kg off/on water operations. date	Art. 2(8)(b): non unmanned helicopters, 2 seats Max, MTOW 600/650kg off/on water operations. date	Art. 2(8)(c): non unmanned sailplanes (included powered ones), 2 seats Max, MTOW below 600kg as recorded by MS. date	Comments	Organisations outside of this decision (Name/Activity / category)	MS modification or revocation date
11/09/2018	Initial	DE	028/18/0001	11/09/2018	11/09/2018	N/A		None	
02/05/2019	Initial	CZ	028/19/0001	15/03/2019	15/03/2019	15/03/2019		None	
12/07/2019	Initial	FR	028/19/0002	01/07/2019	01/07/2019	N/A	<b>Criteria:</b> - 2 seats: maximum 500kg plus an extra 25 kg when the aircraft is equipped with an airframe mounted total recovery parachute and an extra 45 kg when the aircraft intended to be operated on water. - 1 seats: maximum 330kg plus an extra 15 kg when the aircraft is equipped with an airframe mounted total recovery parachute and an extra 30 kg when the aircraft intended to be operated on water. - minimum steady flight speed in landing configuration not exceeding 38 knots calibrated air speed and microlight helicopters.	None	
11/12/2019	Modified	FR	028/19/0002R1	01/07/2019	01/07/2019	01/07/2019	to clarify that 028/19/0002 covers also microlight powered sailplanes but excludes sailplanes MTOW : see above.	None	05/12/2019
13/02/2020	Initial	SI	028/20/0001	27/12/2019	27/12/2019	27/12/2019		None	
20/04/2020	Initial	SK	028/20/0002	15/04/2020	N/A	N/A	For aeroplanes referred to in point (a) for sport and recreational flying excluding those intended to be operated on water.	None	
09/07/2020	Initial	FI	028/20/0003	01/01/2021	01/01/2021	01/01/2021		None	
15/10/2020	Initial	IT	028/20/0004	01/03/2021	01/03/2021	N/A		None	
23/10/2020	Initial	AT	028/20/0005	15/09/2020	15/09/2020	N/A		None	
26/11/2020	Initial	SE	028/20/0006	01/12/2020	01/12/2020	01/12/2020		None	
07/07/2021	Initial	BG	028/21/0001	28/06/2021	N/A	N/A		None	

# OPT- OUT in Germany – declared 11.09.2018

Two organisation responsible – DULV and DAeC

<b>600kg TC issued by DULV based on OPT-OUT</b>			
	<b>ULL name</b>	<b>Date issued</b>	<b>Remark</b>
1	Prime BS100	11.06.2020	
2	G70	22.11.2019	
3	BLACKWING	04.06.2020	
4	Virus SW 600 D	10.04.2019	
5	P2002 Sierra MKII	20.12.2019	
6	KFA Explorer UL 600	01.04.2020	
7	WT 9 600 FG	23.01.2020	
8	WT 9 600 RG	23.01.2020	
9	Ellipse Spirit	21.10.2020	valadated LAA CR TC
10	Risen	11.09.2020	
11	P92 Echo MKII	14.10.2020	
12	Magnus Fusion 212	20.10.2020	
13	A TEC 321 Faeta NG	18.12.2020	valadated LAA CR TC
14	A32	27.04.2021	
15	A32	21.05.2021	
16	P92 Echo MKII Light	28.05.2021	
17	Superstol JA35	02.06.2021	
18	Breezer	24.08.2021	
19	BOREY	09.09.2021	
20	A32	09.12.2021	
21	AC4-UL	16.12.2021	

# OPT-OUT in Czech Republic – declared

<b>600kg TC issued by LAA ČR based on OPT-OUT</b>			
	<b>TC number</b>	<b>ULL name</b>	<b>Remark</b>
1	ULL 02/2016	JA 600	extended TC
2	ULL 01/2017	JA 400	extended TC
3	ULL 05/2019	TL3000 Sirius	
4	ULL 06/2019	Bristell LSA	
5	ULL 04/2019	TL2000 Sting S4	
6	ULL 02/2019	VL3 E	
7	ULL 02/2020	Ellipse Spirit	
8	ULL 05/2020	Stream	
9	ULL 06/2020	Atec 321 Faeta NG	
10	ULL 01/2021	Legend 600	
11	ULL 02/2021	Dynamic WT9 OK Edition	
12	ULL 03/2021	Dynamic WT9/600	
13	ULL05/2021	Skyper GT9-600	
14	ULL 01/2022	P92 Echo MKII	validated DULV TC
15	ULL 02/2022	Viper SD4-600	validated DULV TC
16	ULL 04/2022	Shark 600	

# OPT- OUT in France – declared 01.07.2019

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1985 > first regulation

1998 (september) > 1st major revision of the regulation

2019 (june) > 2nd major revision of the regulation

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## THE PRINCIPLES THAT GUIDED OUR WORK WITH OUR CAA (DGAC)

- Do not touch the fundamentals of our declarative, simple and responsible system
- Operation under the responsibility of the pilot/owner
- Take into account the reality of the current Microlight fleet and evolution trends
- Stay in the “ true ” Microlight outside EASA > Annex 1 and choose a “ reasonable ” Opt-Out
- Collaborative work with the DGAC
- Do not turn microlights into planes (nor planes into microlights!)
- Kinetic energy less than 100 MJ
- Allow technological innovation
- Remain pragmatic, without suffering pressure and lobbying

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FOR SIMPLICITY,  
**A MICROLIGHT**  
CAN BE DEFINED BY

- Its maximum take-off mass (MTOM)
- Its maximum empty mass (MEM)
- Its minimum stall speed
- Its crew carrying capacity
- Its maximum power
- Its autonomy
- Its simplicity
- Its lightweight

# OPT- OUT in France

## Characteristics

# MULTIAXIS

A multiaxis microlight is a single-engine propeller aircraft supported by a fixed wing.  
A class 3 multiaxis microlight meets the following technical conditions:

- The maximum power is less than or equal to 65 kW for a single-seater and 80 kW for a two-seater.
- The maximum mass is less than or equal to 330 kg for a single-seater and 500 kg for a two-seater; these masses can be increased by 15 kg if a single-seater multiaxis is equipped with a rescue parachute, by 25 kg if a two-seater multiaxis is equipped with a rescue parachute, by 30 kg in the case where a single-seater microlight multiaxis is equipped with floats or by 45 kg in the case where a two-seater microlight multiaxis is equipped with floats.
- The stall speed (VSO) does not exceed 38 knots (70 km/h) in conventional speed (CS).

## Table of masses and powers - Class 3

In red: developments made under the new regulation

3 Class	Configuration	Mass max. (in kg)	Empty mass max with new max masses (in kg)	Fixed lump sum (in kg)				Total cumulation mass para + floats + fuel + pil/pax	Power (in kW and (in CV))  Powers max.	VSO (CS)
				Credit mass inclusive parachute	Credit mass inclusive floats	Mass inclusive pilot/passenger	Mass inclusive fuel (Petrol)**			
Multiaxis Single-seater	Basic	330	223	-	-	86	21	107	65 (88)	38Kts (70km/h)
	+ parachute	345	238	15	-	86	21	122	65 (88)	38Kts (70km/h)
	+ floats	360	253	-	30	86	21	137	65 (88)	38Kts (70km/h)
	+ parachute + floats	375	268	15	30	86	21	152	65 (88)	38Kts (70km/h)
Multiaxis Two-seater	Basic	500	312,5	-	-	156	31,5	187,5	80 (109)	38Kts (70km/h)
	+ parachute	525	337,5	25	-	156	31,5	212,5	80 (109)	38Kts (70km/h)
	+ floats	545	357,5	-	45	156	31,5	232,5	80 (109)	38Kts (70km/h)
	+ parachute + floats	570	382,5	25	45	156	31,5	257,5	80 (109)	38Kts (70km/h)

\*\* 30 liters x 0,7 (single-seater)

\*\* 45 liters x 0,7 (two-seater)

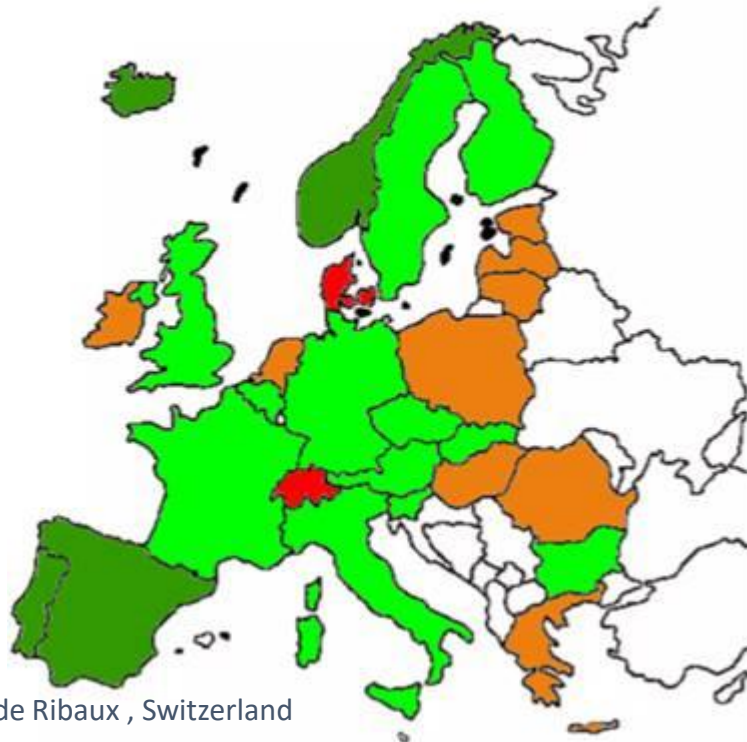


# OPT- OUT in UK

- Opt out was completed into law 19th August 2021.
- But implementation details were still in progress, so first approvals did not appear until early 2022
- Limits: 600kg and 45kts Vso. Applicable for Fixedwing and Flexwing and 1 or 2 seats.
- Responsibility: UK CAA but with delegations for approval recommendations to BMAA and LAA (no change to old arrangement for 450kg)
- Airworthiness regulation: At present CS-VLA but a new BCAR Section S is in preparation and also documents covering convergence / differences with German and Czech codes
- so we can have a relatively painless mutual recognition for aligned items.

# OPT-OUT map

- **Light green** -> OPTOUT 600 or 500 kg
- **Dark green** -> probably on the way to OPTOUT 600
- **Red** -> NO OPTOUT 600
- **Orange** -> NO OPTOUT 600 but use of foreign MLA tolerated or in some cases integrated as KIT or experimental



# Ideal OPT-OUT Solution

- Each Member State will use the same OPT-OUT condition given by the Basic Regulation = 600kg MTOM and 83km/h stall speed
- As many MS will use the same Airworthiness Code – based on Czech UL2/2019 or German LTF-UL 2019
- Each MS will keep their microlight rules but the Airworthiness code will be the same.
- We will use bilateral agreements for validation of Type Certificates – The CZ and Germany already signed such agreement
- LAA CR is offering help to other countries – all our major microlight regulations are translated into English so you can use them for your inspiration!

# Possible problems

- There could be up to 31 different systems and cross border flying could be very difficult
- The only other alternative to this is the EASA system
- Part 21 Light is a big thread for our micolight systems
- U-space and drones regulation

# New possibilities for GA development

- New BR opens new opportunities in the GA
  - Realistic useful load means opening new opportunities for the development of new technologies (turbine etc..)
  - „Electric“ aviation – development of new power units, controllers, bateries and off course aircraft



ΦNIX - Electro powered airplane with range extender

# THANK YOU!

Contact: [fridrich@laacr.cz](mailto:fridrich@laacr.cz)

[www.laacr.cz](http://www.laacr.cz)

[www.czechaviation.info](http://www.czechaviation.info)

