
Overview of Gyroplane Weight Limits in EASA Member Countries

Presented to Transportstyrelsen
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Disclaimer & About the Author

- ◆ The information is gathered, analyzed and presented with the best of intentions to represent a fact-supported version of the reality at the time of data collection.
- ◆ However, due to uncountable reasons the information might display one or several errors.
- ◆ The author of this short report accepts no liability and urges the reader to exercise due caution when confronted with the information in the following pages.
- ◆ The author of the report is a private, Swedish individual who recently has taken up the love of flying gyroplanes. His flying experience is humiliatingly inferior to many readers of this report (if we do not include the countless hours flying around the globe in a Boeing or Airbus as a passenger). Yet, he bets that none would have been able to answer the key question, and is thus genuinely proud of serving this information for free to anyone who wants to take part of it. In no way does he represent any interest, organization, company or individual except himself. No contribution or compensation, monetary or of other nature, has been accepted (or, indeed; offered) for this work.
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Introduction – what set the snowball in motion?

◆ Question:

- ◆ **How do the 32 countries which are members of EASA differ in terms of weight limitations for gyroplanes which fall under Annex II of Regulation (EC) No 216/2008, para f)*?**
 - ▲ In modern day and time, one would think that this relatively simple question would easily be solved by contacting
 - ▲ EASA, or
 - ▲ any European flying association / organization which aspires to at least partially represent the gyroplane flying community, or
 - ▲ turn to the modern version of Pythia - the oracle in Delphi; Google.
 - ▲ Nothing could be more wrong. The short answer is: **nobody knows!** The author has completely failed to identify one entity that claims that it has a complete answer.

* See Appendix 1 for a complete version of Annex II

Purpose of Analysis & Execution

- ◆ The analysis was carried out to bring some current information in a condensed format to regulatory authorities' as well as to public knowledge re. gyroplane weight limitations in EASA.
- ◆ The ambition has been to investigate and demonstrate assumed differences in a simple and clear manner with the hope that it might serve as food for thought and thus trigger – where needed – a regulatory process leading to a *safer* use of gyroplanes.
- ◆ The work was largely carried out in January 2015 via phone and/or e-mail contacting organizations representing countries which are members of EASA. The goal was to cover:
 - + Members of EASA that jointly made up at least 85% of EASA countries' summarized population, and
 - + Germany, Italy, Spain, Poland, Austria, Slovenia and Hungary as representatives of industrially produced gyroplanes in Europe, in addition
 - + No analysis of this topic would carry significant weight without having UK on the list of covered countries, simply because of the status on the user and regulation side of the equation that gyroplanes have in this country.

All goals were achieved.

In total, 53 direct contacts with different individuals were taken.

Acknowledgement

- ◆ The author is permanently indebted to the following individuals for excellent and highly work-time reducing support:
 - + Mrs. Rieteke van Luijt, European Microlight Federation, www.emf.aero
 - ▲ Mrs. van Luijt's kindness to put a general question on EMF's discussion forum saved a significant amount of time on the phone.
 - + Mr. René Meier, Europe Air Sports, www.europe-air-sports.org
 - ▲ Reviewed the preliminary results and cross-checked with organization's information
 - + Mr. Roman Tadic, Primus Motor of Skånska Gyrokooperklubben, www.gyroflyg.se
 - ▲ Offered time and again patiently explanations to seemingly basic questions and allowed the author to draw from his immense knowledge of flying gyroplanes and their safety and technical limitations as well as opportunities

- ◆ And finally, a sincere thank you to each respondent. Without your generous offer of details from your country, this work would have been impossible to finish on a voluntary basis.

Definitions & Abbreviations

- ◆ CAS: Calibrated Air Speed
- ◆ EASA: European Aviation Safety Agency
- ◆ Empty weight: The weight of the gyroplane itself, excluding occupants and fuel, but including all other operating fluids, e.g. coolant and oil
- ◆ MTOM: Max Take-off Mass, includes the empty weight of the gyroplane + payload
- ◆ Payload: Weight of occupant(s) + cargo + fuel

Factual Background

- ◆ In Article 4(4) of Regulation (EC) 216/2008 it is mentioned that aircrafts falling under the definitions used in Annex II¹⁾ are not regulated by EASA
 - + Thus, individual members of EASA, i.e. countries, set their own rules for Annex II aircrafts
 - ▲ This has led to a plethora of rules, where some countries have tried to seek inspiration from each other while others have chosen to define rules on a stand-alone basis
 - + Gyroplanes fall under Annex II, para f) and reads as follows:
 - ▲ **“(f) single and two-seater gyroplanes with a maximum take off mass not exceeding 560 kg”**
 - ▲ There is no other rule in Annex II which is relevant for a modern, factory built gyroplane

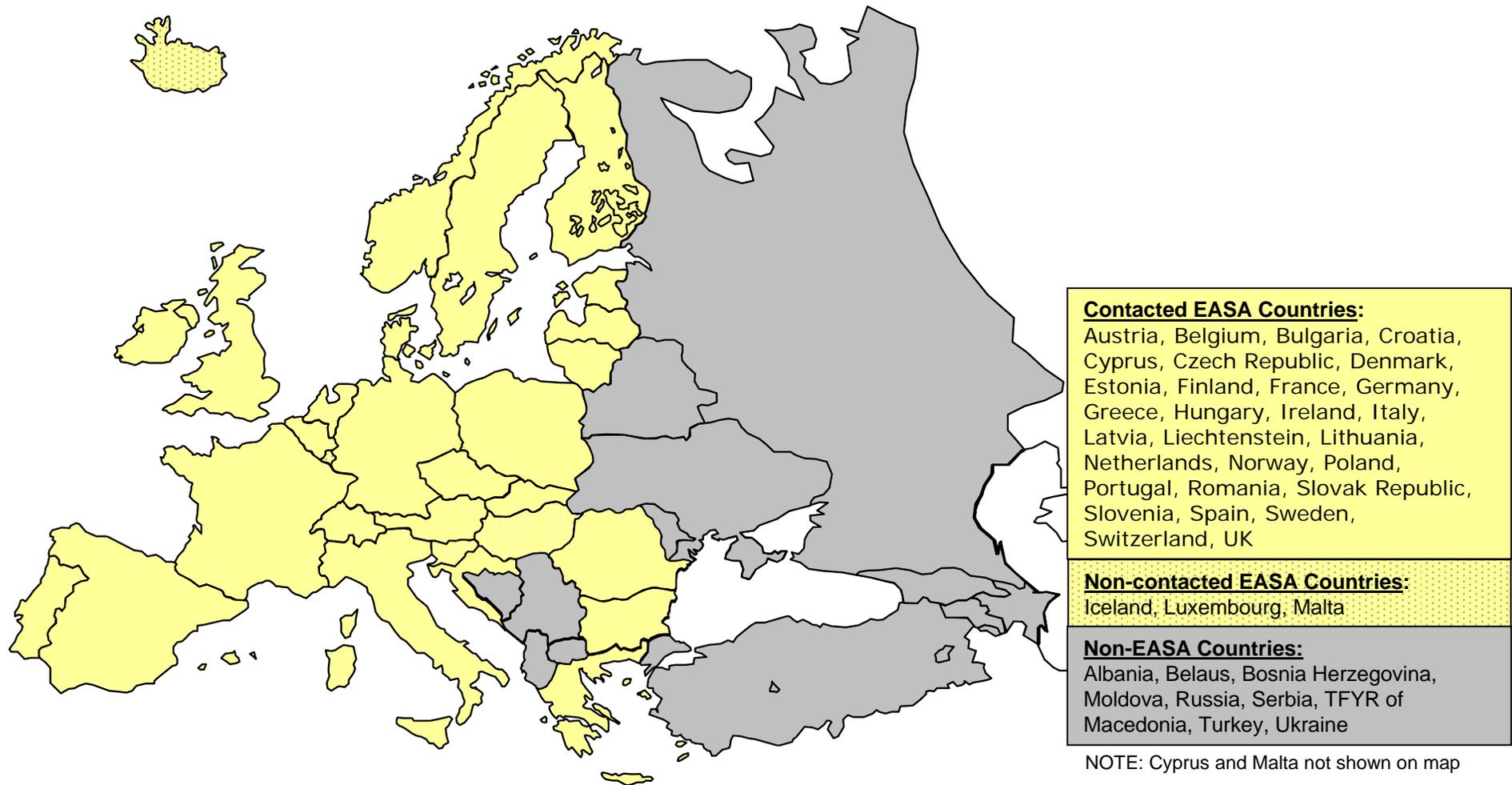
- ◆ The European gyroplane market is served by only a few manufacturers which also have a significant share of the global market for light weight, modern, factory built gyroplanes
 - + The major producers are located in Germany and Italy which both have MTOM 560 kg.

- ◆ Unlike a modern, fixed-wing aircraft which typically uses a monocoque construction of carbon composites (in order to reduce weight but still obtain necessary structural integrity), a gyroplane needs a heavy steel frame onto which the ‘cockpit’, engine, rotor, main gear and nose wheel are attached. This, in combination with a development towards safer gyroplanes and nicer/more comfortable (e.g. closed canopy) flying experience, lead to a trend for heavier gyroplanes.

- ◆ Gut-feeling that Sweden has the tightest weight limits in EASA:
 - + 450 kg MTOM with a payload of 175 kg → gyroplane empty weight of 275 kg.
 - + Furthermore, Swedish regulations have not developed a class of its own for gyroplanes, instead it is in regulatory text referred to as ultra-light fixed-wing aircraft²⁾ and comparing different regulations the definition is less than crystal clear³⁾

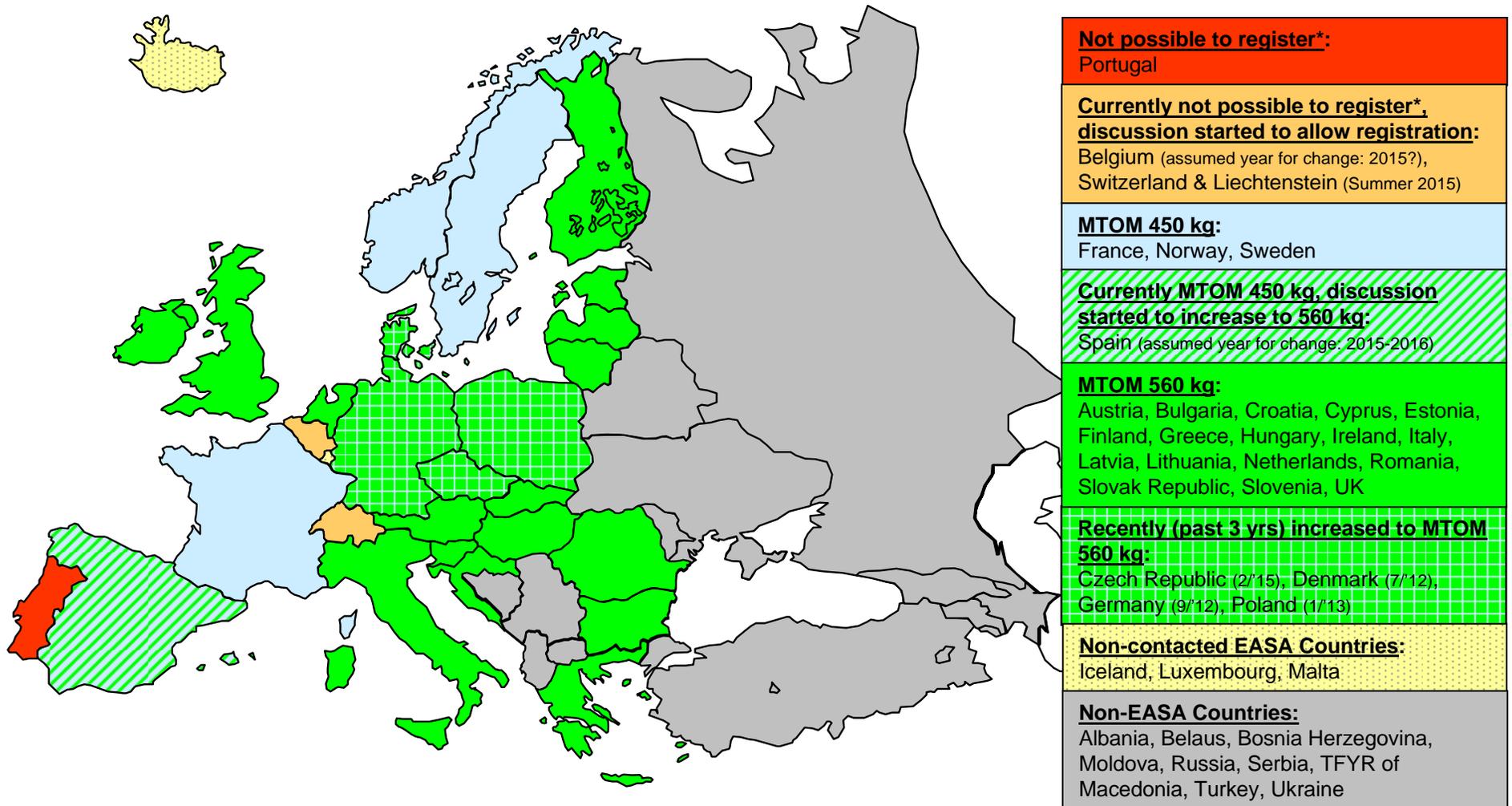
¹⁾ See Appendix 1 for a complete version of Annex II ²⁾ See Appendix 4 for an example ³⁾ See Appendix 5

Contacted Countries in EASA



- ◆ Info gathered from 29 of EASA's 32 member countries, jointly accounting for 99,8% of EASA members' population.

21 countries, equivalent to 70% of EASA's population, have 560 kg as MTOM limit for gyroplane. Spain in discussions to increase to 560 kg.



* Registering as "Experimental" OK, but not as "Annex II bullet f)" (or "Annex II bullet e)" as Sweden has chosen)

NOTE: Cyprus and Malta not shown on map

Analysis* of data leads to the conclusion that Sweden ranks in the bottom

NO LIABILITY ACCEPTED FOR THE LIST'S ACCURACY		SUGGESTIONS TO IMPROVEMENTS ARE WELCOME!			
EASA Country	Pop. (Mln.)	Results for weights (kg), 2-seat gyros			Comment
		MTOM	Min payload ¹⁾	Max empty weight	
Evaluated					
Austria	8	560	0		
Belgium	10	0	n/a		UL gyros cannot be registered in BE. Discussions started Jan. '15 to change rules.
Bulgaria	7	560	0		
Croatia	4	560	0		
Cyprus	1	560	0		
Czech Republic	11	560	0		
Denmark	6	560	187	373	
Estonia	1	560	0		
Finland	5	560	0		
France	66	450	166	284	
Germany	81	560	186	374	
Greece	11	560	0		
Hungary	10	560	0		
Ireland	5	560	0		
Italy	62	560	0		
Latvia	2	560	0		
Liechtenstein	0	0	n/a		Liechtenstein is administrated by Swiss FOCA, thus rules = Switzerland
Lithuania	4	560	0		
Netherlands	17	560	0		
Norway	5	450	168	282	282 with radio
Poland	38	560	0		
Portugal	11	0	n/a		No rules. Slow process to change.
Romania	22	560	0		
Slovak Republic	5	560	0		
Slovenia	2	560	0		
Spain	48	450	0		Working towards 560
Sweden	10	450	175	275	
Switzerland	8	0	n/a		UL gyros cannot be registered in CH, pending revision of rules by mid-2015
United Kingdom	64	560	195	365 (/305)	560 factory built, 600 amateur built. Mfg. typically produce to 500 to reduce CAA fees.
Population:		524			
Share of EASA:		99,8%			
Non-evaluated					
Iceland	0,3				
Luxembourg	0,5				
Malta	0,4				
Population:		1			
Share of EASA:		0,2%			
SUM EASA:		525			

The table shows that

◆ MTOM

- + 560 kg: 21 countries / 70% of pop.
- + 450 kg: 4 / 25%
 - ▲ ES working towards higher MTOM
- + Gyroplanes not allowed: 4 / 5%
 - ▲ BE & CH & LI working towards lifting ban in 2015

◆ Max empty weight of gyroplane

- + 6 countries representing 44% of population have min. payload rules ranging from approx. 166 – 195 kg, resulting in max empty weight of:
 - ▲ >300 kg: 3 countries / 29% of pop.
 - ▲ 280-300 kg: 2 / 13%
 - ▲ 275 kg: 1 / 2%

◆ To sum up; in EASA, Sweden has

- + Shared lowest MTOM
- + **Lowest max empty weight**

* See Appendices 2 and 3 for details

Conclusions

- ◆ The analysis covered 29 of EASA's 32 member countries, jointly accounting for 99,8% of EASA countries' population
- ◆ Obtained info shows *beyond any doubt* that
 - + Swedish weight restrictions for gyroplanes are the lowest among the analyzed EASA countries.
 - + No other country has lower max empty weight restriction
- ◆ Since it is impossible to legally register a modern, factory built ultralight gyroplane with an empty weight > 275 kg, but still with an MTOM of max 560 kg, there is an inherent risk that
 - + Manufacturers of modern and safe factory built gyroplanes will disregard Swedish tight weight rules since the Swedish market accounts only for <2% of the potential market in EASA, leading to...
 - + In average **less safe** gyroplanes will be flying in Sweden than in other EASA countries which allow for a higher MTOM than Sweden's 450 kg.
 - ▲ This is entirely dependent on current legislation, which is solely in the hands of Transportstyrelsen to decide
 - + Current rules bar gyroplanes to reach the potential they deserve as a safe, enjoyable and useful type of aircraft
- ◆ The analysis leads to a final question



What is Transportstyrelsen's motivation to not change current outdated Swedish definition of an ultralight gyroplane?

Decision Tree re. Next Steps

- ◆ Questions to you based on your experience and leading position in the Swedish aviation world:

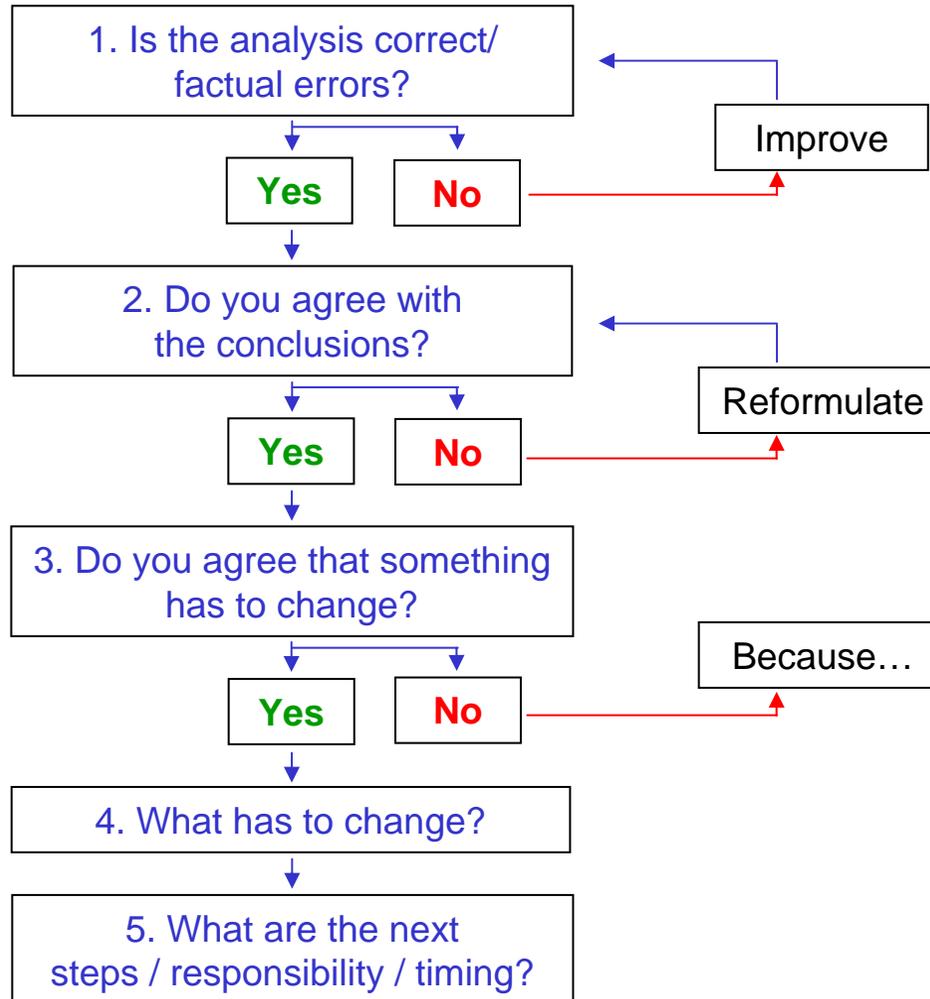


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Appendix 1 – Annex II of Regulation (EC) No 216/2008

ANNEX II

“Aircraft referred to in Article 4(4)

Article 4(1), (2) and (3) do not apply to aircraft falling in one or more of the categories set out below:

- (a) historic aircraft meeting the criteria below:
 - (i) non-complex aircraft whose:
 - initial design was established before 1 January 1955, and
 - production has been stopped before 1 January 1975;
 - or
 - (ii) aircraft having a clear historical relevance, related to:
 - a participation in a noteworthy historical event, or
 - a major step in the development of aviation, or
 - a major role played into the armed forces of a Member State;
- (b) aircraft specifically designed or modified for research, experimental or scientific purposes, and likely to be produced in very limited numbers;
- (c) aircraft of which at least 51 % is built by an amateur, or a non-profit making association of amateurs, for their own purposes and without any commercial objective;
- (d) aircraft that have been in the service of military forces, unless the aircraft is of a type for which a design standard has been adopted by the Agency;
- (e) aeroplanes, helicopters and powered parachutes having no more than two seats, a maximum take-off mass (MTOM), as recorded by the Member States, of no more than:
 - (i) 300 kg for a land plane/helicopter, single-seater; or
 - (ii) 450 kg for a land plane/helicopter, two-seater; or
 - (iii) 330 kg for an amphibian or floatplane/helicopter single-seater; or
 - (iv) 495 kg for an amphibian or floatplane/helicopter two-seater, provided that, where operating both as a floatplane/helicopter and as a land plane/helicopter, it falls below both MTOM limits, as appropriate;

continued

(v) 472,5 kg for a land plane, two-seater equipped with an airframe mounted total recovery parachute system;

(vi) 315 kg for a land plane single-seater equipped with an airframe mounted total recovery parachute system;

and, for aeroplanes, having the stall speed or the minimum steady flight speed in landing configuration not exceeding 35 knots calibrated air speed (CAS);

of particular importance for this analysis

(f) single and two-seater gyroplanes with a maximum take off mass not exceeding 560 kg;

(g) gliders with a maximum empty mass, of no more than 80 kg when single-seater or 100 kg when two-seater, including those which are foot launched;

(h) replicas of aircraft meeting the criteria of (a) or (d) above, for which the structural design is similar to the original aircraft;

(i) unmanned aircraft with an operating mass of no more than 150 kg;

(j) any other aircraft which has a maximum empty mass, including fuel, of no more than 70 kg.”

Appendix 2 – Individual data by analyzed country – 1(2)

NO LIABILITY ACCEPTED FOR THE LIST'S ACCURACY		SUGGESTIONS TO IMPROVEMENTS ARE WELCOME!			
Country	Source	MTOM (kg)	Other limits; weight (kg), speed etc.	Owner do maintenance w/o a technical certificate?	Comments
EASA	Regulation (EC) No 216/2008, Annex II, para f)	560	None		Single-seat
EASA	Regulation (EC) No 216/2008, Annex II, para f)	560	None		Two-seat
Austria	Österreichischer Aero Club + FD Composites	560	No other weight or speed restrictions.	Yes	
Belgium	Belgian ULM Federation - BULMF	0	Currently UL gyros are not allowed to be registered in Belgium. In January 2015, BULMF started a discussion with Belgian aviation authorities aiming at changing the rules.	n/a	
Bulgaria	Gyrocopter Bulgaria Ltd	560	No other weight or speed restrictions	Yes, but needs a permit from Bulgaria CAA (not equivalent to becoming a certified flight technician).	
Croatia	Croatian CAA	560	No other weight or speed restrictions	Yes	
Cyprus	Department of Civil Aviation	560	No other weight or speed restrictions	Yes	
Czech Republic	Light Aircraft Association of the Czech Republic	560	Old was 450, but 560 approved from 2015-02-01. Only other restriction: max 2 people.	Yes	
Denmark	Dansk Gyrokooper Union	560	Min. payload: 1-seat: 101 kg, 2-seat 187 kg. No other weight or speed limits.	Yes	
Estonia	Estonian CAA	560	No other weight or speed restrictions	Yes	
Finland	Finnish Aeronautical Association	560	No other weight restrictions or minimum speed limits	Yes	
France	Fédération Française de Planeur Ultra-Léger Motorisé - FFPLUM	450	+5% if parachute, +10% if floaters (non-cumulative with the chute weight addition), min. payload; 1-seat 86 kg, 2-seat 156 kg + fuel for 1 hr level flight (by me estimated to 10 kg) --> max. empty weight of 450 - 156 - 10 = 284 kg. 100 kW max. engine power. Disc loading between 4,5 - 12 kg/m2.	Yes	
Germany	Deutscher Ultraleichtflugverbandes (DULV) e.V.	560	Min. payload: 1-seat 90 kg, 2-seat 180 kg + fuel for 30 min. flying (by me estimated to 6 kg) --> max empty weight 560-180-6 = 374 kg. 65 km/h min. flight speed. Changed from 450 to 560 kg in Sep. 2012.	Yes	
Greece	Hellenic Aeronautical and Airports Federation	560	Min. weight of 70 kg, 36 Kts (CAS) min flight speed.	Yes	
Hungary	Hungarian UL Sport Association	560	No other weight or speed restrictions	Yes	
Ireland	National Microlight Association of Ireland	560	No other weight or speed restrictions	Yes	
Italy	Magni Gyro	560	No other weight or speed restrictions	Yes	
Latvia	Latvian Civil Aviation Agency	560	No other weight or speed restrictions	National aircraft maintenance licence required (unless classified as 'Experimental').	
Liechtenstein	Europe Air Sports	0	Liechtenstein is administrated by Swiss FOCA. Thus, rules = Switzerland	n/a	
Lithuania	Aeroclub of Lithuania	560	No other weight or speed restrictions	Yes	
Netherlands	Autogyro Nederland BV	560	No other weight or speed restrictions	Yes	

Appendix 2 – Individual data by analyzed country – 2(2)

Continued

NO LIABILITY ACCEPTED FOR THE LIST'S ACCURACY		SUGGESTIONS TO IMPROVEMENTS ARE WELCOME!			
Country	Source	MTOM (kg)	Other limits; weight (kg), speed etc.	Owner do maintenance w/o a technical certificate?	Comments
Norway	FlyBoat ANS	450	Max. empty weight: 275 (no radio), 284 (with radio) and 320 (with floaters), payload calculated accordingly from MTOM 450. No other weight or speed restriction.	Yes	Two-seat
Poland	Magni Gyro - Poland	560	Was 495 until 2013. No other weight or speed restrictions.	Necessary to obtain an aircraft maintenance mechanic certificate.	
Portugal	Gyrocopter Experience - Portugal	0	No rules for gyros. Those flying in Portugal operate under foreign licenses, mainly Spanish, French, German and UK.	n/a	
Romania	Aeroclubul Romaniei	560	No other weight limitation. 72 km/h CAS min. speed.	Yes	
Slovakia	Slovak Ultralight Federation - SFUL	560	No other weight or speed restrictions	Necessary to complete a training course authorized by SFUL	
Slovenia	Letalska Szeza Slovenija	560	No other weight or speed restrictions	Yes	
Spain	Asociación Española Pilotos Aeronaves Ligeras	450	No other weight or speed restrictions. Working on changing to 560 to allow for higher rotor weight for inertia reasons.	Yes	Two-seat
Sweden	Transportstyrelsen	300	+30 for amphibian/float, +15 recovery parachute, min. CAS 35 knots. Minimum payload 95 kg --> max empty weight of aircraft 205 if MTOM 300.	Yes	Single-seat
Sweden	Transportstyrelsen	450	+30 for amphibian/float, +15 recovery parachute, min. CAS 35 knots. Minimum payload 175 kg --> max empty weight of aircraft 275 if MTOM 450.	Yes	Two-seat
Switzerland	Swiss Microlight Flyers	0	Currently UL gyros have not been allowed to be registered in Switzerland. Revision of rules started and expected to take effect by mid-2015.	n/a	
UK	CAA: CAP 643 BCAR Section T + British Rotorcraft Association	560 (factory built), 600 (amateur built)	Gyros registered in its own class called "Light Gyroplane". Mfg. typically produce to 500 kg since CAA fees almost doubles if exceeding 500 kg. Payload defined as 1x90 kg (single-seat) or 2x90 kg (two-seat) + fuel for 1 hr. at continuous full power (estimated by me to abt. 15 kg) --> max empty weight of 365 (if MTOM 560) or 305 (if MTOM 500). No minimum speed limits.	Yes (see doc. LAA TL 2.05)	

Appendix 3 – Examples from selected EASA members re. gyroplane’s regulatory basis

Country	Source	Gyro weight & speed limits, maintenance	Gyro vs. UL – Legal definition	Pilot certificate	Airworthiness / Construction rules
Czech Republic.	Mr. Jan Fridrich, Light Aircraft Association of the Czech Republic (LAACR)	MTOM 560 kg. Changed from 450 kg 2015-02-01. No other weight restrictions or minimum speed limits. Max 2 people. Owner can do maintenance.	LAACR has been delegated the power from Ministry of Transport to be the competent authority for all “Sports Flying Equipment” (MTOM <600 kg). Gyro still considered an UL. Simple change of legal basis; LAACR wrote to the Ministry of Transport and asked to get a changed mandate: “responsible for gyroplanes with MTOM <= 560 kg”, which was granted.	No change in education or type of certificate issued today vs. prior to increase of MTOM. UL gyro syllabus detailed in regulation UV3 - parts of it identical with other types of aircrafts, parts of it unique to UL gyro.	Detailed for gyros in document UL2 part 4, which borrows heavily from UK’s BCAR Section T. Required some minor re-work when increasing MTOM to 560 kg..
Denmark	Mr. Mikkel Palmbo, Auto-Gyro Nordic	MTOM 560 kg. Min payload: 1- seat 101 kg, 2-seater 187 kg.. No min. speed limit. Owner can do maintenance.	BL 9-12 Bestemmelser om ultralette gyroplaner (from May 15, 1995). Defines Ultralet Gyroplan as max empty weight 180/210 kg (1/2- seat) and can hold 20/30 lit of fuel. General dispensation (MTOM 560 kg, no limit for fuel) issued by Trafikstyrelsen July 3 2012 in anticipation of reworking BL 9-12.	Gyro pilot studies whole regular PPL theory and adds a two day course on rotor knowledge + a course on engine knowledge (the latter is shared with UL pilots). In addition: practical fly training..	No own rules. Gyros approved in Germany (BUT), UK (BCAR Section T) and Italy and Sweden can automatically be registered in Denmark.
Finland	Mr. Nils Rostedt, Finish Aeronautical Association	MTOM 560 kg. No other weight restrictions or minimum speed limits. Owner can do maintenance.	Gyro is a class of its own with its own legal text and thus disconnected from UL	Own certificate which borrows heavily from UL	No own rules. Relies on other countries’ construction rules.
Germany	Mr. Wolfgang Lint, Deutscher Ultraleichtflugverbandes (DULV) e.V.	MTOM 560 kg. Min. payload: 1-seat 90 kg, 2-seat 180 kg + fuel for 30 min. flying (by me estimated to 6 kg). 65 km/h min. flight speed. Owner can do maintenance.	Changed MTOM from 450 to 560 kg on Sep. 25, 2012. Everything is the same today as it was before the change, e.g. education, certificate. All it took was 8 words: “ <i>deren Abflugmasse nicht mehr als 560 kg beträgt</i> “. Gyro with MTOM 560 kg referred to in legal text as ULT (Ultraleichten Tragschrauber).	UL theory package identical for all types of UL except for aircraft type specific sections, e.g, for gyro it is rotor technique and emergency procedures.	Two docs are relevant: 1. Bauvorschriften für Ultraleichte Tragschrauber, Sep. 26, 2001 (referred to as BUT) 2. nFl II 67 / 12, Sep. 25, 2012
UK	British CAA and Mr. Kai Barnett, Rotorsport Association	MTOM 560 kg. (factory built), 600 kg (amateur built). Min. payload 1x90 kg (1-seater) or 2x90 kg (2-seater) + fuel for 1 hr. at continuous full power (estimated by me to abt. 15 kg). No min. flight speed. Owner can do own maintenance.	Gyro defined in a class of its own (‘Light Gyroplanes’) with its own legal text and thus disconnected from UL . Maintenance document: LAA TL 2.05.	Own certificate which borrows heavily from UL.	Defined in CAP 643 BCAR Section T (issue 5, May 9, 2013

Appendix 4 – Excerpt of TSFS 2012:85* to demonstrate how poorly gyroplanes are defined in current Swedish legislation

“Tillämpningsområde

.....

2 § För gyroplan vars högsta tillåtna startmassa inte överstiger motsvarande viktgräns för ett ultralätt flygplan ska reglerna för ultralätta flygplan i dessa föreskrifter tillämpas.

.....

Definitioner och förkortningar

3 § I dessa föreskrifter avses med

.....

ultralätt flygplan ett flygplan med högst två sittplatser

1. vars högsta tillåtna flygvikt för landflygplan inte får överstiga 300 kg för ensitsiga eller 450 kg för tvåsitsiga, med fallskärmssystem monterat som kan bära upp hela flygplanet får högsta tillåtna flygvikt inte överstiga 315 kg respektive 472,5 kg,
2. vars högsta tillåtna flygvikt för sjöflygplan inte får överstiga 330 kg för ensitsiga eller 495 kg för tvåsitsiga,
3. vars sammanlagda tillsatsvikt för förare/passagerare, bränsle och bagage lägst ska vara 95 kg för ensitsigt och 175 kg för tvåsitsigt flygplan,
4. vid högsta tillåtna flygvikt och flygning rakt fram med avdragen motor i landningskonfiguration ska flygplanet kunna vara styrbart ned till en flygfart av 35 knop (65 km/h) CAS, och
5. delas in i två klasser, klass A för flygplan som manövreras helt eller delvis genom tyngdpunktsförflyttning och klass B för flygplan som manövreras helt med roder- eller spoilerstyrning”

Reflections by the author

- Gyroplane lacks a class of its own in Swedish aviation legislation. Instead it is lumped into the fixed-wing aircraft category.
- Interpretation of current gyroplane definition may lead to the conclusion that there is a minimum flight speed of 35 knots CAS where a gyroplane still should be maneuverable. From a rotor aircraft perspective this is not relevant at all.
- TSFS 2012:85 (Maintenance) and TSFS 2012:87 (Construction...) refer to gyroplane MTOM as 450 kg, while TSFS 2013:18 (Certificates, Schooling...) states 560 kg as MTOM (see Appendix 5).

* Transportstyrelsens föreskrifter och allmänna råd om underhåll, reparation och modifiering av flygmateriel; beslutade den 13 juni 2012

Appendix 5 – Excerpt of TSFS 2013:18* to demonstrate how poorly gyroplanes are defined in current Swedish legislation

“Tillämpningsområde

.....

1 § Dessa föreskrifter ska tillämpas vid utfärdande, förnyelse och utökning av flygcertifikat, behörighetsbevis och behörigheter för ultralätt flygplan och anger de befogenheter som flygcertifikatet och behörigheter ger innehavaren. Dessa föreskrifter ska också tillämpas av flygskolor som tillhandahåller utbildning för ovanstående certifikat och behörigheter.

2 § För en- och tvåsitsiga gyroplan med en maximal startmassa på **högst 560 kg** ska reglerna för ultralätt flygplan i dessa föreskrifter tillämpas.

.....

Definitioner och förkortningar

3 § I dessa föreskrifter avses med

.....

ultralätt flygplan ett flygplan med högst två sittplatser

1. vars högsta tillåtna flygvikt för landflygplan inte får överstiga 300 kg för ensitsiga eller 450 kg för tvåsitsiga, med fallskärmssystem monterat som kan bära upp hela flygplanet får högsta tillåtna flygvikt inte överstiga 315 kg respektive 472,5 kg,
2. vars högsta tillåtna flygvikt för sjöflygplan inte får överstiga 330 kg för ensitsiga eller 495 kg för tvåsitsiga,
3. vars sammanlagda tillsatsvikt för förare/passagerare, bränsle och bagage lägst ska vara 95 kg för ensitsigt och 175 kg för tvåsitsigt flygplan,
4. vid högsta tillåtna flygvikt och flygning rakt fram med avdragen motor i landningskonfiguration ska flygplanet kunna vara styrbart ned till en flygfart av 35 knop (65 km/h) CAS, och
5. delas in i två klasser, klass A för flygplan som manövreras helt eller delvis genom tyngdpunktsförflyttning och klass B för flygplan som manövreras helt med roder- eller spoilerstyrning.

.....

15 § Ultralätt flygplan får flygas av den som har ett giltigt certifikat.....”

Reflections by the author

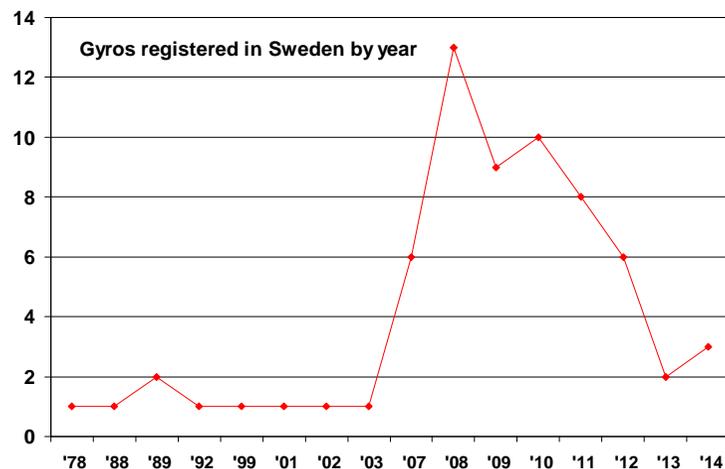
- TSFS 2013:13 states that it is legal to train and fly a gyroplane with MTOM 560 kg in Sweden. Furthermore, certificates issued cover gyroplanes up to MTOM 560 kg.
- But, all the training and flying of gyroplanes in Sweden with an MTOM >450 kg and \leq 560 kg can only happen with gyroplanes which are not registered in Sweden (see Appendix 4 re. regulations for registering UL gyroplanes in Sweden).
- Where is the logic?

* Transportstyrelsens föreskrifter om certifikat, flygskolor och instruktörsutbildning för ultralätt flygplan (UL); beslutade den 15 mars 2013.

Appendix 6 – List of registered gyroplanes in Sweden as of January 22, 2015

Model & make	1978	1988	1989	1992	1999	2001	2002	2003	2007	2008	2009	2010	2011	2012	2013	2014	SUM
Air & Space 18 A*	1												1	2			1
AUTOGYRO-HUMLAN*		1	1	1	1								1	2			7
BARNETT-J4B*							1										1
CALIDUS											3	4	3				10
CAVALON														1	2		3
ELA-07 R 100 COUGAR													1				1
ELA-07 S																1	1
HOLLMAN HA-2M SPORTSTER*								1									1
MCCULLOCH J-2*			1														1
MT 03									4	4							8
MTO SPORT									2	8	6	4	1	3		1	25
PARSON-TWO PLACE*												1					1
Sparrowhawk III*													1				1
Sycamore Mk1*						1											1
TRIXY-G4-2RT																1	1
XENON-2										1							1
XENON-RT												1	1				2
SUM	1	1	2	1	1	1	1	1	6	13	9	10	8	6	2	3	66

* Assumed to be registered as 'Experimental'



Source: Transportstyrelsen