

# IDENTIFICATION FICHE FOR CLASS 1 SERIES-PRODUCED ULM



# 1 - Subject

This guide is intended to assist you in compiling your application file for a "fiche d'identification" (FI) request for a class 1 series-produced ULM and thus enable an easier processing by the DSAC.

It contains a presentation on the key steps of the process and explanations of specific expectations. It also contains a checklist listing all the elements of the file to be constituted and the associated expectations.

### 2 - References

[ULM order]: order dated 23 September 1998 related to ultralight motorised aircrafts (ULM) (https://www.legifrance.gouv.fr/loda/id/LEGITEXT000005626846).

[ULM instruction]: instruction dated 24 June 2019 related to ultralight motorised aircrafts (https://www.legifrance.gouv.fr/download/pdf/circ?id=44800).

[EN 926-1]: NF EN 926-1 Standard "Paragliding equipment - Paragliders - Part 1: requirements and test methods for structural strength" (<a href="https://www.boutique.afnor.org/en-gb/standard/nf-en-9261/paragliding-equipment-paragliders-part-1-requirements-and-test-methods-for-/fa175969/46445">https://www.boutique.afnor.org/en-gb/standard/nf-en-9261/paragliding-equipment-paragliders-part-1-requirements-and-test-methods-for-/fa175969/46445</a>)

"ULM – Manufacturers" webpage: <a href="https://www.ecologie.gouv.fr/en/public-policies/ulm-manufacturers">https://www.ecologie.gouv.fr/en/public-policies/ulm-manufacturers</a>. You will find the additional forms and technical conditions mentioned in the rest of the document.

Online fee payment website: <a href="https://redevances.aviation-civile.gouv.fr/tous-les-produits/ulm/constructeurs-d-ulm-de-serie.html">https://redevances.aviation-civile.gouv.fr/tous-les-produits/ulm/constructeurs-d-ulm-de-serie.html</a>

## 3 – Key steps of the process

Conditions related to the applicant: refer to guide §§ 4.2 et 4.3

Before the FI request: if flight tests are required with a ULM identified in France, these flight tests must be carried out under:

- Manufacturer identification card (refer to <a href="https://www.ecologie.gouv.fr/politiques-publiques/ulm-demarches-constructeurs-dulm-serie#carte-didentification-constructeur-4">https://www.ecologie.gouv.fr/politiques-publiques/ulm-demarches-constructeurs-dulm-serie#carte-didentification-constructeur-4</a>), or
- Provisional identification card (refer to <a href="https://www.ecologie.gouv.fr/politiques-publiques/ulm-demarches-particuliers#carte-didentification-provisoire-4">https://www.ecologie.gouv.fr/politiques-publiques/ulm-demarches-particuliers#carte-didentification-provisoire-4</a>)

FI(s) request is to be sent to <a href="mailto:ulm@aviation-civile.gouv.fr">ulm@aviation-civile.gouv.fr</a>

Preparation of the application file:

- Application form(s\*) for a FI request for a class 1 series-produced microlight: R8-ULM-F101
- Form(s\*) description of a microlight class 1: R8-ULM-F001
- Proof of payment of the 100€ fee (refer to guide § 4.5)
- Technical file:
  - Proof of compliance with the applicable technical conditions (handling qualities, structural strength)
  - User and maintenance manuals in French

DSAC ensures that the application file contains the various documents required and only carries out consistency checks between these documents. DSAC also verifies that the declared characteristics of the ULM comply with the limits specified in the ULM order. Refer to guide § 4.6 and checklist in § 5.

If inconsistencies are detected, DSAC sends its comments to the applicant who must take them into account by returning an updated application file (refer to guide § 4.7).

When DSAC has no/no more comments, the FI(s) will be issued.

<sup>\*</sup> for a group request of FI(s) for the same model of wing in different sizes, refer to guide § 4.4

#### 4 - Guide

#### 4.1 - Class 1 ULM

A class 1 ULM (paramotor) is a complete aircraft, made of a wing under which is attached a trike, or a frame with a harness\*, on which the power unit (motor + propeller) is fixed.

\* in the following, to simplify, the term "trike" will be used in a generic meaning.

However, the regulation provides that FI is only related to the wing, without specifying a precise type of trike and power unit.

Nevertheless, it is up to the applicant for the FI to specify (in the FI and/or in the user manual) all the criteria that the ULM user must verify when attaching a trike and a power unit on the wing.

Those criteria relate in particular to:

- Minimum and maximum weights (total weight in flight) to comply with
- Minimum strength of the anchor points of the trike under the wing
- Any other conditions defined by the FI holder to ensure compatibility between the wing covered by the FI and the trike and power unit. For example: maximum engine power, maximum spacing between attachment points, requirement for an emergency parachute\*\*... The conditions to be indicated on the FI must be mentioned in the application via the 'Other limitations' section of R8-ULM-F001 form.
  - \*\* especially if required to benefit from an increased maximum weight. In all cases, if a parachute is installed, it is up to the ULM user (identification card holder) to check the compliance with additional technical conditions "Emergency parachute (French version)" (in particular: affixing a label alerting emergency services to the presence of a pyrotechnic device).

The technical file attached to the FI request shall include flight test reports at MTOW, maximum engine power and applicable to each size.

#### 4.2 - Applicant ("manufacturer")

The applicant for the FI, who will become its holder, is normally the designer and manufacturer of the wing.

In any case, the applicant must undertake to assume, because of his position and the relationships he has, where appropriate, with the other actors involved in the design of the ULM and the manufacture of the wing, all the responsibilities that the regulations assign to the holder of a FI:

- Ensure and certify, at the time of the initial application for the FI, and then at each wing manufactured and identified as a microlight in France, that the microlight meets the applicable technical design conditions;
- Monitor the airworthiness of the ULM identified under the FI: analyse manufacturing problems or occurrences encountered in service, define the necessary corrective actions and make them available to the persons concerned.

In case of a control or accident, if a non-compliance with the regulation is detected, or a safety defect related to the design of the ULM or the manufacture of the wing, its responsibility may be sought.

In this document, "manufacturer" will designate the applicant and future holder of the FI.

#### 4.3 - Mandate

The applicant for the FI may be supported by a partner to assist him or her in the process of obtaining the FI.

This partner must be notified to DSAC, specifying the areas for which, if any, he is entitled to act on behalf of the manufacturer and to engage the manufacturer's liability.

The DSAC has published a standard template of mandate.

However, regardless of the prerogatives granted to the authorised representative, the application forms for the FI (R8-ULM-F101) and the descriptive elements (R8-ULM-F001) must be signed by the manufacturer himself, because of their essential role in the FI issuance process.

In addition, since the manufacturer's liability may be engaged by the actions of its authorised representative, the manufacturer must be in copy of all exchanges with the DSAC.

#### 4.4 - Group request of FI for a same model of wings in different size.

In the case of the same model of wing with several sizes, it is recommended to send only one R8-ULM-F101 form specifying in the section "Model name" all the sizes involved in the application:

#### Information about the microlight

| Model name:      |       |  |
|------------------|-------|--|
| Class: 1 – paran | notor |  |

On the other hand, it is necessary to send as many R8-ULM-F001 forms (description of a microlight) as wing sizes for the model.

Refer to § 4.5 below for the possibility of paying the fee only once if the application covers several sizes of the same model at the same time.

#### 4.5 - Fee

Pursuant to the order dated 28 December 2005 on fees for services rendered by the State for the safety and security of civil aviation (<a href="https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000457102">https://www.legifrance.gouv.fr/loda/id/JORFTEXT0000000457102</a>), the issue of an FI is subject to the payment of a 100€ fee.

It is strongly recommended to make an online payment on <a href="https://redevances.aviation-civile.gouv.fr/tous-les-produits/ulm/constructeurs-d-ulm-de-serie.html">https://redevances.aviation-civile.gouv.fr/tous-les-produits/ulm/constructeurs-d-ulm-de-serie.html</a>.

Payment methods are described in the <u>ULM fee form</u>; this form must be attached to the request for payments by bank transfer. In case of an online payment, the invoice can be downloaded on the payment website once payment has been successfully completed and must be attached to the request.

Important: the <u>simultaneous</u> submission of an application for several FI corresponding to several sizes of the same wings model gives rise to the payment of a single fee of 100€.

#### 4.6 - Nature of checks carried out by DSAC

Upon receipt of the application file, DSAC ensures that it contains the various documents required and carries out simple consistency checks between those documents (refer to checklist in § 5). It also verifies that the declared characteristics of the ULM comply with the limits defined in the ULM order.

As stated in the ULM order, the FI is only issued based on the applicant's conformity statement. The issuance of the FI does not mean in any way that DSAC has validated the content of the technical file, which remains under the sole responsibility of the applicant.

The technical file is kept for archiving purposes only and may be consulted by the DSAC or handed over to the competent authorities (e.g. BEA, judiciary authorities) in particular in the event of an accident.

#### 4.7 - Document management

In order to facilitate the processing of the FI application, here are some rules to be observed:

- The date of signature/editing of documents (or drafts) must be updated with each evolution of these documents (or drafts)
- For documents with a version number (in particular user and maintenance manuals): if the document has not been circulated outside the exchanges between the applicant and the DSAC (i.e. it can be considered as a working document at draft stage) then it is not necessary to update this version number (the date of the document must be updated instead). In case the document has been officially released, whether publicly (e.g. publication on the manufacturer's website) or in a restricted manner (individual distribution to one or more users), the version number AND the date of the document shall be updated.

Form R8-ULM-F101 for the serial FI application shall constitute the manufacturer's formal commitment to the accuracy and validity of the technical file. Consequently, its date of signature must be posterior to the dates of signature/editing of all the other documents contained into the application dossier. To avoid the applicant having to fill in this form a significant number of times, it is possible to resend it once the file has been completed.

# 5 - Checklist

| Form / document                              | Key point  | Status                             | Comment  |
|--|--|------------------------------------|--|
| R8-ULM-F101 FI request form                  | Is the applicant the designer and manufacturer of the wing?  | ☐ Yes / ☐ No                       | Refer to guide § 4.2 If not, the applicant must give explanations on his/her links with the designer and/or manufacturer, enabling him/her to fulfil his responsibilities as holder of an ULM FI.  |
|  | Are all the sizes of the wing concerned by the application mentioned?  | ☐ Yes / ☐ No                       | Refer to guide § 4.4   |
|  | Is the signatory an employee of the applicant and not a representative?  | ☐ Yes / ☐ No                       | Refer to guide § 4.3   |
|  | Is the date of signature clearly specified and posterior or equal to all dates specified in the attached technical documents?  | □ Yes / □ No                       | Refer to guide § 4.7   |
| R8-ULM-F001 description of a microlight form | Is the signatory an employee of the applicant and not a representative?  | ☐ Yes / ☐ No                       | Refer to guide § 4.3   |
|  | Does the maximum weight comply with the limits of the ULM order?   | □ Yes / □ No                       | Reminder of the maximum weight limits of the ULM order:  Single seater Two-seater  Without parachute 300kg 450kg  With parachute 315kg 475kg   |
|  | If the weight exceeds 300kg for a single seater or 450kg for a two-seater, is the box indicating that the safety parachute is mandatory ticked?  | ☐ Yes / ☐ No /<br>☐ Not applicable | If so, the user manual must recall the obligation for the ULM to be equipped with a safety parachute, specifying that it is the responsibility of the holder of the ULM identification card to ensure that the installation of the parachute complies with the <u>additional technical conditions</u> related to safety parachute (especially: label alerting emergency services to the pyrotechnic system). |
|  | Does the Other limitations field include all the relevant criteria to ensure compatibility between the wing covered by the FI and the trike and power unit that the end user will use? | □ Yes / □ No                       | Refer to guide § 4.1 Indicate at least the maximum power allowed for the engine (limit value of the ULM order, or a lower value if necessary) Reminder of the ULM order limits: 60kW for a single seater ULM, 75kW for a two-seater ULM. If necessary, refer to detailed criteria in the user manual.  |
|  | Is the minimum anchorage strength the strength of each anchorage point?  | ☐ Yes / ☐ No                       |  |
| Proof of payment of the fee                  | Is the appropriate document provided?  | ☐ Yes / ☐ No                       | Refer to guide § 4.5   |

|  | Is a sustained loading test report provided?   | ☐ Yes / ☐ No                       | Required by the ULM instruction.   |
|--|--|------------------------------------|--|
| Proof of structural strength: sustained loading test | Was the test carried out in accordance with EN-926-1 standard?   | □ Yes / □ No                       | If not, the applicant must justify that the approach used provides an equivalent level of safety.  |
|  | Is the tested aircraft model exactly the same as the requested aircraft model?   | □ Yes / □ No                       | If not, provide a justification explaining how the test(s) carried out is/are relevant to the model requested.   |
|  |  |                                    | Maximum load validated: § 4.5.2 of EN-926-1 expected that the measured load exceeds the validated load either for 3 seconds cumulated or 10 times.   |
|  | For the size tested, is the maximum weight requested for the FI suitable with the load validated during the test?        |                                    | Maximum weight allowed: the ULM instruction requires a limit load factor of at least +3.5g and a safety coefficient of at least 1.5, that is an extreme load of at least +5.25g. So, the load validated during the test (according to requirement above) must be divided by at least 5.25 to get the paramotor maximum weight allowed. |
|  | Has a safety coefficient been applied for the wing sizes other than the aircraft model tested?                           | ☐ Yes / ☐ No /<br>☐ Not applicable | § 4.2 of EN-926-1 requires a coefficient of 0.9.   |
|  | Is a shock loading test report provided?   | $\square$ Yes / $\square$ No       | Required by the ULM instruction.   |
|  | Was the test carried out in accordance with EN-926-1 standard?   | □ Yes / □ No                       | If not, the applicant must justify that the approach used provides an equivalent level of safety.  |
| Proof of structural strength: shock loading test     | Is the tested aircraft model exactly the same as the requested aircraft model?   | ☐ Yes / ☐ No                       | If not, provide a justification explaining how the test(s) carried out is/are relevant to the model requested.   |
|  | For the size tested, is the maximum weight requested for the FI suitable with weak link value tested?                    | □ Yes / □ No                       | § 4.1.1 of EN-926-1 standard defines breaking loads of the weak link based on total weight in flight.  |
|  | Has a safety coefficient been applied for the wing sizes other than the model tested?                                    | ☐ Yes / ☐ No /<br>☐ Not applicable | § 4.2 of EN-926-1 requires a coefficient of 0.9.   |
| Flight tests   | Are flight test report(s) provided?  | $\square$ Yes / $\square$ No       | Required by the ULM instruction.   |
|  | Do the reports provided cover the model and all the sizes of wing requested?   | □ Yes / □ No                       | If not, provide a justification explaining how the test carried out is relevant to cover the model and all the sizes of the FI request.  |
|  | Do the flight tests cover the requirements specified in §§ 7.1.1 and 7.3.1 of the ULM instruction?                       | □ Yes / □ No                       |  |
|  | Do the reports provided cover the maximum engine power allowed for each size of wing?                                    | ☐ Yes / ☐ No                       |  |
|  | If a single maximum engine power has been defined for a size of wing, is this power suitable for the whole weight range? | ☐ Yes / ☐ No /<br>☐ Not applicable | If not, it is possible to define, in the "Other limitations" field of form R8-ULM-F001, different engine power limits per weight group.  |

| User manual        | Does the manual include, for each size of wing of<br>the FI request, the following data: weight range<br>(for paramotor use), flat surface, maximum<br>engine power (kW)? | ☐ Yes / ☐ No                       | Required by the ULM instruction.   |
|--------------------|---|------------------------------------|--|
|                    | Is the safety parachute information mentioned?  | ☐ Yes / ☐ No /<br>☐ Not applicable | Refer to comment about maximum weight of R8-ULM-F001 form "description of microlight". |
|                    | Are the normal and emergency procedures in motorised version explained?   | □ Yes / □ No                       |  |
|                    | Are all the restrictions in the "Other limitations" field of the FI recalled?   | □ Yes / □ No                       |  |
|                    | Does the manual include all the important information relating to paramotor performances, handling and stability?   | ☐ Yes / ☐ No                       |  |
|                    | Do all the instructions ensure that the pilot remains within the flight envelope?   | □ Yes / □ No                       |  |
| Maintenance manual | Are the periodic maintenance operations specified, as well as their deadlines (flight hours and/or time period since the last check)?                                     | □ Yes / □ No                       |  |