



NORWEGIAN DEFENCE MATERIEL AGENCY

MILITARY AIRWORTHINESS AUTHORITY – NORWAY

MAA-NOR reference:

MILITARY UAS TECHNICAL APPROVAL CERTIFICATE

1. UAS operator

1.1 Operator registration number	
1.2 Operator name	
1.3 Name of the accountable officer/person	
1.4 Point of contact	
Name	
Telephone	
Email	

2. UAS data

2.1 Manufacturer		2.2 Model	
2.3 Type of UAV			
2.4 UAV category according to BLF Annex 6			
2.5 Serial number or, if applicable, UAV registration mark <small>Applicable to UAS Specific S1 and S2</small>			

3. Technical approval terms

The UAS defined in **Block 2** and **Block 5** is assessed as airworthy according to the following conditions and limitations:

as long as it remains in compliance with the information in this form and the **Bestemmelse for militær luftdyktighet, BLF**.

To operate the UAS, a separate operational approval is required.

4. Approval

4.1 Technical approval number	
4.2 Expiry date	
Date	Signature and stamp <p style="text-align: center;">_____ Jon A. Olsen Head of Military Airworthiness Authority – Norway</p>

5. UAV characteristics

Physical Characteristics

5.1 Max characteristic dimension	m	5.2 Maximum take-off mass	kg
5.3 HW configuration		5.4 SW configuration	

Flight Envelope / Performance

5.5 Cruise airspeed	m/s (kt)	5.6 Maximum airspeed	m/s (kt)
5.7 Maximum range	m	5.8 Maximum altitude	m (ft)
5.9 Maximum endurance	hrs	5.10 Glide ratio (L/D)	
5.11 Maximum kinetic energy	J		
5.12 Communication maximum range	m	5.13 Communication frequency band	

Limitations

5.14 Operating Environment	<i>Flight test</i> <i>Operational</i> <i>Other:</i>	5.15 Airspace	<i>Danger area</i> <i>Civilian airspace</i> <i>Other airspace:</i>		
5.16 Temperature limitations	Min. °C Max. °C	5.17 Precipitation limitation	Max. mm/hr		
5.18 Wind limitations	(Maximum values in m/s (kts))	<u>Headwind</u>	<u>Crosswind</u>		
		<u>Gusts</u>			
		<i>Flight</i>	()	()	()
		<i>Launch</i>	()	()	()
		<i>Recovery</i>	()	()	()

Documentation & international recognition

5.19 Alternative documentation for equivalent to EU C0 - C3 <small>Applicable to UAS Open A1 - A3 and Specific S1 that are <u>not marked</u> with class C0 – class C3 according to EU regulation 2019/945</small>	
5.20 Risk assessment report <small>Applicable to UAS Specific S1 and S2</small>	
5.21 Design verification report <small>Applicable to UAS Specific S2</small>	
5.22 User documentation	
5.23 Nations where the UAS is in service	

6. Applicant remarks

7. Applicant statement

I, the undersigned, hereby declare that

- the information provided in this application to my knowledge is correct*
- any referenced documentation, on request from the MAA-NOR, can be presented*

Date

Signature and stamp

MAA-NOR Form UAS Guidelines

By *TECHNICAL APPROVAL* is meant **Airworthiness approval**.

If some information submitted as part of the application is classified, it can be submitted in a classified attachment to the form.

In this case, fill in the reference to the attachment, and in the attachment refer to the block number of the form.

All blocks on grey background shall be completed by the applicant.

All blocks on blue background shall be completed by MAA-NOR.

1. UAS operator data

The **operator** is the organisation that uses the aircraft.

1.1 **UAS operator registration number** is provided by MAA-NOR.

1.2 The *UAS operator name* shall be an identifiable unit within the Norwegian defence sector.

1.3 The name of the person with authority for assuring correct usage and maintenance of the UAS in compliance with the information given in this form, e.g. *Avdelingsjef* or other managerial position at the appropriate level.

1.4 Contact details of the person responsible for the actual use of the UAS, to answer possible technical questions raised by the MAA-NOR.

2. UAS data

2.1 Fill in the name of the manufacturer.

2.2 Fill in the model's name, as defined by the manufacturer.

2.3 Select one of the five types of UAS from the pull-down menu.

2.4 Select one of the UAS category as defined in BLF from the pull-down menu.

2.5 Applicable to UAS Specific S1 and S2

If known, fill in the serial number(s), or UAV registration marks, of the units relevant for this application. If not sufficient space, fill in the document reference to the complete list of serial numbers/registration marks, and attach this document to the application.

If this information is not available at the time of application, provide a separate list when known.

Otherwise fill in **n/a**.

3. **Technical approval terms** are the conditions and limitations for the use of the UAS, as mandated by MAA-NOR.

4. **Approval** is completed by MAA-NOR.

5. UAS characteristics

5.1 Fill in the maximum dimensions of the UAV in meters

- for aeroplanes: the length of the wingspan
- for helicopters: the diameter of the rotor
- for multicopter: the maximum distance between the tips of two opposite rotors

5.2 Fill in the value, expressed in kg, of the UAV maximum take-off mass (MTOM).

5.3 Fill in the part number with version/revision/mark at the time of application.

Alternatively, refer to the documentation providing this information and attach this to the application.

5.4 Fill in the version/revision of the UAS control SW at the time of application.

Alternatively, refer to the documentation providing this information and attach this to the application.

5.5 Fill in the typical cruise airspeed, expressed in m/s and kt in parentheses.

5.6 Fill in the maximum cruise airspeed, expressed in m/s and kt in parentheses.

5.7 Fill in the maximum range.

5.8 Fill in the maximum altitude.

5.9 Fill in the maximum flight endurance in hours.

5.10 Fill in the glide ratio during unpowered flight (gliding).

5.11 Fill in the maximum kinetic energy in Joules that the UAV represents in terms of the maximum TOM and the maximum airspeed that the UAV may obtain in powered flight using the formulae $E = \frac{1}{2} \times m \times v^2$, where

m is the MTOW
 v is the maximum airspeed

- 5.12 Fill in the maximum communication range for the remote control link.
- 5.13 Fill in the communication band(s) that are used for the remote control link.
- 5.14 Select the intended operating environments.
If *Other* is selected, fill in a description in the provided field.
- 5.15 Select the intended operating environments.
If *Other airspace* is selected, fill in a description in the provided field.
- 5.16 Fill in the applicable temperature range limits for operation, as provided by the manufacturer.
- 5.17 Fill in the applicable maximum precipitation level limit for operation, as provided by the manufacturer.
- 5.18 Fill in the applicable maximum wind strengths limits for operation, as provided by the manufacturer.
Note that data must be provided for all three scenarios for all three types of wind.
- 5.19 Applicable to UAS **Open A1 - A3** and **Specific S1** without an EASA C0 – C3 classification (see UAV Category based on EASA definition in BLF Appendix 6):
If the UAS to be approved has not been provided with an EASA C0 – C3 classification by the supplier, so approval is applied for based on **equivalent criteria**s, fill in the reference to this documentation, and attach the relevant documentation to this application.
Otherwise fill in **n/a**.
- 5.20 Applicable to UAS **Specific S1** and **S2** (see UAV Category based on EASA definition in BLF Appendix 6):
Technical approval of this UAS categories will be based on the content of a **UAS Risk assessment report**. A template for this is provided in attachment MAA-NOR Template for UAS Risk assessment report. (Form MUASTA attachment 1).
It is MAA-NOR advice that the content of this attachment is sent to potential UAS suppliers as part of the acquisition preparations for them to provide answers in the form of a **UAS Risk assessment report**. Without satisfactory answers to all questions, a positive outcome of the approval application cannot be guaranteed.
- Fill in the document ID and revision of the Design verification report, and attach it to this application.
Otherwise fill in **n/a**.
- 5.21 Applicable to UAS **Specific S2** (see UAV Category based on EASA definition in BLF Appendix 6):
Technical approval of this UAS category will be based on the content of a **Design verification report**, answering out the set of questions provided in attachment MAA-NOR UAS Design verification report (Form MUASTA attachment 1).
It is MAA-NOR advice that the content of this attachment is sent to potential UAS suppliers as part of the acquisition preparations for them to provide answers in the form of a **Design verification report**. Without satisfactory answers to all questions, a positive outcome of the approval application cannot be guaranteed.
- Fill in the document ID and revision of the Design verification report, and attach it to this application.
Otherwise fill in **n/a**.
- 5.22 Fill in the reference to relevant user documentation for the UAS, and how changes to the documentation is managed and distributed to the operators.
The list below is for guidance, fill in all available documents, also those not mentioned.
- *Flight Manual*
 - *User/Owner's Manual*
 - *Maintenance Program*
 - *Maintenance Manual*
 - *Pre- and Post-flight checklists*
 - *Training syllabus*
- All documents listed shall be attached to this application.
- 5.23 Fill in the names of the nations where it can be documented that the UAS is in service.
The purpose of this information is for the MAA-NOR to be able to benefit from possible recognition agreements in the approval process.