



NORWEGIAN DEFENCE MATERIEL AGENCY
MILITARY AIRWORTHINESS AUTHORITY NORWAY

Telephone: +47 971 99 505

E-mail: maa-nor@mil.no

Web: www.maanor.no

Mail to be registered:
Forsvarsmateriell Luftkapasiteter
Postboks 800, Postmottak
2617 Lillehammer
Norway
E-mail: maa-nor@mil.no

MAIB-NOR 24/03 18 JUL

How to apply for technical approval of a military UAS

Background

Before operating a military UAS in Norway, the UAS type must be approved by MAA-NOR.

The MAA-NOR has recently published new regulations regarding UAS approval. The new requirements are published in the regulation for military airworthiness which can be found under the Regulations tab on the MAA-NOR webpage at <https://www.fma.no/maanor/regulations>.

How to apply

To apply for an approval, the applicant needs to complete the Military UAS technical approval (MUASTA) Form, and submit it to the MAA-NOR.

MAA-NOR has published the application form and templates for attachments to this form, on <https://www.fma.no/maanor/applications/military-uas-technical-approval-application>.

The MAA-NOR expects the Form MUASTA to be completed by the operating organisation.

NOTE also that the operator, in MAA-NOR terminology, refers to the operating organisation, including accountable persons and procedures, and not (only) the individual pilot. Within the Norwegian Armed Forces, this term also includes the MIL UAS CAMO.

UAS categories

The MAA-NOR has introduced the classes OPEN – SPECIFIC – CERTIFIED.

These classes are selected as the military standard across Europe, even if they are not fully implemented at time of writing. By introducing these classes, the MAA-NOR expects to ensure interoperability across nations and to be well suited to industry standards and expectations.

OPEN category

If the MAA-NOR concurs that the UAS belongs in the open category, MAA-NOR will verify whether the UAS type has an existing technical approval that the MAA-NOR can accept. This may include an existing approval from a number of possible sources (e.g. foreign military approval, civil C0 – C3). If you are aware that the UAS type you intend to use, already has an approval as indicated above, remember to include this information in block 5.23 of the MUASTA form.

If the type does not already have an existing technical approval that can be accepted by the MAA-NOR, documentation that shows compliance to civil C0 – C3 requirements published by EASA will be required, as well as any deviations from these requirements.

MAIB-NOR 24/03 18 JUL

The MAA-NOR will expect that a military UAS differs from a civil UAS as a minimum in the software load, enabling the military UAS to operate in danger areas and risk areas (geozones or similar). Other changes, i.e. payload, sensors and so on, is also expected.

When the technical approval has been verified or performed, the MAA-NOR will issue an approval in the form of a signed and stamped form MUASTA to the applicant.

This form MUASTA confirms that the UAS has a technical approval, as well as imposing any limitations.

SPECIFIC category

If the MAA-NOR concurs that the UAS belongs in the specific category, it will be verified that the additional requirements (risk assessment report and design verification report, see below) are satisfied. When this has been verified, the MAA-NOR will issue the approval part of the MUASTA and return to the applicant. The completed MUASTA is the physical evidence of the approval.

Risk assessment report

The Risk Assessment Report (RAR) is applicable to SPECIFIC S1 and S2. It could also be applicable to OPEN if novel technologies or user patterns are foreseen.

The Risk Assessment Report is intended to provide the MAA-NOR documentation regarding technical hazards affecting ground risk and air risk associated with the UAS.

The MAA-NOR expects this document to be prepared by the designer/manufacturer, or an organisation closely affiliated with the manufacturer and with access to design data.

Design Verification report

The Design Verification report (DVR) is applicable to SPECIFIC S2. It could also be applicable to OPEN or SPECIFIC S1 as an alternative AMC to the C0-C3 requirements,

The Design Verification report is intended to provide the MAA-NOR documentation regarding the design of the UAS.

The MAA-NOR expects this document to be prepared by the designer/manufacturer, or an organisation closely affiliated with the manufacturer and with access to design data.

The MAA-NOR does not list a lot of specific requirements in this template, but has chosen a descriptive approach, where the applicant is required to describe the technical solutions implemented in the UAS.

The MAA-NOR will accept a range of different standards, where these are applicable to the risk and safety of the UAS. This may include, but not limited to, EASA requirements (specifically C0 - C3, with expected military adaptations), the relevant STANAGs (4671, 4702 or 4703), as well as other requirement sets.

However, the applicant must assure that all relevant data requested in the DVR, is submitted, and it is highly preferred that any existing document formats are cross-referenced in the DVR format.

Testing, experiments and innovation

An organisation that has a need to modify or design and produce own UAS types or modifications, has the option to apply to the MAA-NOR for an organisation approval. This will include, as applicable to the individual organisation, the quality system related to design, production, testing and aspects of the operation of the UAS. It would normally also include the identification of nominated post holders in the organisation, who are accountable for the activity.

An organisation approved in this way, would normally be awarded privileges to self-approve test configuration within pre-defined limitations.

Contact the MAA-NOR for advice on how to compile a design, production and/or testing quality system.

Approvals

If your UAS satisfies the requirements for a technical approval, the UAS type is allowed to operate within the specified limitation.

NOTE that you still need to adhere to operational requirements for pilot training, operational procedures etc. before you can fly.

If your UAS is in the SPECIFIC category and does not have a satisfactory system for detect and avoid (either on-board or ground-based, or a combination), the UAS type will be limited to operate only in segregated airspace.

Resources and references

For an insight into the ongoing standardisation work within EDA, see:

European Defence Agency (EDA) MIL UAS SPECIFIC STUDY (with further links): [MIL-UAS-SPECIFIC STUDY \(europa.eu\)](#)

For an overview of population densities, see:

Copernicus Global Human Settlement Layer (GHSL): <https://ghsl.jrc.ec.europa.eu/index.php>