

## NAVIGATION APPROVALS – RVSM – MNPS – FANS – RNP 10 – RNP 4

### APPLICATION FOR AN OPERATIONAL APPROVAL/RENEWAL

Please complete the form in BLOCK CAPITALS using black or dark blue ink after reading the attached guidance.

This form is designed to elicit all the required information from those operators requiring **RVSM, MNPS, FANS, RNP 10 and RNP 4** operational approval. Please complete those sections of the form relevant to the approvals required. Sections A and G should be completed in all cases. Completed forms should be submitted to the Flight Operation Section at the address listed on page 8.

Applicants are strongly advised to read the 'Notes for Completion' before completing the form.

<b>Section A</b>	<b>Page 1</b>	<b>Operator/Airframe Details</b>	<b>Completion mandatory</b>
<b>Section B</b>	<b>Pages 2-3</b>	<b>RVSM Operational Approval</b>	<input type="checkbox"/> (tick all that apply)
<b>Section C</b>	<b>Pages 3-4</b>	<b>MNPS Operational Approval</b>	<input type="checkbox"/>
<b>Section D</b>	<b>Pages 4-5</b>	<b>FANS Operational Approval</b>	<input type="checkbox"/>
<b>Section E</b>	<b>Page 5</b>	<b>RNP 10 Operational Approval</b>	<input type="checkbox"/>
<b>Section F</b>	<b>Page 6</b>	<b>RNP 4 Operational Approval</b>	<input type="checkbox"/>
<b>Section G</b>	<b>Page 6-8</b>	<b>Signature Block/Notes</b>	<b>Completion mandatory</b>
<b>Section H</b>	<b>Page 9</b>	<b>Fleet Details Continuation Sheet</b>	<input type="checkbox"/>

#### SECTION A OPERATOR/AIRFRAME DETAILS

##### APPLICANT'S DETAILS – required for all Approval requests

- Please give the official name and business or trading name(s), address, mailing address, e-mail address and contact telephone/fax numbers of the applicant.

##### AIRCRAFT DETAILS – required for all Approval requests

- Aeroplane type(s), series, manufacturer(s) serial number(s), registration mark(s), mode "S" address code(s), date(s) of modification or certification of the airframe(s) for RVSM.

Aeroplane Type	Aeroplane Series	Manufacturer(s) Serial Number	Registration	Mode "S"	RVSM Modification/

(use continuation sheet provided on page 9 if necessary)

## SECTION B RVSM OPERATIONAL APPROVAL

Refer to EASA AMC1. SPA.RVSM.105 operational approval, accompanying Notes, Temporary Guidance Leaflet No 6, Revision 1 See Also ,", ( <http://www.eurocontrol.int/eur-rma>)

3. List those ICAO Regions for which this RVSM Operational Approval request is made. If the applicant wishes to operate in other than the European Region additional (navigation) approvals will be required. Please provide this additional navigation system and system operation information required in the MNPS and/or RNAV sections.

4. RVSM **Airworthiness** Documentation – Give reference(s) of relevant documentation which shows that the above airframes have been modified or certified to the RVSM Minimum Aircraft Systems Performance Specification (MASPS) on the dates given at 2 Above. Mention any relevant EASA Type Certificate if the RVSM-compliant aircraft was certified by EASA.

5. RVSM Training Programs, provide details of training for **maintenance staff**, please provide confirmation that training has been conducted - give references of relevant documentation.

6. Continued Airworthiness (Maintenance Procedures).

Provide references to specific documentation and processes designed to satisfy the Requirements of the following sub-paragraphs in TGL 6 must be provided either here or as an appendix to this application.

*10.1 General.....*

*10.2 Maintenance Programmes.....*

*10.3 Maintenance Documents.....*

*10.4 Maintenance Practices.....*

*Appendix 4, Training Programmes and Operating Practices and Procedures, paragraphs 3 and 6...*

7.	Operations Manuals, <b>flight crew</b> training, crew notices – give reference(s) of details Pertinent to RVSM operations in the proposed area(s) of operation. <b>Include with submission Copies of relevant sections from Ops and Training Manuals.</b>
8.	Minimum Equipment List – reference of MEL where RVSM operations are addressed
9.	<p><b>Note: Only applicable to Airframe that has not been previously Verified to comply with RVSM.</b></p> <p>Plan for Participation in Verification/Monitoring Programs – As a minimum provide contact details of appropriate specialist who understands the requirements of, and the reason for EUR RVSM requirements. This specialist will need to be aware of the requirements to advise the authority of fleet changes as soon as they occur and will also need to be readily contactable should routine monitoring show aberrant or unacceptable height keeping performance of an airframe.</p>
10.	What is the Proposed Date for the commencement of RVSM operations?

SECTION C MNPS OPERATIONAL APPROVAL	
<p>MNPS Approval can only be granted to operators who are already RVSM approved or who are applying concurrently for RVSM Approval. Refer to the accompanying notes and to the latest edition of "The MNPS Airspace Operations Manual" available on the Internet – excerpts from this manual could be used for an operator's "operations manual". See <a href="http://www.nat-pco.org">http://www.nat-pco.org</a></p>	
11.	Operations Manuals, flight crew training, crew notices – give reference(s) of details pertinent to operations in NAT MNPS Airspace. <b>Include with submission copies of relevant sections from Ops and Training Manuals.</b>
12.	Minimum Equipment List – reference of MEL where MNPS operations are addressed.

13. Give details of Flight Crew Training for NAT MNPS operations, Ref OM-D and CBT or other Programmed Instructions.

14. Long Range Navigation equipment details (See 'Notes for Completion', Para 14)

#### SECTION D FANS OPERATIONAL APPROVAL

FANS operational Approval can only be granted to Operators who are already RVSM and MNPS approved. FANS approval refer to ICAO DOC, Global Operational Data Link Document (GOLD), FAA AC 120-70B and for PBN ICAO Doc 9613, Recommended for Flight Crew training is ICAO CBT <http://www.icao.int/safety/pbn/Pages/default.aspx> (PBN Overview and PBN Airspace Design).

16. Give details of Related Aircraft SB or TC or STC for Technical Status of capability for SAT Com.

17. Give details of Related Aircraft Capability for PBN, list Equipment and Software Status Ref to Manufacturers SB and References.

18. Give details of Flight Crew and Maintenance personnel FANS and PBN Training.

19. Minimum Equipment List – Give Reference where FANS Operations are Addressed.

20. Give details how Navigation and Communication Systems integrity is assured during Preflight.

#### **SECTION E RNP 10 OPERATIONAL APPROVAL**

RNP 10 implementation is applied to those Oceanic/Remote phases of flight where ground based navigation aids do not normally exist. Acceptable Means of compliance refers to EASA AMC 20-12 which refers to FAA Notice 8400-12C as an acceptable means of compliance as well as ICAO Doc 9613-AN/937 for RNP 10 Approval.

( see, <http://www.faa.gov/documentLibrary/media/Order/8400.12.pdf>).

21. Operations Manuals, flight crew training, crew notices – give reference(s) of details pertinent to Operations in RNP 10 airspace. Include with submission copies of relevant sections from Ops and Training Manuals.

22. Minimum Equipment List – reference of MEL where RNP 10 operations are addressed.

23. Long Range Navigation equipment details if different from Para 14, (See 'Notes for Completion', Para 14).

24. Give reference of confirmation of RNP 10 eligibility. Include with submission copies of relevant sections from Aircraft Flight Manuals or evidence from navigation system manufacturers.

## SECTION F RNP 4 OPERATIONAL APPROVAL

RNP-4 is applied to those Oceanic/Remote phases of flight where Airspace Navigational Performance requires its use.

Refer to FAA DOC 8400.33,( [http://www.faa.gov/documentlibrary/media/order/8400\\_33.pdf](http://www.faa.gov/documentlibrary/media/order/8400_33.pdf))  
ICAO Annex 6 and Doc 9613

25. Give Aircraft Manufacturers references/compliances with RNP-4 in AFM, TC or STC.

26. Give references to Aircrafts conformity to PBN System which include "On board Monitoring and Alerting" Function of the FMS (Paragraph 19) Dual independent GNSS equipment is required and an approved dispatch fault detection and exclusion (FDE) availability prediction program must be used. Ref.ICAO Doc 9613AN/937 paragraph 1.3.2.2.2 b)

## SECTION G SIGNATURE BLOCK

Signature:

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Name (BLOCK LETTERS):

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Appointment:.....

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Date:.....

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Please note that a **minimum** of 30 working days will normally be required to check and confirm the information given above - If data is missing or omitted the process may take considerably longer.

## FORM FRD 021 – NOTES FOR COMPLETION

### SECTION A – COMPLETION OF SECTION A IS MANDATORY FOR ALL

**APPLICATIONS Paragraph 1** – For AOC holders - company name, AOC number

and e-mail address will suffice.

**Paragraph 2** – This information is required by both the State of Registry for the State RVSM Approvals database and by the verification and monitoring programme office(s) of the appropriate ICAO Region(s). Enter Mode 'S' code (if assigned) in hexadecimal format -see also paragraph 10.

### SECTION B – RVSM APPROVAL

TGL 6 (rev1) is available on the Internet – see <http://www.eurocontrol.int/eur-rma> (Note that this Web site contains much additional information about EUR-RVSM and has links to other RVSM regions Web sites).

**Paragraph 3** – RVSM Operations have been conducted in the North Atlantic (NAT) region since 1997, in Europe (EUR) since 2001 and in the whole of North America (NAM) since early 2005. RVSM operations are now conducted in all the world's ICAO regions. Specific details regarding the areas of applicability within each region can be found in ICAO Doc 7030/4 – Regional Supplementary Procedures.

**Paragraphs 4, 5, 7 and 8** – Details in these paragraphs are required so that the appropriate flight operations inspectors, design and aircraft maintenance standards evaluators, etc.) are able to confirm the RVSM compliance data.

**Paragraph 6** – Further investigation of Continued Airworthiness (Maintenance Procedures) **cannot** commence until such time as the information at Paragraph 6 has been provided. In addition to the information requested, amendments to your company EASA 965/2012 – Maintenance Management Exposition. These amendments must define the procedures to be followed for initial and continued RVSM approval.

**Paragraph 9** – linked with paragraph 2. See TGL 6 or the AIC for further details. A major requirement of the verification and monitoring programs is for the airframe details of an operator's RVSM approved fleet to be kept up-to-date.

### SECTION C – MNPS APPROVAL

**Paragraphs 11, 12 and 13** – Details in these paragraphs are required so that the appropriate flight operations inspector specialists are able to confirm MNPS compliance.

**Paragraph 14** – Suitable Long Range Navigation Equipment for NAT MNPS or RNP 10 airspace includes IRS/INS and certain GPS equipment. If the Long Range Nav Equipment has to work through an FMS this must also be included, together with details of the software version, if applicable.

An example of an acceptable entry would be:

“XXX (Model Number) Inertial Reference System with a YYY (Model Number) Flight Management Guidance Computer (where “XXX” and “YYY” represent the manufacturer’s names). Inertial alignment limits are 60° South and 76° North latitudes. Software part number is (Part Number).”

Or

“ZZZ (Model Number) GPS Navigation System with a YYY (Model Number) FMS. Software part number is (Part Number).” Such an entry would need to be supported with documentation that shows that the GPS “engine” meets the specifications in FAA Notice 8110.60 or FAA Advisory Circular 20-138A, Annex A.

## SECTION E – RNP 10 APPROVAL

**Paragraphs 15 and 16** – Details in these paragraphs are required so that the appropriate ICETRA specialists (flight operations inspectors) are able to confirm RNP 10 compliance.

**Paragraph 17** – Please include details in the format requested in Paragraph 14 above. Note: RNP 10 operations require the carriage of at least dual independent, long range navigation systems.

**Paragraph 18** – The ICETRA will accept aircraft eligibility for RNP 10 operations through RNP certification.

## SECTION F – RNP 4 APPROVAL

Paragraph 19 - Dual independent GNSS equipment is required and an approved dispatch fault detection and exclusion (FDE) availability prediction program must be used.

## SUBMISSIONS AND ENQUIRIES

Address for submissions:

Icelandic Transport Authority / ICETRA  
Flight Safety Division  
Skógarhlíð 12  
105 Reykjavík  
Iceland

Contact details for enquiries:

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