

SERVICE DATASHEET

ISO7 Cleanroom

PROJECT TITLE	-
PROJECT REF.	FAC2020
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ISSUE	01_00
DATE OF ISSUE	10/01/2020
STATUS	Issued
TYPE	Service Datasheet, Non-Confidential
REFERENCE	FAC2020-RR-PQA-FI-003_01_00

CUSTOMER(S)	-
CONTRACT REF.	-
CUSTOMER ID.	-

Template file ref.: QUA2020-RR-PQA-SS-001_i01

APPROVAL

Issue	Date	Signatures		
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DISTRIBUTION LIST

Company	Name	No. of copies
N/A	N/A	N/A
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CHANGE LOG

Reference	Date	Issue	Revision
FAC2020-RR-PQA-FI-003_01_00	10/01/2020	1.0	1

CHANGE RECORD

Issue: 1.0	Revision: 1		
Reason for change	Date	Page	Paragraph(s)
N/A (initial release).			

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1 Purpose and Scope

The present document provides detailed technical information about the ISO7 Cleanroom for space engineering related activities operated by REMRED Space Technologies Ltd. used for ECSS-conform space equipment production and assembly in the following cases:

- Space equipment soldering activities;
- Space equipment assembly activities.

The definitions and glossary of terms from ECSS-S-ST-00-01C [AD 1] apply to this document.



Figure 1 – The ISO7 Cleanroom and ISO8 airlock

2 Application and Key Features

2.1 APPLICATION

- ✓ Space equipment components cleaning and preparation
- ✓ Space equipment electronics ECSS-conform soldering
- ✓ Space equipment assembly activities
- ✓ Space equipment flight unit storage

2.2 KEY FEATURES

- ✓ **ISO7 validated environment with environment control and monitoring system**
 - Temperatures, humidity, air pressures and events are measured and logged
 - Calibrated Portable Airborne Particle Counter
- ✓ **ISO8 validated access airlock system and material airlock box**
 - Temperatures, humidity, air pressures and events are measured and logged
- ✓ **ECSS conform soldering station including**
 - Stereozoom soldering microscope
 - Soldering station with temperature control
 - Fume extractor
 - Digital soldering tip measurement unit
 - Calibrated portable airborne particle counter
 - Purified N2 available for cleaning purposes
- ✓ **Space equipment assembly station including**
 - Assembly tools
 - Calibrated torque drivers
 - Calibrated torque meter
 - Calibrated portable airborne particle counter
 - Purified N2 available for cleaning purposes
- ✓ **Safe and controlled storage area for any space flight units**
- ✓ **ESD-safe working environment with ESD-tester station**
- ✓ **High level of safety assurance**
 - The Cleanroom is located at a closed, guarded site with limited number of access
 - Every area is video controlled
 - Any access to the Cleanroom area is logged
- ✓ **ECSS certified soldering personnel and inspectors are available upon request through our partners**

3 Accreditation and Audits

Table 4 – Accreditation and Audits

Code	Title	Type	Validity	Remarks
ISO 9001:2015	Quality management systems	Accreditation planned	N/A	Accreditation is in progress
ISO 17025:2018	General requirements for the competence of testing and calibration laboratories	Accreditation planned	N/A	Accreditation is in progress
ECSS-Q-ST-20-07C [AD 2]	Quality and safety assurance for space test centres	Audit by ESA	N/A	Audit was performed in 2018

4 ANNEX A – ISO7 Cleanroom

You find here the Vibration Test System related mechanical interface information for designing the mount of the test item and related accelerometers.



Figure 2 – Cleanroom control and monitoring system (in the ISO8 airlock)



Figure 3 – Cleanroom soldering workstation (with environmental parameter indicators on the wall)



Figure 4 – Cleanroom cleaning and assembly workstation with material airlock box

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5 List of Abbreviations

AD	Applicable Documents
ECSS	European Cooperation for Space Standardization
RD	Reference Documents

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8 References

8.1 APPLICABLE AND NORMATIVE DOCUMENTS

Table 2 – Applicable and Normative Documents

AD	Title	Reference	Version
[AD 1]	ECSS system - Glossary of terms	ECSS-S-ST-00-01C	1 Oct 2012
[AD 2]	Space product assurance - Quality and safety assurance for space test centres	ECSS-Q-ST-20-07C	1 Oct 2014

8.2 REFERENCE DOCUMENTS

Table 3 – Reference Documents

RD	Title	Reference	Version
[RD 1]	-	-	-