

RFD/RFW Number:	FLX-RFD-ALM-CU-0006	Issue	1.0
------------------------	----------------------------	--------------	------------

Spacecraft / Project	FLORIS	Originator's Name	Thomas Gandy	
System / Experiment / Model	FLEX	Signature / Date		
Sub-System		Request Type (Highlight applicable request)	Waiver (RFW)	Deviation (RFD)
Assembly	EQM/PFM	Organisation	Almatech	
Sub-Assembly	Calibration Unit	Ref. Doc. / Drwg No.	ALM-PRO-4162	
Item	-	References	-	
Serial No.	PFM			

RFW/RFD Title	Cleanroom Conditions
----------------------	-----------------------------

End Items(s) Affected (Hardware, Software)				
Name	CI-Number	Model(s)		
Calibration Unit		PFM		
Requirement / Interface Documents Affected				
Specification/Drawing Title	Number	Issue	Date	App. Paragraph
FLORIS Cleanliness requirement for subcontractor	FLX-RS-FNM-INS-0028	3	25.07.2017	5.2
Description of Deviation / Discrepancy / Non-Conformance				
<p>FLO-GEN-CLE-REQ-016 requirement says :</p> <p><i>All AIT activities, starting with the assembly of components to subsystems, shall be performed in environmentally controlled areas (cleanrooms), classified and periodically verified in accordance with FED-STD-209E standard (R3). Particular attention shall be paid, but not limited, to:</i></p> <ul style="list-style-type: none"><i>existing overpressure between cleanrooms and surrounding environment;</i><i>monitoring of cleanroom air by means of particle counters;</i><i>temperature and humidity monitoring;</i><i>correct use of garments, facilities and training of personnel;</i><i>ESD protection tools.</i><i>Upon request, contractor shall provide evidence and traceability of the fulfilment of the above conditions / requirements through area logbooks and / or applicable internal procedures / reports.</i> <p>Almatech is partially compliant to this requirement as explained below :</p> <p>Almatech cleanroom is certified as per ISO14644 Class 5.</p> <p>This certification implies :</p> <ul style="list-style-type: none">- No overpressure is measured.- A particulate contamination monitoring is done only twice a year to recertify the cleanroom.- Temperature and humidity is recorded but no alarm is set on the values.- No ESD protection foreseen. <p>In addition, Sub-systems like motor, microswitches, harmonic drive are not assembled in cleanroom by suppliers. These are integrated in the calibration unit in cleanroom in Almatech</p>				
Other Items or Requirements (Potentially) Affected				
None				

RFD/RFW Number:
FLX-RFD-ALM-CU-0006
Issue
1.0
Need for RFW/RFD and Rationale for Acceptance

Here are the justifications for the points mentioned above.

- Overpressure: the air flow has been demonstrated to be laminar by test.
- A particulate contamination monitoring is done only twice a year to recertify the cleanroom according to ISO14644 requirements.
- Temperature and humidity is recorded but no alarm is set on the values. No ESD sensitive items is identified.
- No ESD protection foreseen as no ESD sensitive items are identified at the moment.

With regards to the sub-systems. These are manufactured in standard environment with no opportunity to manufacture them in cleanroom.

They are of course cleaned at arrival at Almatech and processed in cleanroom from this stage.

RFW/RFD CLOSED	Name	Sign & Date	
		Approved	Rejected
Project Manager / Engineering: (Sub System)	Gianluigi Capo		
Engineering: (Almatech)	Marco Lai		
Product Assurance: (Almatech)	Thomas Gandy		
Project Manager: (Leonardo)			
Engineering: (Leonardo)			
Product Assurance: (Leonardo)			
Engineering (ESA)			
Contract Manager (ESA)			

Continuation sheet: