Company A

Subsystem requirement specification:

Pod structure

Terma Case

Version history

Version	Date	Name	Changes
V 0.1	*29-09-10*	*Søren*	*Initial document.*
V 0.2	*29-09-10*	*Søren*	*Added Introduction, Scope of delivery, System requirements and Traceability requirements.*
V 0.3	*05-10-10*	*Nikki*	*Added Subsystem Requirement Traceability Matrix*

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1 Introduction

This document is a specification of the requirements and a system overview for a pod structure. The pod is a subsystem, which is contained in larger system called the "Self Protection Suite" to the Royal Danish Airforce.

1.1 Purpose

The purpose of this document is to state the requirements for a pod structure based on the requirements from the Terma Case document.

1.2 Glossary

Abbreviation	Name	Explanation
AMC	Aircraft Mission Computer	The airplanes main computer.
DSS	Digital Sequencer Switches	A unit, which are used to fire payloads and have two magazines is attached.
MWS	Missile Warning System	Fully developed unit (Government Furnished Equipment)
PCU	Power Control Unit	Power supply to the units in the SPS.
SPS	Self Protection Suite	The name of the overall system, where the POD structure is included.

1.3 Referenced documents

- Terma Case document
- FAQ - Terma Case
- System specifikation - [SS-1]
- Subsystem Requirement Traceability Matrix

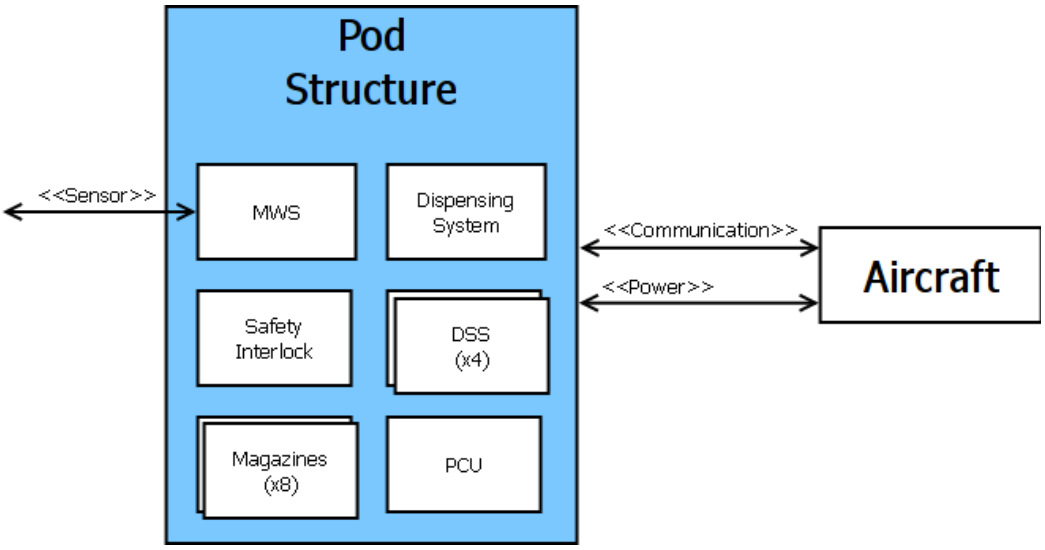
2 Scope of delivery

The pod is subsystem or a larger system to protect the pilot from missile attacks and other

threats in the air.

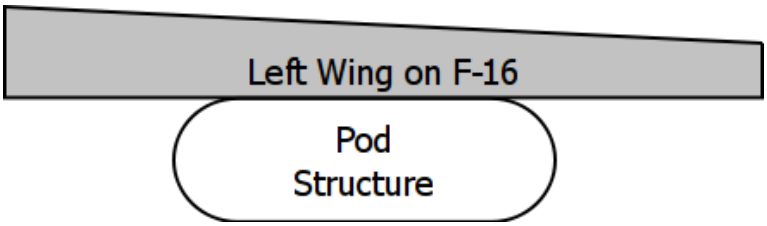
2.1 System overview

The pod contains several components and have a interface to the aircraft, which can control the dispensing system, the PCU and the MWS. To be able to physically contain these components, we request a pod structure with certain requirements (*see 3 System requirements)*.



2.2 Physical placement

The pod structure meant to be mount on the left wing on F-16.



3 System requirements

The purpose of the pod structure is to be mounted on the left wing on a F-16 aircraft with certain requirements. The requirements are categorized into following topics:

- **Physical Interface**: The requirements to interface with the F-16 aircraft.
- **Specification of physics**: The requirements of weight and dimensions.
- **Environmental requirements**: The set of requirements which deal with conditional

demands to the pod structure.

3.1 Physical interface

Requirement ID	Requirement
SS-POD-RQ-1	The pod structure shall allow to dispense payloads forwards, downwards and sideways
SS-POD-RQ-2	The pod structure shall have physical openings to reload the magazines.
SS-POD-RQ-3	The pod structure shall have a physical opening to remove and insert a safety interlock.
SS-POD-RQ-4	The pod structure shall be mounted on the F-16 left wing with standard T-Hooks spaced by 13 inches.
SS-POD-RQ-5	The pod structure shall have one opening for 6 discrete signal wires to the inner compartment.
SS-POD-RQ-6	The pod structure shall have one opening for a shielded data bus of the type MIL-STD-1553-B data bus.
SS-POD-RQ-7	The pod structure shall have one opening for a 115 VAC 400 Hz power cable.

3.2 Specification of physics

Requirement ID	Requirement
SS-POD-RQ-8	The pod structure shall have a weight no larger than 175 kg.
SS-POD-RQ-9	The pod structure shall have a dimension of <*TBD*> x <*TBD*> *x* <*TBD*>
SS-POD-RQ-10	The pod structure shall be physically designed so it does not compromise the operation of the weapon systems on a F-16.
SS-POD-RQ-11	The pod structure shall be able to carry at least 95 kg.

3.3 Environmental requirements

Requirement ID	Requirement
SS-POD-RQ-12	The pod structure shall remain intact when exposed to steady state acceleration levels of 4g fore 2.5 aft, 22g up, 10 down.
SS-POD-RQ-13	The inner compartment of the pod structure shall not exceed a temperature above 70

	C at any time.
SS-POD-RQ-14	The pod structure shall remain intact with operatinal temperatures of 95 C on outer skin and 102 C on leading edge for 25 minutes.
SS-POD-RQ-15	The pod structure shall remain intact at temperatures of 134 C on outer skin and 151 C on leading edge for 3 minutes.

4 Traceability requirements

The requirements in this document are registered together with the initial requirements in the spreadsheet Subsystem Requirement Traceability Matrix.

5 Budget requirements

The total cost of the pod structure (all inclusive) is 2.000.000 DKR.