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# Introduction

This document is referred to from document **ESS-0005826 ICD Fluid Systems - Target Systems** [2] in accordance with [1].

Interfaces between **Target helium cooling** and **Fluids supply & process systems** (within Fluid systems, FS) is described in this document. Interface descriptions included in this document are marked red in figure 1 below.

Note that **Target helium cooling** consists of several sub systems, i.e. PCool, PrC, HeSto, HeRel and HeInj.

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Figure 1. Interfaces included in this document marked in red

# Interface agreement

## Target Helium Primary Cooling pressure control – Fluids supply & process systems

| ID | **PCool-901** | **Helium supply** |
| --- | --- | --- |
| **Requirement** | Pristine helium supply; purity at least 99.95%, flow range 0 – 60 g/s, total available amount without interruption and time delays 100kg, pipe connection DN25. |
| **Rationale/Reference** | Purity level to reach a pure enough helium atmosphere in the systems. Flow range upper value to limit the total time to fill the systems. Total available amount in e.g. a buffer to secure at least one complete evacuation and final filling without interruption and time delays. |

| ID | **PCool-902** | **Nitrogen supply** |
| --- | --- | --- |
| **Requirement** | Nitrogen supply; purity at least 99 %, flow range 0 – 200 g/s, total available amount without interruption and time delays 20kg, pipe connection DN25. |
| **Rationale/Reference** | Purity level to reach a pure enough nitrogen atmosphere in the systems. Flow range upper value to limit the total time to fill the systems. Total amount in e.g. a buffer to secure at least one complete evacuation and final filling. |

# References

1. ESS-0002917 Interface Management Plan
2. ESS-0005826 ICD Fluid Systems - Target Systems

# Document Revision history

| Version | Reason for revision | Date |
| --- | --- | --- |
| 1.0 | New document (using new template) | 2015-04-14 |
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