

DECK012 baseline ring

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The Engineering of DECK012 - Baseline Ring

Document status: Draft (EVOL-00 baseline) **Date:** 2025-08-25 **Applies to:** Earth ONE class sphere station (Ø 127 m)

1. Abstract / Zusammenfassung (EN/DE)

EN: DECK 012 is a baseline pressurized ring providing volume for future systems. It spans $r_i = 49.0$ m to $r_o = 52.5$ m (gross) with 0.5 m structural thickness (net $r_o = 52.0$ m).

DE: DECK 012 ist ein Baseline-Ring für zukünftige Systeme. Er erstreckt sich von $r_i = 49.0$ m bis $r_o = 52.5$ m (brutto) mit 0,5 m Strukturstärke (netto $r_o = 52.0$ m).

2. Baseline Geometry & Environment (EVOL-00)

- **Radial band:** inner radius **49.0 m**, outer radius **52.5 m**, net outer radius **52.0 m**, net deck height **3.0 m** (gross 3.5 m).
 - **Circumference:** ~**307.9 m** (inner) to ~**326.7 m** (outer net).
 - **Gravity:** ~**13.42 m/s²** at net outer radius (EVOL-00 spin law).
 - **Deck role:** TBD.
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3. Open Parameters (TBD/TBC)

- Detailed functional layout & interfaces.
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4. Drawing & Data References

- DECK geometry baseline table.
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