

Review report and certificate – for public disclosure

Life Cycle Assessment of piCLASSIC and piCLASSIC Neo

This document is a redacted version for public disclosure that has been cleared of any confidential content. However, this does not change the factual content, nor the conclusions presented in this report.



REVIEW ORDERED BY:

Fredrik Andersson, Piab

REVIEW PERFORMED BY:

Andreas Asker, Sweco Sverige AB

Certificate of completed third-party review

This report summarizes the results from the third-party review of the project report *Life Cycle Assessment of piCLASSIC and piCLASSIC Neo*, commissioned by Piab, and performed by Miljögiraff. The critical review has been performed by Andreas Asker at Sweco, in accordance with the ISO 14040-44 standard series.

This review report includes a short presentation of the main features of the LCA report and summarises questions and comments that have been communicated during the review.

The verifying party hereby certifies that the results of the performed LCA corresponds to the requirements of ISO 14040 and 14044.

Andreas Asker, Sweco Sverige AB, 2025-04-25

Background, Goal and Scope

Piab has commissioned a life cycle assessment (LCA) of the piCLASSIC and piCLASSIC Neo. The LCA has been performed in accordance with the ISO 14040 standard.

The results will be used internal communication, business, and product development for reduced environmental impact as well as in external communication. Although the results will be disclosed in public, the comparative assertion in this LCA applies only to the two versions of the piClassic and are not intended to be used in comparative assertions with other peer products.

In this critical review, aspects defined in the ISO-standard for LCA (ISO 14040:2006 *Environmental management - Life cycle assessment - Principles and framework* and ISO 14044:2006 *Environmental management - Life cycle assessment - Requirements and guidelines*) are evaluated. The review considers the four main steps in the LCA:

1. Goal and scope definition,
2. Inventory analysis,
3. Presentation and evaluation of environmental impacts, and
4. Interpretation.

Description of the Reviewed LCA

In the table below, basic information concerning performed LCA is presented.

Title	<i>Life Cycle Assessment of piCLASSIC and piCLASSIC Neo</i>
Commissioner of LCA	<i>Piab</i>
Author and performer of LCA	<i>Annie Johansson & Pär Lindman, Miljögiraff AB</i>
Dialogue with verifier performed during the execution of the study?	<i>No</i>
Assessed product(s)	<i>piCLASSIC and piCLASSIC Neo</i>
Functional unit/Declared unit	<i>The functional unit is one item, i.e. one unit of piCLASSIC or piCLASSIC Neo used for 5 years.</i>
Scope	<i>Cradle-to-grave</i>
Performed according to standard	<i>ISO 14040 and 14044</i>
Comparative assessment	<i>Yes, but only comparative between two generations of Piab's piClassic with the exact same functions and not with peer products.</i>
Results disclosed in public	<i>Yes</i>
Reviewed documentation	<i>LCA-report with Appendices 1-3 as well as process list from SimaPro-model.</i>
Software for assessment of background data	<i>SimaPro 9.6</i>
Background database	<i>Ecoinvent 3.10</i>
Specific data	<i>Yes, collected for Piab's facilities.</i>
Provision of LCI-data for review	<i>Report and online presentation of LCA-model.</i>
LCIA method	<i>Environmental Footprint 3.1 (EF)</i>

Date of LCA-report for review	2024-11-11
Verifiers	Andreas Asker, Sweco Sverige AB

Standards and Criteria for Review

The critical review has been performed in accordance with guidelines in the ISO 14040 and ISO 14044 standards. Focus of the review has been on the following five aspects:

- the methods used to carry out the LCA are consistent with the standard,
- the methods used to carry out the LCA are scientifically and technically valid,
- the data used are appropriate and reasonable in relation to the goal of the study,
- the interpretations reflect the limitations identified and the goal of the study, and
- the study report is transparent and consistent.

Performed Review

The review is based on the four main steps of LCA as stated in the ISO-standard: goal and scope definition, inventory analysis, impact assessment and interpretation.

Concerning the first step, definition of goal and scope, the functional/declared unit, definition of system boundary, allocation procedures, assumptions and choice of method and impact categories for the LCIA are reviewed.

The inventory analysis has been reviewed focusing on collected specific data, process tree, calculations, and choice of generic data. The clarity and transparency of these aspects was considered.

Concerning the LCIA, the focus of the review has been on the consistency between inventoried data and results as well as the presentation of results. No sampling of results has been performed.

The evaluation of the interpretation step was based on performed sensitivity analyses, the validity of results, discussion of results in relation to other products, and recommendations.

Grammar and spelling have been noted when checking for compliance with the ISO framework, but no complete grammar check has been conducted.

Review Procedure

The procedure for the external review has been done as follows:

1. A first review of the final draft of the LCA-report was conducted in December 2024. During this review, checklist with review dialogue ver.1 was written to communicate review comments and question.
2. This review dialogue was sent to the commissioner and authors of the report for addressing of comments and revision of report.
3. Revised report and responded comments from Review dialogue ver.1 were sent to reviewer in mid-December, and the next review round was conducted shortly after. During the second review round, a few minor questions were resolved by going through the LCI-inventory and LCA-model, and the report was accepted by the reviewer (Review dialogue ver.2).

All communication throughout the review was documented in Appendix 1 of the full review report.