

A RAG chunking strategy for technical manuals

Splitting a manual into arbitrary-length pieces makes the right answer get searched in the wrong context. Preserve headings, tables and revision information.

In short

- A fixed character count can cut a table in the middle, so split manuals on heading boundaries and keep each chunk's heading path.
- Fault-code table rows are misleading without their header row, so attach the headers to each row or keep the table whole in one chunk.
- Attach product family, model, revision, language and page metadata to every chunk, because similar fault codes from different families cannot be reliably separated without it.

01 / Keep the structure

Manuals consist of headings, subheadings, tables and warning boxes. Splitting at a fixed character count cuts a table in the middle or separates a warning from its step. Split on heading boundaries and attach to each chunk the heading path it belongs to.

02 / Treat tables and codes separately

Fault-code tables carry meaning row by row. Storing a row without its header row is misleading. Attach the column headers to each table row or keep the table whole within a chunk boundary. For very large tables, form row groups and repeat the header in each.

03 / Add metadata

Attach product family, model, document revision, language and page to every chunk. These fields are needed both for filtering at search time and for citing sources in the answer. A similar fault code from a different product family cannot be reliably separated without metadata.

04 / Measure the chunking

Compare chunk size and overlap not by intuition but with a fixed question set: measure at each setting how often the expected document appears in the top five results. This approach is a suggested engineering method; the best setting depends on the document structure and question type.

Try it

Split a manual page with two different chunk sizes and compare which chunk ranks first for the same three questions.

References and online guide

[Open the online guide](#)

Introduction to Information Retrieval: Okapi BM25

Proposed pilot steps do not claim field accuracy. Synthetic examples are not measurements from a production site.