

AI-03994 Inventree BKM Upload

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I have thousands of parts list, what is the bkm to upload to Inventree?

When importing **thousands of parts** into InvenTree, dumping them all into a single monolithic file will almost certainly cause server or proxy timeouts (Gunicorn/Nginx/Caddy will cut off long-running requests).

To ensure a smooth, error-free migration, follow this established **BKM (Best Known Method)**.

The Golden Rule: Top-Down Order

InvenTree maintains strict data integrity. A part *cannot* exist without a category, and a stock item *cannot* exist without a part and a physical location. You must import your data in this precise sequence:

1. **Part Categories** (e.g., Electronics > Passives > Resistors)
2. **Stock Locations** (e.g., Lab Bench 1 > Bin A)
3. **Parts / Master Templates** (The structural definition of your parts)
4. **Stock Items** (The actual physical quantities sitting in your locations)

Phase 1: Pre-Staging & Deduplication

Do not try to clean data inside InvenTree; handle it entirely in Excel or Python beforehand.

- **Assign Internal Part Numbers (IPN):** If you don't have them, generate a consistent schema now (e.g., RES-10K-0603). InvenTree relies heavily on IPNs to map parameters and prevent duplicates.
- **Sanitize Names & Categories:** Standardize text strings. Ensure capitalization matches perfectly (Resistors and resistors will create two completely different categories).
- **Chunk the Files:** Split your master parts list into smaller batches of **500 to 1,000 lines** per file. This completely eliminates proxy timeout issues.

Phase 2: Execution via the InvenTree Built-In Importer

InvenTree includes a powerful built-in wizard specifically designed for matching spreadsheet columns to database fields.

Step 1: Create Your Categories and Locations

Before touching the parts wizard, manually create or bulk-import your high-level categories and stock locations in the InvenTree web UI.

Step 2: Upload Your Part Batch

1. In the web interface, navigate to the **Parts** dashboard.
2. Click the **Import** button (or go to Settings > Admin Center > Import/Export Data).
3. Upload your first 1,000-line CSV or XLSX chunk.

Step 3: Map Your Columns

The interface will present a Column Mapping screen. Align your spreadsheet headers with InvenTree's internal fields:

- Name \rightarrow Name *(Required)*
- Description \rightarrow Description
- IPN \rightarrow Internal Part Number
- Category \rightarrow Category *(Must match an existing category name)*

Step 4: Map Distinct Values & Run

InvenTree will validate the rows. If a specific cell contains a value it doesn't recognize, it will prompt you to map it to an existing database record. Once validated, click **Submit** to commit the batch.

Phase 3: The Power-User Alternative (Python API)

If you have tens of thousands of rows spread across multiple relational sheets, skip the web GUI entirely and use the official Python wrapper `inventree-py`. It handles throttling and data parsing flawlessly.

```
import pandas as pd

from inventree.api import InvenTreeAPI
from inventree.part import Part

# 1. Connect to your local Docker instance
api = InvenTreeAPI('http://localhost:8000', token='your_api_token_here')

# 2. Read your sanitized Excel sheet
df = pd.read_excel('parts_master_list.xlsx')

# 3. Iterate and upload programmatically
for index, row in df.iterrows():
    try:
        Part.create(api, {
            'name': str(row['Part Name']),
            'description': str(row['Description']),
            'IPN': str(row['IPN']),
            'category': int(row['Category_ID']), # Uses the integer ID of pre-created categories
            'active': True
        })
```

except Exception as e:

```
print(f"Error importing row {index}: {e}")
```

Summary Checklist for Bulk Uploads

âšŒ ï„÷ **Critical Checkpoints:**

- Always perform a **dry-run test** using a sacrificial batch of 5 to 10 rows first to ensure your columns map correctly.
- If you are importing parts that have external links or specific manufacturer numbers, keep those in separate columns (Producer, MPN) to map directly into InvenTreeâ€™s Supplier/Manufacturer subsystem.
- Back up your Docker volume data (docker compose run --rm inventree-server invoke backup) *before* pushing thousands of records, allowing a rapid roll-back if a dataset alignment is botched.