

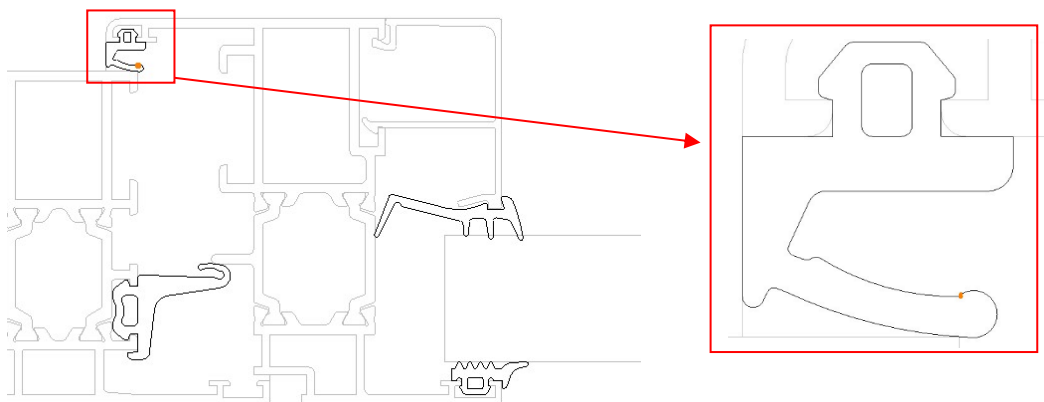
1. Introduction

Apart from assigning colour properties to DXF layers (as described in [Document H3 - How to assign colour properties to DXF-layers?](#)), preparing a clean DXF file is a fundamental step before loading the geometry to BISCO or TRISCO. A well-prepared DXF significantly speeds up bitmap creation and reduces errors during processing.

This document outlines common issues encountered when importing DXF files and provides practical solutions.

2. Non-closed polyline

[alu_1 frame panel not closed.dxf](#)



Issue: DXF files may contain polylines that are not properly closed

Behaviour in BISCO: When loading such a file in BiscoDxf, any open polyline will be highlighted with an orange marker.

Solution:

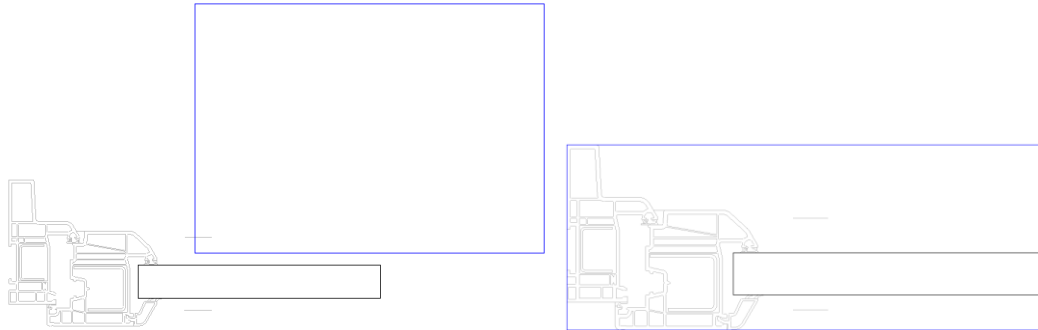
- When generating the BMP file, apply the fill mode **"Line"** for affected layers.
- After importing into BISCO or BiscoBmp: Close the gaps using: *Bitmap* → *Line* or *Draw*
- Fill the closed regions with a paint brush using: *Bitmap* → *Fill*

3. Cleaning DXF files.

Issue: The geometry is not positioned within the blue bounding rectangle when opening the file in BiscoDxf.

Example:

- Before cleaning: [example_dxf_before_clean.dxf](#) → object appears outside the working area
- After cleaning: [example_dxf_after_clean.dxf](#) → object correctly fits within the blue rectangle



Solution: Clean the DXF file using:

- DraftSight → command: -Clean
- AutoCAD → command: Purge

This removes unnecessary elements and ensures correct positioning.

4. Unsupported elements (text, hatches, blocks, dimensions)

Issue: DXF layers may contain elements such as: Text, Hatches, Blocks, Dimensions. These elements may not be correctly imported into BISCO (see BISCO Manual below).

The following drawing DXF commands are read:

- LINE
(Read group codes: 8, 10, 20, 11, 21)
- LWPOLYLINE
Both line segments and arc segments are possible.
(Read group codes: 8, 90, 70 (0 or 1), 10, 20, 42, 210, 220, 230)
- POLYLINE (subclass AcDb2dPolyline) and VERTEX (subclass AcDb2dVertex)
Both line segments and arc segments are possible.
No curve-fit or spline-fit vertices.
(POLYLINE group codes: 8, 70 (0 or 1); VERTEX group codes: 8, 10, 20, 42)
- ARC
(Read group codes: 8, 10, 20, 40, 50, 51, 210, 220, 230)
- CIRCLE
(Read group codes: 8, 10, 20, 40, 210, 220, 230)
- ELLIPSE
(Read group codes: 8, 10, 20, 11, 21, 40, 41, 42, 210, 220, 230)

Block definitions (DXF command BLOCK, containing the drawing commands as above) and block insertions (DXF command INSERT) are possible, with the following restrictions:

- No external references (to files).
- BLOCK: the base point is not read (i.e. always X = 0 and Y = 0).
- INSERT: only X and Y of the insertion point, the X scale and Y scale factor, and the rotation angle are read.

(BLOCK group codes: 2, 8; INSERT group codes: 2, 8, 10, 20, 41, 42, 50)

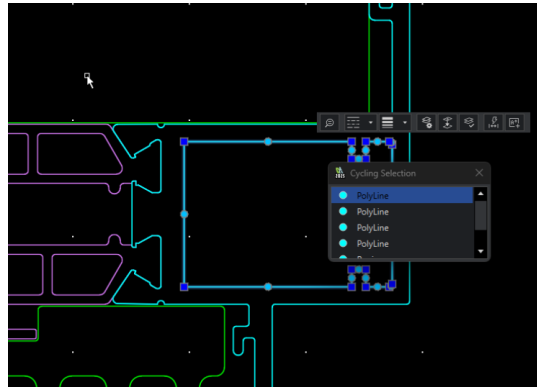
Solution:

- Explode blocks into basic geometry where necessary
- Remove or simplify: Text annotations, Hatch patterns, Dimension objects
- Keep only essential geometric elements (lines, polylines)

5. Duplicate elements

Issue: Multiple overlapping elements may exist (duplicate lines or shapes).

Solution: Remove duplicates, Ensure only one instance of each element remains.



6. Oversized drawings / unnecessary geometry

Issue: The DXF file may include excessive geometry beyond the actual frame (e.g. large surrounding drawing space).

Solution:

- Trim the drawing to include only the relevant frame
- Zoom and focus on the object
- Remove any distant or unrelated elements

