

# Workset Organizer - Complete Documentation

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## Overview

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Workset Organizer is a sophisticated Revit add-in designed to automate workset management and system-based model distribution. It reads configuration from Excel spreadsheets to organize MEP elements into worksets and export them as separate Revit files based on package codes.

## Key Benefits

- **Time Savings:** Reduces manual workset assignment from hours to minutes
- **Consistency:** Ensures standardized workset organization across projects
- **Automated Export:** Creates package-specific Revit files automatically
  - 1. **Error Reduction:** Minimizes human error in system classification
- **QC Integration:** Includes built-in quality control mechanisms

## System Requirements

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### Software Requirements

- Autodesk Revit 2023
- Microsoft Excel 2013 or newer
- .NET Framework 4.8
- Windows 10 or Windows 11

### Hardware Recommendations

- 8GB RAM minimum (16GB recommended for large models)
- Multi-core processor
- SSD storage with sufficient space for export files
- Dedicated graphics card compatible with Revit

## Installation Guide

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### Step 1: Prepare Installation Files

1. Download or clone the Workset Organizer repository

2. { Ensure you have the following files:
  - { **WorksetOrganizer.dll** (compiled assembly)
  - { **Workset\_Mapping.xlsx** (template mapping file)
  - { **WorksetOrganizer.addin** (Revit add-in manifest)

## Step 2: Install the Add-in

1. { Navigate to the Revit add-ins directory:

C:\ProgramData\Autodesk\Revit\Addins\2023\
2. { Copy the **WorksetOrganizer.addin** file to this directory
3. { Edit the **.addin** file if necessary to ensure the Assembly path points to your **WorksetOrganizer.dll** location

## Step 3: Verify Installation

1. { Launch Autodesk Revit 2023
2. { Check for the "Workset Tools" tab in the ribbon
3. { Confirm the "Workset Organizer" button is visible

## Step 4: Prepare Mapping File

1. { Place the **Workset\_Mapping.xlsx** file in an accessible location
2. { Customize the mapping according to your project requirements

## Excel Mapping Configuration

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### File Structure

The Excel file must contain a worksheet named "Mapping" (case-insensitive) with the following columns:

Column Name	Description	Required	Example
Workset Name	Target workset name	Yes	HVAC_Supply_Ducts
System Name in Model File	Pattern to match element systems	Yes	SApp*
System Description	Descriptive text for documentation	No	Supply Air System

Column Name	Description	Required	Example
Model iFLS/Package Code	Export package identifier	Yes	M-DX-HVAC-001

## Pattern Matching Syntax

The tool supports advanced pattern matching for system names:

- **Literal characters**: Match exactly (e.g., "SA" matches "SA")
- **x placeholder**: Matches any single digit (e.g., "SAx" matches "SA1", "SA2")
- **xx placeholder**: Matches 1-3 digits (e.g., "SAxx" matches "SA1", "SA12")
- **xxx placeholder**: Matches 2-3 digits (e.g., "SAxxx" matches "SA12", "SA123")
- **Asterisk (\*)**: Wildcard matching (e.g., "SA\*" matches "SA", "SA1", "SA123")

## Special Package Codes

- **NO EXPORT**: Elements will be organized but not exported
- **QC**: Quality control workset for orphaned elements

## Example Mapping

Workset Name | System Name in Model File | System Description | Model  
iFLS/Package Code

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HVAC\_Supply | SAxx\* | Supply Air System | M-DX-HVAC-001  
HVAC\_Return | RAxx\* | Return Air System | M-DX-HVAC-002  
Plumbing\_CW | CWxx\* | Cold Water System | M-DX-PMB-001  
Electrical\_Lighting | LTxx\* | Lighting System | M-DX-ELEC-001  
DX\_QC | NO EXPORT | Quality Control | NO EXPORT

## User Interface Guide

### Main Application Window

The Workset Organizer interface consists of four main sections:

#### 1. Header Section

- Displays application name and vendor information
- Shows brief description of functionality

## 2. File Selection Section

- ( **Excel File Path**: Browse to select your mapping file
- ( **Destination Folder**: Choose where exported files will be saved
- ( **Overwrite Existing Files**: Toggle to overwrite or skip existing files
- ( **Export DX\_QC Category**: Include quality control elements in exports

## 3. Log Display Section

- ( Real-time progress and status messages
- ( Detailed information about processing steps
- ( Error and warning messages
- ( Progress bar with percentage completion

## 4. Action Buttons

- ( **Run**: Start the workset organization process
- ( **Cancel/Close**: Close the application window

## Ribbon Interface

- ( Located under the "Workset Tools" tab in Revit
- ( Single button labeled "Workset Organizer"
- ( Tooltip explains functionality on hover

## Step-by-Step Tutorial

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### Preparation Phase

1. ( **Model Preparation**
  - ( Ensure your Revit model is workshared
  - ( Verify all MEP systems are properly named if not then the elements get placed in DX\_QC workset
  - ( Create a backup of your project file locally

### Execution Phase

1. ( **Launch the Tool**
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- | Open your Revit project
  - | Navigate to the "Workset Tools" ribbon tab
  - | Click the "Workset Organizer" button
2. **Configure Settings**
- | Click "Browse" next to Excel File and select your mapping file
  - | Choose a destination folder for exported files
  - | Set appropriate options (overwrite, QC export)
  - | Review the log for any initial warnings
3. **Run the Process**
- | Click the "Run" button to start
  - | Monitor progress in the log window
  - | The tool will:
    - | Read and validate the Excel mapping
    - | Create necessary worksets
    - | Move elements to appropriate worksets
    - | Export package-specific Revit files
    - | Handle orphaned elements in QC workset
4. **Completion**
- | Review the completion message
  - | Check the destination folder for exported files
  - | Examine the detailed log file saved in the destination folder
  - | Verify workset organization in your Revit model

## Post-Processing Phase

1. **Quality Check**
- | Open exported Revit files to verify content
  - | Check that all systems were properly organized
  - | Verify no elements were missed or misclassified

## 2. **Distribution**

- **Distribute** exported files to appropriate teams
- **Archive** the mapping file with project documentation
- **Save** the processing log for future reference

## Advanced Features

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### Pattern Matching Engine

The tool uses a sophisticated pattern matching system:

```
// Example matching logic
string regexPattern = Regex.Escape(pattern)
.Replace("xxx", @"\"d{2,3}")
.Replace("xx", @"\"d{1,3}")
.Replace("x", @"\"d")
.Replace(@"\"*", ".*");
```

C#

This allows flexible matching of system names while maintaining precision.

### Element Collection

The tool collects elements from multiple MEP categories:

- Duct systems and fittings
- Pipe systems and accessories
- Electrical equipment and fixtures
- Mechanical equipment
- Plumbing fixtures
- Cable trays and conduit

### Workset Management

- Dynamic workset creation for undefined worksets
- Preservation of existing workset structure
- Transaction-safe workset modification
- Error handling for workset creation conflicts

### Export Optimization

- ( Memory-efficient element copying
- ( Template-based new document creation
- ( Automated file naming conventions
- ( Overwrite protection mechanisms

## Troubleshooting

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### Common Issues and Solutions

Issue	Possible Cause	Solution
Tool not appearing in Revit	Incorrect add-in installation	Verify .addin file location and assembly path
Excel file not found	File moved or renamed	Check path and permissions
No elements matched	Pattern mismatch	Review system names and adjust patterns
Export files missing	Destination folder issues	Verify write permissions and disk space
Performance issues	Large model size	Close other applications, increase RAM

### Error Messages

- ( **"Document is not workshared"**: Enable worksharing in your Revit project
- ( **"Excel file contains no worksheets"**: Check Excel file format and content
- ( **"Required headers not found"**: Verify column names in mapping file
- ( **"No valid mapping records found"**: Check data rows in mapping file

### Log File Analysis

The tool generates a detailed log file with timestamps. Key sections to check:

- ( Excel file reading results
- ( Workset creation messages
- ( Element matching statistics
- ( Export file creation details
- ( Error and warning messages

# Best Practices

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## Mapping File Management

1. **Version Control**
  - Maintain version history of mapping files
  - Use descriptive file names with dates
  - Store mapping files with project documentation
2. **Pattern Design**
  - Start with specific patterns before general ones
  - Test patterns on sample data before full implementation
  - Use comments in description column for documentation
3. **Workset Naming**
  - Use consistent naming conventions
  - Follow company BIM standards
  - Avoid special characters in workset names

## Process Optimization

1. **Model Preparation**
  - Clean up unused elements before processing
  - Verify system parameter consistency
  - Resolve any workset ownership issues
2. **Execution Timing**
  - Run during off-peak hours for large models
  - Ensure adequate system resources are available
  - Inform team members before major reorganization
3. **Quality Assurance**
  - Always run on a copy first for testing
  - Verify results with a small subset before full processing
  - Maintain backup copies before and after processing



## Performance Tips

- ( For very large models, consider processing in phases
- ( Close other applications to free up memory
- ( Use SSD storage for better read/write performance
- ( Increase virtual memory allocation if needed

## Support and Resources

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### Documentation

- ( This guide
- ( In-tool tooltips and help text
- ( Sample mapping files
- ( Video tutorials (if available)

### Technical Support

- ( Contact: DEAXO GmbH support team
- ( Issue reporting template
- ( Version compatibility information

### Training Resources

- ( Hands-on workshop materials
- ( Example projects with sample data
- ( Certification program (if available)

## Version History

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- ( **v1.0.0** (Current): Initial release with core functionality
    - ( Excel-based mapping
    - ( Workset creation and organization
    - ( System-based export functionality
    - ( Quality control workset handling
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