

Excavator Pin Dimensions Database

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Data Version 2024.1

Records 929

Manufacturers 54

The most comprehensive excavator pin dimensions database available

Complete specifications for 929+ excavator models from 54+ manufacturers worldwide

Database Overview

This repository contains the most complete collection of excavator pin dimensions and specifications available. The database includes detailed measurements for stick pins, link pins, widths, and center distances for excavators from all major manufacturers.

Database Statistics

Metric	Count
Total Records	929
Manufacturers	54
Original PDF Models	564
New 2019-2024 Models	184
Additional Manufacturers	162
Electric Models	10
Specialty Models	9

Supported Manufacturers

Major Global Brands

- **Caterpillar** (150+ models) - Complete lineup including Next Generation series
- **Komatsu** (50+ models) - PC series, WB series, latest Dash-11 models
- **Volvo** (85+ models) - EC series, ECR series, E-series
- **JCB** (45+ models) - JS series, JZ series, latest models
- **Hitachi** (65+ models) - Zaxis series, EX series, Zaxis-6
- **Hyundai** (45+ models) - R series, HX Z & A series
- **Case** (85+ models) - CX series, C-series
- **John Deere** (25+ models) - Complete G-series lineup
- **Kubota** (35+ models) - KX series, U series, KX-4 series
- **Liebherr** (25+ models) - R series, R900 series

Regional & Specialty Brands

- **Chinese Manufacturers:** Sany, XCMG, Zoomlion, LiuGong, Lonking, Sunward, Shantui, Yuchai
- **European Specialists:** Mecalac, Schaeff, Eurocomach, Wacker Neuson, Atlas
- **Japanese Brands:** Takeuchi, Kobelco, Sumitomo, IHI, Airman, Yanmar, Hanix
- **Other Brands:** Bobcat, Link-Belt, Develon, New Holland, Terex, Gehl, and more

Data Specifications

Each excavator record includes:

- **Manufacturer** - Equipment manufacturer name
- **Model** - Specific model designation
- **Stick Pin Diameter** - Metric (mm) and Imperial (inch)
- **Stick Width** - Metric (mm) and Imperial (inch)
- **Link Pin Diameter** - Metric (mm) and Imperial (inch)
- **Link Width** - Metric (mm) and Imperial (inch)
- **Pin Centers** - Distance between pin centers (mm/inch)
- **Tip Radius** - Bucket tip radius measurements
- **Data Source** - Original source of specifications
- **Notes** - Additional technical information

File Formats

The database is available in multiple formats for maximum compatibility:

Format	File	Description
Excel	<code>excavator_database.xlsx</code>	Full-featured spreadsheet with formatting
CSV	<code>excavator_database.csv</code>	Universal format for data analysis
PDF	<code>excavator_database.pdf</code>	Professional printable reference (21 pages)
XML	<code>excavator_database.xml</code>	Structured data for API integration

Quick Start

Download Data

Bash

```
# Clone the repository
git clone https://github.com/gitdot5/excavator-pin-dimensions.git

# Navigate to data directory
cd excavator-pin-dimensions/data
```

Import into Excel/Google Sheets

1. Download `excavator_database.csv`
2. Open in Excel or Google Sheets
3. Use "Import" or "Open" function
4. Select CSV format with comma delimiter

Use with Python

Python

```
import pandas as pd

# Load the database
df = pd.read_csv('excavator_database.csv')
```

```
# Find specific manufacturer
caterpillar_models = df[df['Manufacturer'] == 'Caterpillar']

# Search by pin diameter
large_excavators = df[df['Stick_Pin_Diameter_mm'] >= 80]

# Filter by model year (2019-2024)
new_models = df[df['Data_Source'].str.contains('New_2024')]
```

Search Examples

Find Models by Pin Size

Python

```
# Mini excavators (< 50mm pin)
mini_excavators = df[df['Stick_Pin_Diameter_mm'] < 50]

# Medium excavators (50-80mm pin)
medium_excavators = df[(df['Stick_Pin_Diameter_mm'] >= 50) &
                        (df['Stick_Pin_Diameter_mm'] < 80)]

# Large excavators (80mm+ pin)
large_excavators = df[df['Stick_Pin_Diameter_mm'] >= 80]
```

Find by Manufacturer

Python

```
# Japanese manufacturers
japanese_brands = ['Komatsu', 'Hitachi', 'Kubota', 'Takeuchi', 'Kobelco']
japanese_models = df[df['Manufacturer'].isin(japanese_brands)]

# European manufacturers
european_brands = ['Volvo', 'Liebherr', 'JCB', 'Mecalac', 'Atlas']
european_models = df[df['Manufacturer'].isin(european_brands)]
```



Data Sources

This comprehensive database combines data from multiple authoritative sources:

- **Original Equipment Manufacturer (OEM) Specifications** - Direct from manufacturer documentation






- **Industry Standard References** - Professional pin dimension charts
- **Technical Service Manuals** - Official service documentation
- **Parts Catalogs** - Manufacturer parts and specifications
- **Industry Research** - 2019-2024 model updates and specifications
- **Professional Databases** - Scribd technical documents and industry references

Version History

Version 2024.1 (Current)

- **929 total records** across 54 manufacturers
- Added **184 new 2019-2024 models** from major manufacturers
- Included **162 additional models** from regional and specialty brands
- Added **10 electric excavator models** with latest technology
- Enhanced data validation and quality control
- Professional XML format with metadata and statistics

Data Quality

-  **Verified Specifications** - Cross-referenced with multiple sources
-  **Standardized Format** - Consistent units and naming conventions
-  **Regular Updates** - Continuously updated with new models
-  **Error Checking** - Automated validation of measurements
-  **Source Tracking** - Full traceability of data origins

Applications

This database is valuable for:

Construction Industry

- **Parts Ordering** - Ensure correct pin specifications
- **Equipment Maintenance** - Quick reference for service technicians
- **Fleet Management** - Standardize parts inventory
- **Cost Estimation** - Accurate parts and service planning

Software Development

- **Equipment Management Systems** - Integrate pin specifications
- **Parts Catalog Applications** - Build searchable databases
- **Mobile Apps** - Field reference tools for technicians
- **API Development** - Create web services for equipment data

Research & Analysis

- **Market Analysis** - Equipment specifications and trends
- **Compatibility Studies** - Cross-manufacturer part compatibility
- **Industry Standards** - Reference for specification development
- **Academic Research** - Construction equipment studies



Future Enhancements

Planned improvements include:

- **Real-time Updates** - Automated manufacturer data feeds
- **API Endpoints** - RESTful API for programmatic access
- **Mobile App** - Dedicated mobile application
- **3D Models** - Visual pin and attachment representations
- **Compatibility Matrix** - Cross-manufacturer part compatibility
- **Historical Data** - Track specification changes over time



Contributing

We welcome contributions to improve and expand this database:

How to Contribute

1. **Fork** this repository
2. **Add** new excavator models or corrections
3. **Verify** specifications with official sources
4. **Submit** a pull request with detailed information





Contribution Guidelines

- Provide **official source** for all specifications

- Use **consistent formatting** and units
- Include **model year** and **configuration details**
- **Verify accuracy** before submitting

Data Validation

All contributions are reviewed for:

-  **Accuracy** - Verified against official sources
-  **Completeness** - All required fields populated
-  **Consistency** - Matches database format standards
-  **Uniqueness** - No duplicate entries

Support & Contact

Issues & Questions

- **GitHub Issues** - Report bugs or request features
- **Discussions** - Ask questions or share ideas
- **Wiki** - Additional documentation and guides

Professional Services




For commercial applications or custom data requirements:

- **Data Licensing** - Commercial use licensing
- **Custom Databases** - Specialized equipment databases
- **API Development** - Custom API endpoints
- **Consulting Services** - Equipment specification consulting

License

This project is licensed under the **MIT License** - see the [LICENSE](#) file for details.

Usage Rights

-  **Commercial Use** - Use in commercial applications
-  **Modification** - Modify and adapt the data
-  **Distribution** - Share and redistribute

-  **Private Use** - Use for internal projects

Attribution

When using this database, please provide attribution:

Plain Text

Excavator Pin Dimensions Database
<https://github.com/gitdot5/excavator-pin-dimensions>

Acknowledgments

Special thanks to:

- **Equipment Manufacturers** - For providing official specifications
- **Industry Professionals** - For validation and feedback
- **Open Source Community** - For tools and frameworks
- **Construction Industry** - For supporting open data initiatives

 **Star this repository if you find it useful!**

 **Share with colleagues in the construction and equipment industry**

 **Follow for updates on new excavator models and specifications**

This database represents the most comprehensive collection of excavator pin dimensions available. It serves the global construction industry by providing accurate, accessible, and standardized equipment specifications.