

DDS-CAD 17

Product Overview
Educational Institutions



DDS-CAD

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The DDS CAD workstation

The DDS-CAD workstation has a comprehensive range of basic functions and its own BIM/CAD core. With this genuine Open BIM solution, you use a complete system that is independent of third party tools such as AutoCAD, Revit, Bentley and other applications. DDS-CAD workstation is equipped with a fully integrated and certified Open BIM interface and provides the ideal basis for an intelligent and multi-disciplinary data exchange with architects, structural engineers and other project stakeholders.

DDS-CAD workstation for educational institutions includes the unlimited expert version and all add-on modules.

Intelligent BIM/CAD Core

Stand-alone intelligent BIM/CAD core that runs on Windows 10 64-bits

Network and server compatible as well as multi-user enabled on a project level

Multi-discipline project management with project navigator

Multi-window technology, any number of models and views (2D, 3D, Zoom)

Import and export of all popular formats such as IFC, DXF, DWG, 3D DWG, PDF, 3DS, JPG and PNG

Classification manager for exporting classifications to IFC (e.g. ETIM, Omniclass etc.)

BIM project coordination and collaboration via file and cloud based BCF managers like Bimsync and BIMcollab

Direct access to cloudbased platform BIMobject®

Fully integrated DWG/DXF editor with intelligent object mapper

Scale independent design and plot functions in 2D and 3D

Technical mirroring for a standardised and norm-compliant representation

Flexible and associative object dimensioning

Intelligent generic and parametric 2D and 3D product databases

Automatic realistic height presentation of overlapping objects in top view (OpenGL)

Freely definable sections, part models and cut-outs

Flexible zone function for freely defining building entities

Intelligent control and navigation with 3D mouse from 3Dconnexion

Automatic multi-discipline management of layer, pen and font

Print layouts with automatic update, independent layer structure and flexible scale selection

Programmable title field automatically fillable; automatic legends

Automatic sorting of parts lists according to building, storey, room and zone

Properties window for direct access to object properties

Create and manage project templates

The DDS CAD workstation

Intelligent building model

Flexible and easy planning of floor plans and building models in 2D and 3D

Extensive selection of intelligent and flexible 2D and 3D components

Automatic room recognition from DWG/DXF files, including windows, doors and room labels

Intelligent bi-directional Open BIM data exchange via IFC (ISO 16739)

Different presentation options for rendered 3D models

Realtime clash prevention

Automated model quality checks, cross-discipline collision detection

Realtime clash prevention

Easy editable building model in case of architectural changes

Intelligent design of suspended ceilings, roof windows, roofs and dormers

Intelligent and dynamic generation of opening elements with automatic labeling

Model-based coordination for provision for voids based on IFC

Automatic and configurable room labels

Automatic calculation of room surfaces and volumes, including roofs and dormers

Easy merging of complete building model including all disciplines for presentation and controlling

IFC and gbXML export for energy performance and other building simulations

Dynamic filter and color representation for rendered 3D models

Room book with extensive room data such as area, height, volume, ceiling type, floor type, etc.

Licensing

In order to be able to use a DDS-CAD license, the use of a license key is required. We offer different variants for different conditions of use. Our contact person for educational institutions will be happy to inform you about which best suits your needs.

DDS-CAD Sanitary and Heating

The DDS CAD packages for the plumbing and heating sector supplement the basic functions of the DDS CAD workstation with the trade-specific SH specialist components. With the additional functions included, you have the necessary means to process your projects in these trades efficiently, professionally and safely.

This is how you turn your DDS-CAD workstation into a comprehensive software solution for planning, calculating, simulating and documenting sanitary and heating engineering.

Discipline specific features

Integrated design of sanitary, heating, cooling, gas, fire hydrant and sprinkler systems

Intelligent pipe network design with automatic object connection

Flexible representations of the pipe network: single line, double line with insulation, flood fill and 3D

Floor logic for simple cross-floor pipe network planning

Associative and freely configurable labeling of objects and pipe segments

Construction of line and system diagrams for heating and sanitation

Automatic adjustment of the flow direction for storey ports based on the calculation result

Integrated calculations

U-value and heat load calculation according to EN 12831-1

Intelligent radiator design and automatic room placement

Flexible planning and calculation of underfloor heating system fields according to EN 1264

Pressure loss calculation, automatic dimensioning and hydraulic balancing of heating and cooling systems

Automatic update of associative labeling on pipe systems after calculation

Systemanalysis with visualization filter: Worst path, velocity, insulation, diameter DN/OD

Building analysis with visualisation filter: building units, U-values, specific heatload

Design and calculation of potable water systems

Pressure loss calculation, automatic dimensioning and hydraulic balancing of potable water systems

Calculation of temperature drop in circulation and of stagnant water and waiting time in hot water pipes

Calculation of centralized and decentralized hot water systems, as well as a combination with multiple boilers

Calculation of ring pipelines with professional tap connection (flow-through backplate)

DDS-CAD Ventilation

The DDS-CAD packages for Mechanical supplement the basic functions of your DDS-CAD workstation with the trade-drawn KL compartment components. The additional functions included are suitable for all sizes, i.e. from classic residential ventilation systems to large ventilation systems. With a package from the DDS-CAD Mechanical, you can process your projects in these trades efficiently, professionally and safely.

At this way, your DDS-CAD workstation becomes a powerful tool for planning, calculating, simulating and documenting air conditioning and ventilation technology.

Discipline specific features

Integrated design of climate and ventilation systems

Flexible planning of round, oval and rectangular duct systems, also in combination

Intelligent duct network design with automatic object connection

Flexible representation of the duct network: double line with insulation, flood fill and 3D

Intelligent storey logic for duct network connections via ceiling and floor

Automatic connection of air terminals and mounting height control

Flexible creation of line and system diagrams with symbols according to EN 12792

Associative and freely configurable labeling of objects and duct segments

Integrated calculations

Consideration of mechanical ventilation systems in the heat load calculation according to EN 12831

Consideration of passive pre-heating and heat recovery in the ventilation systems for the heat load calculation

Air flow specification and calculation of mechanical supply and extract air on individual room level

Automatic adjustment of all air terminals in the building taking into account the volumetric flow rate

Building analysis with visualisation filter: building units, U-values, specific heatload

Consideration of active preheating in ventilation systems

Design and calculation of controlled ventilation systems according to DIN 1946-6

Definition of ventilation zones and usage building units plus consideration of multiple ventilation systems in a single building

Fully automatic updating of flexible labeling for duct work based on calculation results

Systemanalysis with visualization filter: Worst path, velocity, insulation, diameter DN/OD

Pressure loss calculation with hydraulic adjustments in real time

Nominal and balanced pressure loss calculation with automatic dimensioning and flow control

Configurable velocity and dimensioning limits and inheritance per duct segment

Visual presentation of air velocity tolerances after system calculation

DDS-CAD Electrical

With DDS-CAD Electrical you have a powerful electrical specialist software. The additional functions enable you to focus on designing a full electrical installation, distribution documentation or a combination of both areas at the highest technical level. This includes planning and calculating as well as documenting your full projects.

Discipline specific features

Complete 2D and 3D electrical design features for:

- Low voltage, electromobility, PA, aerial, measuring & control, movement and presence detector system
- Lighting design, KNX, data, telephone, nurse call and intercom systems
- Fire, security and alarm systems, video surveillance and access control

Intelligent multi-storey design of cable management systems: cable ladders, -trays, -ducts, conduits and floor trunking

Integrated light calculation and bi-directional interface with DIALux and Relux for advanced light calculations

Simulation and planning of detection areas for movement and presence detectors

Design of lightning protection and earthing systems as well as equipotential bonding

Intelligent circuit selection with circuit and component dimensioning

Diversity factor for determination of load performance per circuit and distributor supply

Intelligent multi-storey cable and cable trunking function with automatic cable length calculation

Flexible multi-storey cabling and routing with automatic cable lists

Automatic calculation of end component performance over sub distributors up to the main supply

Voltage drop calculation with automatic real-time load calculation

Various control functions, Indicate objects without or interrupted connections

Associative and freely configurable component, cable and circuit labeling

Automatic and fully configurable legends

Intelligent exchange between model and distributor database; automatic update of electrical diagrams

Automatic system diagrams for power supply, fire detection, emergency lighting, data network, nurse call and security systems

Bi-directional intelligent KNX interface to ETS via the app 'ProjectDataExchange' from IT GmbH

Distribution board documentation

Automatic creation and update of sheet, revision and circuit lists

Automatic creation and update of single line circuit diagrams

Bi-directional interface with test and measurement equipment from GMC-I

Extensive technical database with intelligent symbols, components and circuit macros

Flexible presentation and intelligent configuration options for sheets and circuit diagrams

Automatic numbering of components and terminals including cross-referencing

Automatic visual warning of under dimensioned components

Automatic prevention of double connections for contacts, components and terminals

Automatic creation and update of multi-line circuit diagrams

Complete distribution board layout design in 2D and 3D

Automatic distributor views (side, interior, door, 3D view), punch patterns, mimic diagrams

Automatic tabular patch panel overview for network and data systems

Intelligent KNX layouts for automatic circuit diagrams and overview of modular devices

Graphical PLC card overview with automatic cross-referencing of inputs and outputs

Creation of measurement, control and regulation technology diagrams and data network cabinet views

Intelligent PV system design

High quality and flexible planning of PV systems in 2D and 3D

Database including generic mounting systems

Visualization of the course of the sun and shading

Photorealistic presentation with sun animation and video output

Flexible system design: on-roof, in-roof, facade and ground mounted

Generation of roof layout, system schematic and string diagram

Freely definable cross-sections, elevations and part models

Configurable parts list by area, building, etc.

Production of assembly and installation plans in DWG, DXF and PDF

Print layouts with automatic updating, layer handling and free choice of scale

Polysun Inside

Integrated database with global climate data of over 8.000 weather stations

Online access to Meteonorm horizon lines and possibility to import from third party systems (e.g. SunEye)

Calculation of weather data for user-defined locations

During the simulation; update of the sun's position every 4 minutes

Detailed shading visualization

Comprehensive and up to date product database for PV modules and inverters

Automatic inverter assignment for PV fields

Connect differently oriented PV fields on a single multi-tracker inverter

Yield estimation with dynamic simulation taking into account module warming and reactive power

Extensive self-consumption profiles: comparison between yield and self-consumption

Dimensioning and editing of PV modules with respect to module area and orientation

Automatic overview and report of yield estimation results

Software maintenance and technical customer advice

As a student or educational institution, the software is always up to date and you will receive future versions free of charge, including updates on databases, interfaces, reports, standards and regulations, help videos and the complete user documentation.

Full support (Software Service Agreement SSA) for students and educational institutes including support via telephone, e-mail and via a direct (online)connection is optional.

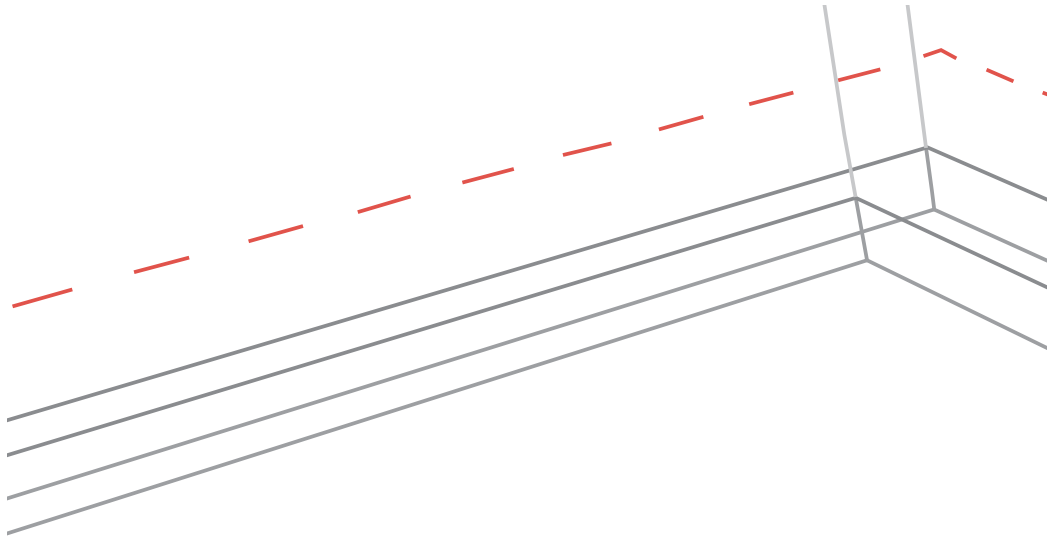
Support

DDS-CAD for Education	Student	Student with Support	Educational Institution
Support			
Online updates	✓	✓	✓
Online support	✓	✓	✓
Phone support	-	✓	✓
Software installation	-	-	✓
Education			
Teaching materials	-	-	✓
Guest lectures	-	✓	✓
Duration			
	90 days	90 days	Individually
One-off investment			
	free	100,- €	OR

- not available

✓ available

OR On Request



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