CADISON – An Integrated & Modular Solution for Brewing Industry



The Food and Beverage Industry is changing fast and specifically the Brewing Industry has been experiencing a major trend shift. Thus, the major challenge for the Breweries is to quickly adapt these changes and be always prepared with a solution which is flexible enough to suit the future needs. The operational efficiency, safety & hygiene, project management and repetitive object/model design during plant expansion are few of the key challenges which this industry is facing. These challenges are adding up to the overall cost and time, and raised a demand in market for a solution which is integrated and intelligent multi-disciplinary (model-based) process for complete planning, designing and maintenance of a Brewery Plant. Typically Brewing Plant deals with a massive amount of data and most of the time seamless processing of this data and its synchronization becomes a major bottleneck.

To optimize every phase one needs a solution or tool which can support both hierarchical and modular structures in a centralized database to keep data transparency & consistency at all levels. CADISON has been developed with a consistent system of data management which increases the flexibility of the overall process and enables parallel collaboration - improving the division of labor (remote teams), accuracy, speed and project success. It is integrated and based on in-built database which assures seamless integration & connectivity between different disciplines and unifies the entire brewery workflow in one system.

Entire Engineering of Brewing Process on a Single Platform

Intelligence, integration, quick turnaround time and modularity are the major Brewing Plant trends. Reusability of model objects, graphics and old projects data for the plant expansion is something this industry is yearning for. The trend towards modular plant design and object-oriented software helps to reduce the engineering cost and faster plant engineering. During the design and engineering phases, a variety of independent planning stages and multiple specialist disciplines (process, piping, electrical, structural, etc.) are involved. The modular approach helps to achieve accelerated engineering by the reuse of engineering information across disciplines, for e.g. project structure, templates, reusable models/assemblies, uniform tagging methodology, etc.

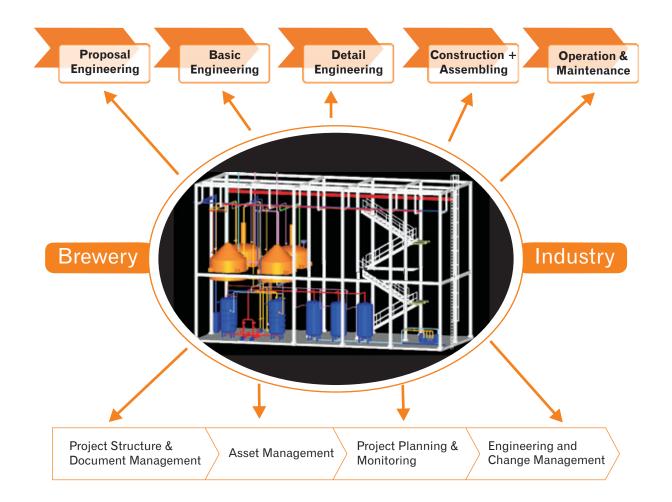


Hence, Multidisciplinary Modularity is the Key!

CADISON – "Complete Plant Engineering & Design solution for Brewing Industry" is an answer to all the problems of this industry. CADISON is a System that enables 'Reusability & Modularity' with modularization framework and processes, which helps the Users to do faster plant planning & designing due to the reuse of information and workflows. The single object-oriented technology of CADISON brings in the flexibility to create object models that have intelligence, graphics and engineering data as 'one source of truth' which avoids synchronization of multiple databases. This allows creating an assembly of objects which contains both 2D (P&ID, Electrical Schematic) and 3D objects.

We understand that whether you are an Owner Operator, EPC, OEM or consultant the pressure remains the same i.e. to meet the budget constraints and sustainability goals without compromising the process flexibility and product quality. CADISON with its unique architecture gives the utmost flexibility to customize Workflows, Object Models & Catalogs (Piping Classifications and Vendor Catalogs like special valves, pumps, instruments, special fittings and filters like crossflow filters, micro filters, etc.) to the company standards and automatically generate Reports, BOM, MTOs, Isometrics & 2D GA drawings to improve project execution efficiency. It does not matter from which segment of Brewery Industry the User belongs to, CADISON fits aptly in every process and business model of every segment of Brewery.

Project Lifecycle Integration



CADISON Workflow for a Brewery

- With CADISON Project Engineer micro-planning for Breweries like Production Schedule, Cost
 of Investment, Preventive Maintenance, etc. for owner operators becomes easy. As CADISON
 Project Engineer module is a non-CAD Module thus it helps the senior management to review
 document at any stage of project lifecycle.
- Engineering P&ID development: Continuation of the offer project previously created including
 the export of technical details like equipment/valves/measuring points into an Excel list as a
 central document for further processing along with the ability to convert standard object
 descriptions into specific manufacturer descriptions per User requirements.
- The process documentation is the key for early stage process engineering function essential
 for project success. The P&ID is the master document for the Brewery Plant. Thus, the User
 can create a process document with all intelligent information intact at the early stage of a
 project. This document can be updated anytime with any changes in P&ID.
- Being an integrated system, any change in any component will automatically update all representations and associated data behind it across all disciplines thereby achieving real integration and effective change management.
- Engineering 3D Piping Planning: Creating the 3D pipe drawings for each process section and the main pipeline routes with 3D layouts and drawings that can export to Navisworks for visualization and coordination with the customer.
- Helps Electrical & Instrumentation Engineers to develop complete schematic circuit diagrams to cable routing and control cabinets of the entire plant.
- Flexibility to customize workflows, object models and catalogs as per own company standards and automatically generate Reports, BOM, MTOs, Isometrics & GA drawings to improve the project execution efficiency.

Below are the Key Benefits

Symbols and Catalogs of Piping Components, Instruments and Equipments



Effective Change & Revision Management with Real-time Updates



Brewery Standards like ASME BPE, etc.



Integrated Modular
Single Platform Solution

Easy Configurations for Tagging, Reports, Isometrics, etc.



Project and Data Reusability with Effective Modularity



Quality Checking of Drawings and Project Monitoring

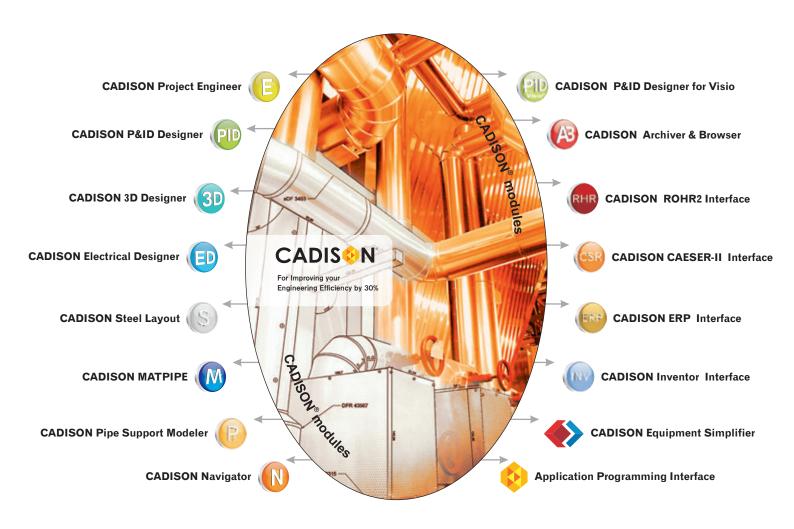


Enhance Brewery Plant Precision with CADISON

- Integration of the entire engineering process for efficient planning across the project life-cycle from budget & project planning to maintenance. This will help to plan, schedule and track proper beer production with Improve operating efficiency and increase yields to leverage return on investment.
- CADISON has database of elements of CIP systems including (line CIP, tank CIP, etc.). This
 helps to better manage the entire CIP management with minimum time and improve the
 entire engineering of cleaning process.
- Faster & Efficient Plant Design with database of all kinds of objects, piping components, catalogs and equipments (pumps, heating systems, valves, instrumentation & controls) as per the Brewery standards like ASME BPE and more.
- Avail the huge database of Piping components, materials (e.g. SS316L standard steel material
 for brewery) and fittings from simple hose based systems for craft breweries, through manual
 piping systems for jumper panel connections.
- Database for Cleaning & Milling section are readily available which includes Pneumatic conveying Screw conveyors, Classifier, Grain silos, etc. Hammer mills, including all instrumentation and controls.
- Effective change management/revision management with real-time updates and compare the performance across the plant and thus minimize costly operating errors.
- Reusability & Modularity save modeling time and reconstruction effort and also increases the accuracy of the reports (Report on Brewing Performance Management i.e. Brewing Material Efficiency and productivity report; also calculate future ingredient requirements and maintain a perpetual inventory).
- During the plant expansion, User again needs to plan and design the Cold Block and Hot Block process areas, which typically increase the timeline and add up to the cost. Thus, CADISON has Logical plant feature with which expansion of Cold Block & Hot Block areas becomes seamless without wasting time on redesigning the entire one.
- Experience real-time updates and changes across all the disciplines of the project lifecycle, thus no project lags and errors.
- As an integrated solution, every project member can work simultaneously in a single working environment, enables quick time-to-market and reduce the Total Cost of Ownership.

CADISON is an end-to-end integrated single platform solution right from Conceptual; FEED, Detailed Design, to implementation and commissioning for Brewing Industry. It has built-in capabilities for design, calculation and analysis for every phase of a project. CADISON is all in one solution thus it saves IT infrastructure costs like different databases for different phases and high end server. No synchronization is required in CADISON, unlike other tools. CADISON modular approach helps to optimize the initial investment, implementation cost & time and realize the ROI over the project life cycle. Thus increase your project engineering efficiency by 30% and reduction of maintenance cost by 2-3%.

CADIS N Modules



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