



Why Select ASD's Optimized Plant Design (OPD) Suite of Products: Optiplant, Pipe Router, Pipe Support Optimizer

BUSINESS VALUE

- ✓ ASD is the Leader and Pioneer in Knowledge based Optimization Technologies. Management combines many years of large EPC Project experience with state-of-the-art technology experience
- ✓ Lack of Resources? –This product provides young engineers with a standard industry-wide knowledge base
- ✓ Applicable to:
 - Multiple stages of Project execution – Used from Proposal stage to Early Estimation to Basic Design
 - Multiple Business lines –Power, Process, Pharmaceutical, Off-shore
- ✓ Eliminate Throw Away Engineering with continuity of information along the Life-Cycle
- ✓ Competitive Advantage –O/O's require advanced technologies to provide for automation within the work-process
- ✓ Quantity and Man-hour Reduction –Save on Material, Elbows, Pipe Hangars, Supports, design hours, and schedule
- ✓ Generate More alternatives within the same time frame –produce the most cost-effective layout

TECHNICAL VALUE

- ✓ Open System to allow Integration with Other Products –PDS, PDMS, PlantSpace, AutoPlant, Kbase, and Zyqad
- ✓ Designed and Developed by Piping Engineers from variety of GlobalEPC's– Based on industry-wide standards and can be used on variety of applications
- ✓ More Engineering Functions to provide better quality and higher accuracy
- ✓ Automated Input Preparation –Feed in lists for pipe connectivity, equipment arrangement, and component requirements
- ✓ Determine layout and engineering constraints at a very early stage
- ✓ Multiple routes to choose the Best Selection and not the First Solution
- ✓ Cost Based Solution Strategy provides the most Cost Effective Solution
- ✓ Supportability Considered in generating the Route
- ✓ Refinement tools allow designers to control design –Data driven and CAD driven



Optimized Plant Design (OPD) Features

3D Conceptual Modeling (Optiplant)

- ✓ Ability to import equipment from an EXCEL file
- ✓ Standard library of parametric equipment and structures
- ✓ Model can be exported to other CAD systems such as Microstation and AutoCAD
- ✓ Library includes Roads, Tank Containment, and Walls
- ✓ Easy to create and then modify a plot plan to study many different scenarios
- ✓ Simple interface does not require CAD experience
- ✓ Excellent graphics allows software to be used in presentations
- ✓ Editing Features include copy, move, multiple object selection
- ✓ Editing can be Data Driven and CAD Driven
- ✓ Structural BOM Report
- ✓ Equipment List Report • Automatic Annotation

Pipe Support Optimizer

- ✓ Knowledge based selection of minimum number of required supports (location and type)
- ✓ Automatic identification of feasible support points and locations
- ✓ Lines may be imported from PDS or ASD's OPD Pipe Router
- ✓ Generates Finite Element Model and Performs Stress analysis
- ✓ Code compliance checking
- ✓ Multiple Line Analysis
- ✓ Common Supports

Automatic Pipe Routing (Pipe Router)

- ✓ Rule-Based Nozzle Placement
- ✓ Advanced functions such as sloped lines, pump loops and nested loops.
- ✓ Optimized component placement
- ✓ Automatic pump routing configurations conforming to industry and company standards.
- ✓ Easily interfaced with detail design software such as PDS and PDMS.
- ✓ Automatic sequencing of batch routing gives priority to more expensive pipes.
- ✓ Optimized tee placement
- ✓ Automatic rack packing on pipe racks.
- ✓ Easy MTO creation for the whole plant, or separate areas.
- ✓ Ability to 'stitch' multiple areas together for overall results.
- ✓ Cost-based calculations for best quality and lowest cost routes.
- ✓ Uses industry information for a variety of standards, including ANSI, DIN, and JIS.
- ✓ Rules are easily changed through a set of data files.
- ✓ Interactive Routes can be imported into the automatic design
- ✓ Vertical Chases and bottom-of-pipe (BOP) Volumes can be defined
- ✓ Objects can be defined as "penetrable"
- ✓ Routes can be "frozen" and connected to later
- ✓ Automatic line annotation.