Design and production of Pumps and Equipment
Using the best CAD/CAM/CAE solution for engineering design, validation and manufacturing of products

• Hydraulic and mechanical design of pumps and equipment
• Generating technical and after sales documentation
• Simulation and Validation of products
• Manufacturing of model, prototype pumps and other parts or serial production
• Controlling and Inspection
• After sale services
Product Data Management (PDM) products manage and synchronize our design data across our entire enterprise.

All data are securely stored and indexed in one database – Vault:
- Design data
- Sketches and documentation
- Manufacturing data, NC programs ...
- Supplier data
- Materials
- Cost calculations, etc

Everyone involved in the process share information and collaborate on designs - inside and outside the organization in multiple locations.
Product Data Management (PDM) products manage and synchronize your design data across our entire enterprise.

Creating an electronic workflow to formalize, manage, and optimize development, document approval and engineering change processes.
Revision Control

Find and Reuse Design Data

Search and integrated preview In user friendly environment – Windows explorer
Hydraulic and mechanical design of pumps and equipment

Hydraulic and mechanical design of Volute

Hydraulic and mechanical design of Impeller
Hydraulic and mechanical design of pumps and equipment

- Mechanical design of other components
Hydraulic and mechanical design of pumps and equipment

- Creating and checking functionality (motion study) of assemblies and subassemblies
Generating technical documentation and specifications

- Assembly drawings
- Workshop drawings
- Drawings for control and inspection
- Technical specifications
- Templates
Generating technical documentation and specifications

Integrated drawingless manufacturing solution

Classic documentation

Model Based Definition - Documentation
Generating after sales and marketing documentation

- Spare parts
- Manuals
- Technical specifications
- High quality images, etc...
Simulation and Validation

In design process – during the designer are looking for the best solution
- Structural analysis with static and dynamic load
- Thermal analysis
- Deformation with large displacement
- Structural Optimization analysis
Simulation and Validation

External Validation
- CFD Analysis - Flow Simulation
- Fluid flow
- Heat transfer
- Displacement distribution from a coupled thermal-stress
Preparing for production and Manufacturing

SAMPLE:
- Manufacturing of Impeller for prototype pump (with 5 axis machine) using special CAM strategies
Preparing for production and Manufacturing

SAMPLE:
- Manufacturing of Impeller for prototype pump (with 3 axis machine)
- Manufacturing of difusor
Preparing for serial production with implementation of CAM software
- Some 3D models of parts are used as a input in CAM software
- Any change in the drawings is automatically changed in the CNC program for machining
Preparing for production and Manufacturing

Preparing for serial production with implementation of CAM software
- Technological data: Feed, Speed, Tolls ...
- NC code for: Milling – 2 to 5 axis, Turning, Turn-Mill machines
Preparing for production and Manufacturing

Specific industry machining solution
-Robot programming
Controling and inspection

- Automatically Excel table creation (Measuring List) from 2D Drawings in CAD, PDF or JPG format
- Save time and eliminate possibility of mistakes

System recognize:
- Dimension
- Tolerances
- Geometrical tolerances
- Notes
Product Data Management System

**BASIC RULE – EVERYBODY MUST USE SAME DATABASE**

- The Data are Securely stored and indexed and concerns about version control and data loss are eliminated
- Sharing and collaborating designs with people inside and outside the organization in multiple locations.
- Create an electronic workflow to formalize, manage, and optimize development, document approval, and engineering change processes.

- Secure Access
- Revision Control
- Find and Reuse Design Data
- Audit Trail
- Integrated Search
- Advanced Search and Favorites
- Integrated eDrawings Preview
- Multi-Document Preview
- Scalability

- Automated Neutral File Creation
- Custom Configuration
- Automated Data Import and Export
- Serial Number Generators
- Distributed Design Teams
- Remote Access
- Automated Approval Process
- Email Notifications
Rapid Prototyping and Reverse Engineering

Reverse Engineering - From physical to CAD model