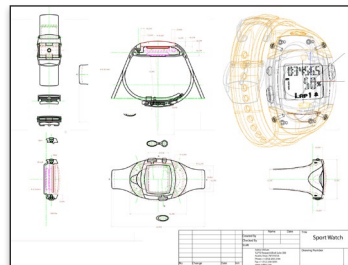
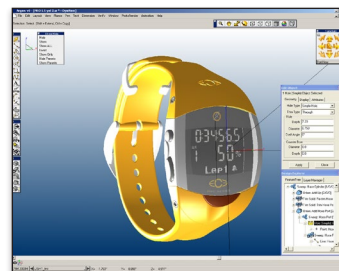
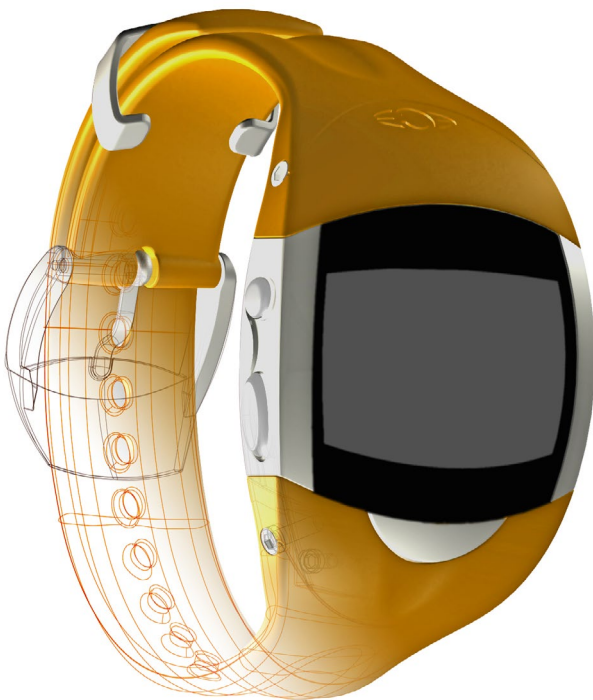




Argon™ v9

History-free precision modelling.™

- Updated Interface
- Unified Drawing & Modeling Tools for Wireframe, Surfaces & Solids
- Vellum Drafting Assistant™ for Intelligent Snaps and Alignments in X,Y, & Z
- Unique Hybrid Mac/Windows, Office/Home Licensing
- Export as STL for 3D Printing
- Exports as 3D PDF for Easy Sharing
- Class-A NURBS Surface Modelling
- True Solid Modelling
- Surface Analysis
- 2D Drawing Snapshots
- Complete Set of Precision Import/Export Translators Including ACIS SAT, Parasolid, IGES, STEP, DXF, DWG, EPS, AI, and more
- Support for Intel Mac
- Full Photo-realistic Rendering & Camera-based Animation
- Object and Group Properties (CG, Volume, Weight, etc.)



“Just extrude in any direction to get a product shape very quickly. It’s as flexible as modelling clay.”

Luc Heiligenstein designed this sports watch using both Ashlar-Vellum drafting and 3D modelling software.

Read more about Luc’s success at www.ashlar.com/success.

General Features

- Direct 3D Modelling
- ACIS Modelling Kernel from Spatial
- 16 Place Floating Point Accuracy
- Hybrid Mac/Windows, Office/Home License
- 65,000 Hierarchical Layers
- Unlimited Colours
- Unlimited Number of Objects and Drawing Size
- Single File Holds Drawings, Models, Assemblies, etc.
- Direct Multi-sheet v
- Universal Binary Support for Intel Mac

User Interface

- Updated Intuitive Vellum Interface
- Drafting Assistant™ for Automatic Snaps and Alignments
- Smart Cursor Changes Shape Indicating Active Tool and Operations
- Strokes and Short Cuts Provide Instant Access to Commands
- Tear-off and Auto-hide Palettes
- Dockable Tools and Palettes
- Palettes can be Flipped Vertically or Horizontally
- Resizable Dialog Boxes
- Status Line to Specify Object Parameters
- Message Line Provides Tool Instructions and Options
- World and User-defined Coordinate Systems
- All Data Entry Fields can Perform Numeric Calculations
- TrackBall for View Selection and Dynamic or Step Rotation
- Show/Hide Palette
- Selection Mask for Easier Selection of Specific Entity Types, Layers, Colours
- Grid (User Definable)
- Object Editor
- Support for SpaceMouse Device on Mac and Windows
- Easy Update Installer



Argon™ v9

Display and Visualization

- Scene Display Modes:
 - Flat Shaded
 - Gouraud
 - Gouraud w/Edges
 - Phong
 - Phong w/Edges
 - Hidden Line Dimmed
 - Hidden Line Removed
 - Photo-realistic
- Scene Display Options:
 - Anti-alias
 - ZBuffer Curves
 - Clip at Eye Point
 - Transparency
 - Reflected Environment
- Real-time Object Display Options:
 - Display Iso Lines
 - Silhouettes
 - Transparency
 - Direction
 - Curvature Comb
 - Surface Analysis Display (Gaussian, Mean, Min/Max, Zebra, Normals, Curvature, Draft)
 - Object Display Resolution (Coarse, Medium, Fine, Very Fine, Super Fine)
 - User Definable Object Colours
- Adjustable Perspective
- Infinite Pan and Zoom
- Section Profiles and Cutaway View in the Edit Window
- Real-time 3D Display:
 - Curves
 - Surfaces
 - Solids
 - Meshes
 - Text
 - Bitmaps
 - Dimensions

Object and Group Properties

- Material
- Centre of Gravity
- Volume
- Weight
- Density
- Moments of Inertia
- Principal
- Axis

Object Management Tools

- Design Explorer™:
 - Layer Tree
 - Object List
- Object Properties Dialog
- Show/Hide Palette

General Transform Tools

- Move
- Copy Along Path
- Rectangular Array Duplicate
- Feature Array
- Rotate
- Polar Array Duplicate
- Scale (Uniform or Differential)
- Mirror
- Align

Text Tools

- Normal
- Along a Path
- Keep Screen Horizontal
- At an Angle
- Set:
 - Font
 - Size
 - Style
 - Colour
- Thicken
- Extrude
- Revolve
- Sweep

Wireframe Creation Tools

- Point
- Points on Curve
- Points on Surface
- Line
- Mid-point Line
- Connected Line
- Arc
- Circle
- Ellipse
- Conic
- Rectangle
- Polygon
- Arbitrary Polygon
- Star Polygon
- Sketch Spline
- Through-point Spline
- Vector Spline
- Bezier Spline
- Helix
- Spiral

Wireframe Editing Tools

- Fillet
- Chamfer
- Trim
- Relimit/Extend
- Break
- Offset
- Join
- Extrude
- Revolve

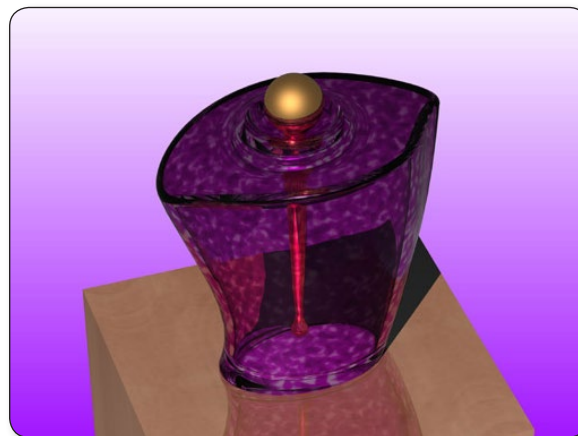
- Project to Plane
- Extract Edge of Surface or Solid
- Increase Order
- Fair Spline
- Add/Remove Spline Points
- Modify Spline Slope
- Curve by Intersection of Plane and a Curve, Surface, or Solid
- Project Curve onto Surface/Solid
- Intersect Two Curves
- Create Points by Intersecting Surfaces or Solids

Surface Creation Tools

- Surface Primitives:
 - Sphere
 - Block
 - Cylinder
 - Pyramid
- Infinite Plane
- Lathe
- Extruded Surface
- Sweep:
 - In Place
 - Perpendicular
 - Ridged
- Sweep Along One Rail:
 - Full Rail
 - To Entity
 - Between Rail Points
- Sweep Along Two Rails:
 - With Maintain Height
- Skin, Skin w/ Guide Curves
- Tangent Loft
- Cover Surface, Tangent Cover
- Net Surface
- Revolved Surface
- Tube Surface
- Offset Surface
- Drafted/Extended Surface
- Fillet Surface
- Surface from Two Contours
- Conic Surface from Sections & Guides

Surface Editing Tools

- Freeform Deformation (Push/Pull Surface Points)
- Deform to a Point, Factor, or Curves
- Add/Subtract/Intersect Planar Surfaces
- Join Surfaces
- Trim/Untrim Surfaces
- Match G1 and G2 Tangency
- Insert Control Points
- Elevate Degree
- Rebuild Surfaces
- Add, Remove, & Replace
- Curves of Associative Surfaces
- Imprint Profile Sketches for Surface Subdivisions



Perfume bottle by **Marc Caloren** of Marc 3 Designs.

“Argon is our software of choice — there is very little training required before our new team members are productive on the program. It is amazing how quickly people grow and learn with Ashlar-Vellum.”

Jason Pippenger, manufacturing engineer and manager for TSS Technologies.

Continued...

Argon™ v9

Solid Creation Tools

- Solid Primitives:
 - Sphere
 - Slab
 - Block
 - Cylinder
 - Cone
 - Torus
 - Prism
 - Pyramid
 - Ellipsoid
- Lathe Profile:
 - With Draft
 - Non-planar Profile
- Extrude Profile:
 - Distance
 - Vector
 - To Entity
 - Mid Plane
 - Thin Wall
 - With Draft
 - Non-planar Profile
- Skin, Skin w/ Guide Curves
- Tangent Loft
- Sweep Profile Along One Rail:
 - In Place
 - Perpendicular
 - Ridged
 - Full Rail
 - To Entity
 - Between Rail Points
 - With Draft
- Sweep Profile Along Two Rails:
 - With Maintain Height
- Pipe Solid
- Thicken Surface into Solid
- Stitch Surfaces into Solid

Solid Editing Tools

- Boolean Add/Subtract/ Intersect Solids
- Constant Blends:
 - Radial
 - Elliptical
 - Vertex
- Variable Blends:
 - Linear
 - By Position
 - To Curve
 - To Fixed Width
 - To a Hold Line
- Constant Chamfers:
 - By Length
 - Two Lengths
 - Length and Angle
 - Vertex
- Variable Chamfers:
 - By Lengths
 - Four Lengths
 - Lengths and Angles
 - By Position
 - To Fixed Width
- Holes:
 - With Bore
 - With Sink
 - To Depth
 - Through
 - First Blind
 - To Face
 - With Draft

- Bosses:
 - With Specified Fillet
 - With Draft
- Profile Cutout:
 - With Draft
- Profile Protrude:
 - By Vector
 - To Face
 - With Draft
- Split:
 - With Surfaces or Solids
- Trim:
 - With Curves, Surfaces or Solids
- Shell:
 - With Independent Face Offsets
 - With Core/Cavity Options
- Parting Line:
 - With Draft
- Local Operations:
 - Taper/Draft Face
 - Move Face/Edge
 - Offset Face
 - Remove Face
 - Replace Face
 - Match Face
 - Deform Face (By Factor, To Point, To Curves)
- Bend Solids
- Twist Solids
- Stretch Solids

Architectural Features

- Smart Walls
- Smart Doors
- Smart Windows

Independent 2D/3D Drawing Creation

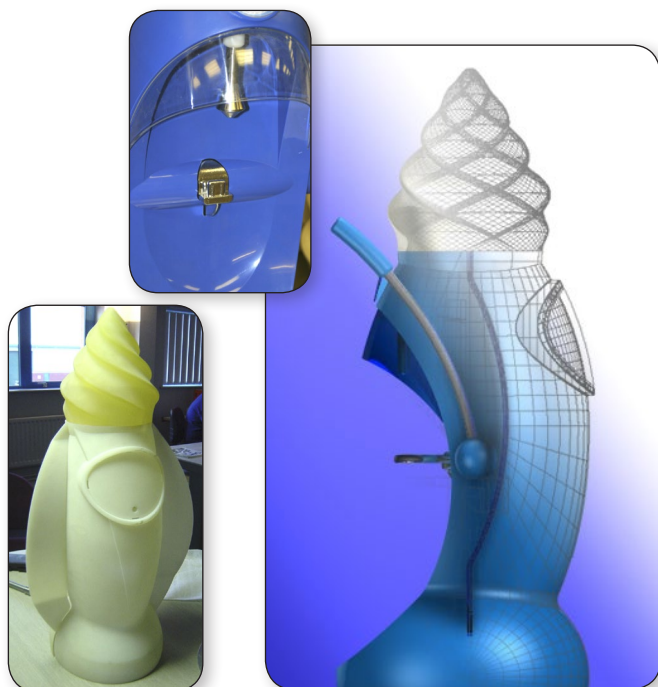
- Predefined and Customizable Layouts
- Create 2D/3D Drawings w/o Building Models
- Stored in Same File as Model

2D/3D Drawing Creation from Models

- 2D or 3D Snapshots from 3D Wireframe, Surfaces, and Solids
- Sectioning Capability (Manual)
- Automatic Hidden Line
- Predefined Layouts

2D/3D Drafting & Detailing

- Available for Independent and Model-driven Drawings
- Smart Dimension Tool Automatically Creates the Appropriate Dimensions
- Dimensions:
 - Linear
 - Angular
 - Diametric
 - Radial
 - Spline Length
- Standard and User-definable Tolerances and Settings:
 - ANSI
 - DIN
 - ISO
 - JIS
 - Dual
 - Architecture
 - Stacked Fraction
- Balloon and Callout Dimensions
- Predefined and User Created Hatch and Fill Patterns
- Predefined and User Created Line Weights, Colours, and Styles
- All Dimensions can be Dynamic or Static
- Hatching Optionally Includes Area



“Ashlar-Vellum software is the heart of our virtual prototyping design and development process, supplying all our solid modelling, 2D drawing and image rendering needs in the one package.”

In only five months from concepts through distribution, **Nick Dearden** brought this ice cream dispenser to shops throughout the U.K.

Read more at www.ashlar.com/success.

Continued...

Argon™ v9

Photo-realistic Rendering

- Drag and Drop Materials
- Drag and Drop Decals (with Alpha Channel)
- 3D Wireframe Interleave
- Realistic Texture Maps and Procedural Textures:
 - Wood
 - Marble
 - Granite
 - Leather
 - Plastic
 - Glass
 - Metal
 - Brushed Metal
 - Automotive Paint and more
- Advanced Material Editor:
 - Colour
 - Reflectance
 - Specular
 - Diffuse
 - Ambient
 - Roughness
 - Bump
 - Transparency
 - Refraction
 - Texture Orientation and more
- Interactive Materials Display
- Environment Maps
- Customizable Scene Presets
- Editable Light Sources:
 - Spot
 - Bulb
 - Distant
- Photo-realistic Sunlight (Location/Date/Time)
- Photo-realistic Tube and Area Lights
- Adjustable Hard and Soft Shadows
- Visible Volumetric Light Effects
- Sketch Effects (SP1)
- Fog Effects
- Backgrounds
- Raytracing with Anti-aliasing
- Production Quality Resolution & Output (BMP, TGA, TIF, LWI, EPS)
- Multiprocessor Photo-realistic Rendering
- User-defined Presets

Camera-based Animation

- Fly-by
- Walk-through
- Sunlight Timeline
- QuickTime Object VR
- QuickTime Panoramic VR
- Direct Event Journal Recording and Playback
- QuickTime Event Recording and Playback

Import/Export

- ACIS SAT
- 2D PDF
- 3D PDF (Export Only)
- DWG/DXF
- IGES
- STEP
- Pro/E (via SAT)
- Parasolid X_T (Windows Only)
- SolidWorks (via SAT)
- Catia v4
- 3D Studio (Import Only)
- Rhino 3DM (Import Only)
- Facet
- STL
- Adobe Illustrator
- EPS (Export Only)
- CGM
- VRML
- ShockWave 3D (Export Only)
- Bitmap:
 - BMP (with Alpha Channel)
 - JPEG
 - PNG (with Alpha Channel)
 - PPM
 - XPM
 - XBM
 - GIF
- PICT (Mac Only)
- Spline (Import Only)
- RAW Triangle (Export Only)
- ASCII Text
- Grid Surface (Import Only)
- Other Ashlar-Vellum Products

Localized User Interface

- English US
- English UK
- French
- German
- Italian
- Portuguese
- Russian (Windows only)
- Swedish

PDF Integration

- 2D PDF Import
- 2D PDF Export with Non-tessellated Arcs and Splines
 - Multi-sheet
 - Imbedded Exports Optional
- 3D PDF Export

Available Accessories

- Graphite v8
- Cobalt Share™ for Viewing, Printing and Exporting at Client or Manufacturing Site (Free)
- Vellum:environments™
- Vellum:tracks™
- Vellum:materials™
- Vellum:decals™
- Tutorials (Free)

Recommended System

- Windows / Macintosh
- Windows 7 / 8.1 / 10 (x32 or x64)
- OS X 10.5 / 10.6 / 10.7 / 10.8 / 10.9 / 10.10 / 10.11
- 32 MB Accelerated Video Card w/ Open GL (Standard on all business-class systems since 2005. Additional RAM will not improve performance.)
- Medium- to High-performance Workstation Graphics Subsystem Recommended for Real-time Environment Mapping on Complex Files
- 512 MB RAM
- 250 MB Free Hard DriveSpace / 1 GB Allocated Virtual Memory
- DVD Drive or High Speed Internet Connection



“There is nothing to match the flexibility and sheer value of Ashlar-Vellum translation tools for 3D geometry—and then there’s the modelling.”

Designer **Kevin Quigley** produced this line of Optima Mugs for Village Mill.

Read more at www.ashlar.com/success.