

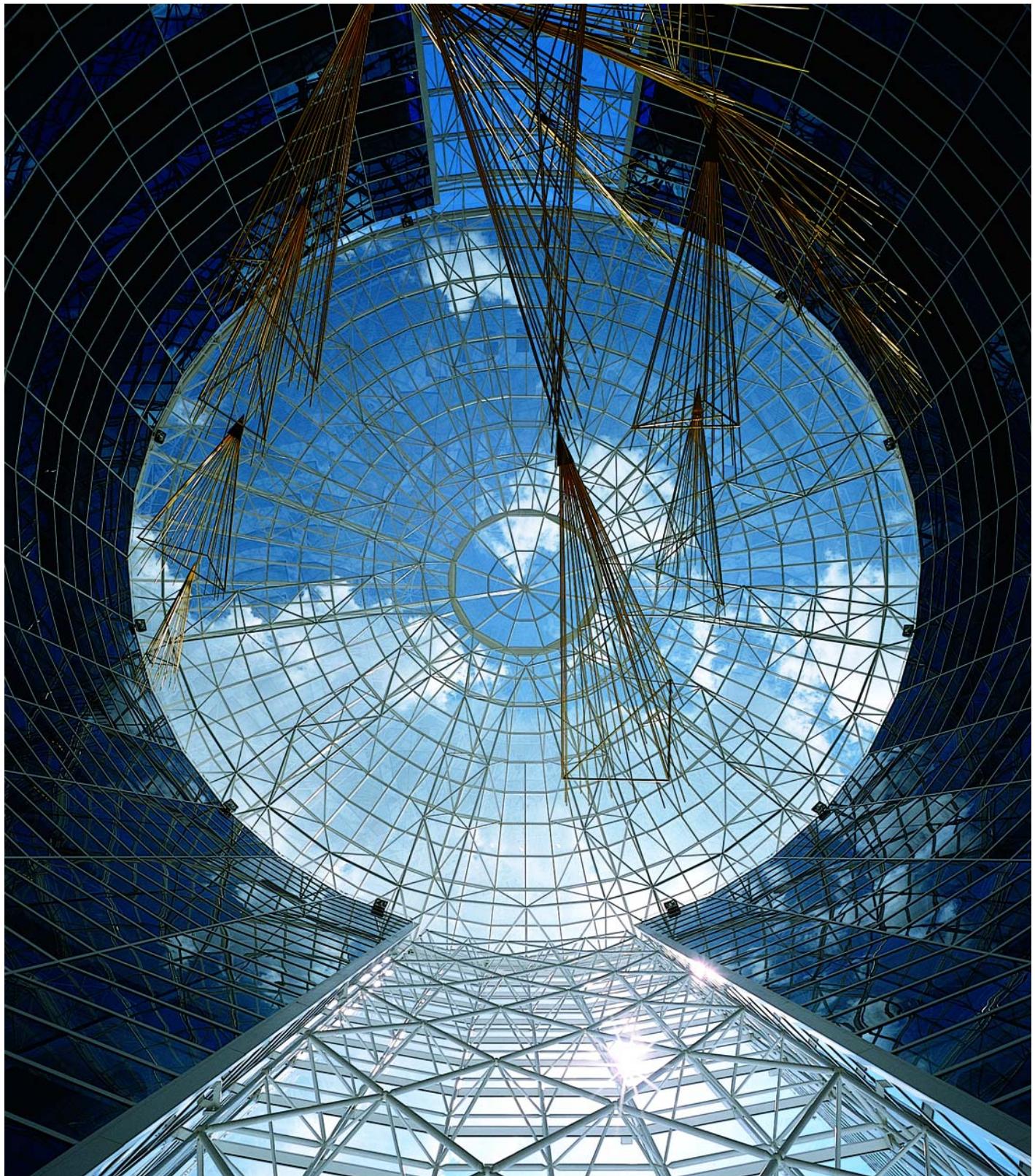
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KK-System

Kugel Knoten (Spherical Node)

Structural System

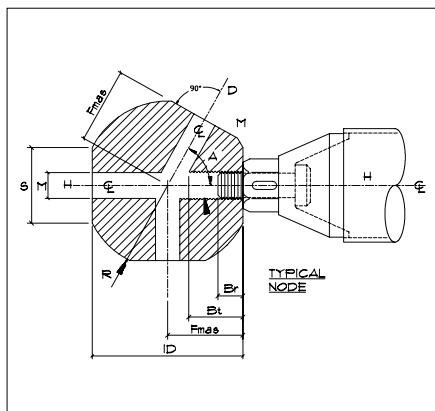
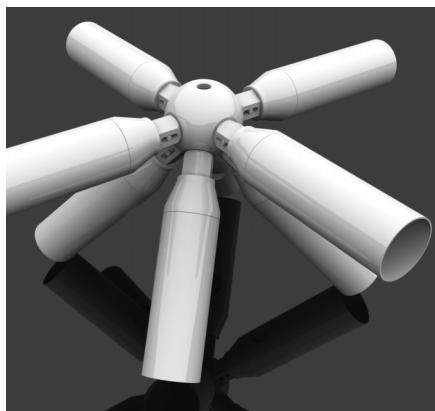
NOVUM





## KK-System

### Kugel Knoten (Spherical Node)



## Structural System

### System Components

01. Nodes are C45 forged steel, plated and painted
02. Structural members are circular hollow sections A500 Gr B or equal
03. Structural members are hot dip galvanized and powder coated
04. Bolts are DIN 267 Grades 5.6, 8.8 and 10.9

### Applications

01. Typically double or triple layer grid structure
02. Can be used in curved single layer structures with adequate boundary conditions
03. Ingenious flexibility of design enables true free form geometry

### System Attributes

01. Classic technology first pioneered by Dr. Mengeringhausen in Germany during the 1940's and used on thousands of projects worldwide
02. Timeless design of lattice work and minimal size connections
03. Affordable and elegant for projects of any size
04. Standard components allow spans to 300' (100m)
05. Nodes are custom machined for a tight tolerance and complete geometric flexibility using CNC equipment
06. Single bolt pin ended connections are achieved with hidden fasteners
07. Structural members are optimized with varied diameters and wall thicknesses
08. Grid sizes are determined by applied loading or cladding type and the geometry can be optimized to accomplish highly transparent and lightweight designs
09. Secondary steelwork is used as the interface of structure and cladding and simply attaches to the nodes allowing integration of traditional claddings such as metal roofs, opaque or translucent panel systems
10. IAS quality control certified
11. Structures are designed by Novum engineers
12. Integrates fully with Novum Aluminum Supported Glass, Edge Clamped Glass, Linear Supported Glass, and Point Supported Glass Systems

### Options/Materials/Finishes

01. Mild steel is standard. Aluminum and stainless steel versions are available
02. Standard member finish is hot dip galvanized inside and out after fabrication. Galvanizing is followed by a thermoset polyester powder color coat
03. Additional finish options include liquid polyurethanes over hot dip galvanizing, powder coated aluminum or brushed stainless steel