

BK-System

Block Knoten (block node)

Structural System

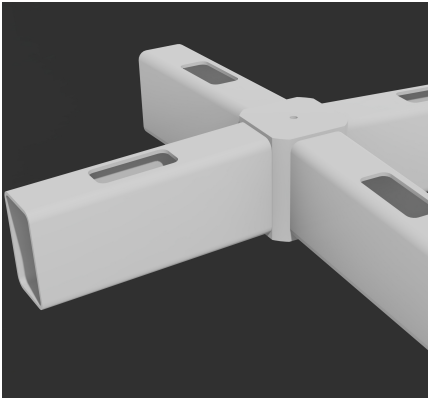
NOVUM



## BK-System

### Block Knoten (block node)

## Structural System



### System Components

01. BK nodes are from C45 forged or S355 steel, precision machined and then plated and painted. The solid node is typically the system depth
02. BK structural members are typically hollow rectangular sections (A500 Gr B or C or S355) with factory welded rectangular end plates
03. Hot dip galvanized and painted tubular members are standard
04. Concealed high strength steel fasteners with zinc plated and special corrosion coating
05. Bolts are DIN 912 Grade 8.8 or 10.9 depending on applications and strength

### Applications

01. Single or double layer three-dimensional grid structures
02. Typically used for regular form single layer grids with planar orthogonal geometries such as domes and vaults. Triangular geometries are also readily accomplished
03. Designed to achieve modest angular changes in surface planes and where angles between tubes are typically over 50 degrees
04. Where flat cladding panels require support along their edges
05. BK beams can be integrated with Novum HK nodes and KK-System as bending stiff chords resulting in very stiff double layer space trusses

### System Attributes

01. Contemporary spaceframe technology design aesthetic
02. Nodes are custom machined using CNC equipment to tight tolerances providing full quality geometric certainty
03. Hidden prestressed high strength fasteners using special tools
04. Semi rigid connections comfortably provide spans to 100' (30m) or more as a single layer
05. Structural profiles are optimized using varied wall thicknesses and need not be same depth in both directions of an orthogonal grid
06. Standard member sizes typically are 3" (80mm) wide and vary in depth from 5" (125mm) to 12" (300mm). Node heights match member heights
06. Grid geometry and beam sizes are determined by loading and cladding type
07. System requires no secondary steelwork as a cladding interface
08. Structure and cladding are designed by Novum's in-house engineers
09. In single layer orthogonal applications, the BK-System accommodates other Novum Systems (KK or DC) as bracing for improved stiffness
10. The BB-System can be used between BK members as non-primary infills to split larger grid modules to achieve economical cladding
11. Glass, panels and membrane cladding materials integrate with the BK-System using Novum Edge Clamps, Linear Supported Glass, Point Supported Glass, Air Filled Pillows or Stressed Skin Membrane Systems
12. This system is fast to fabricate due to highly integrated design and production software and processes. It installs quickly

### Options/Materials/Finishes

01. Standard member finish is hot dip galvanized inside and out after fabrication and then 2-coat finish painted
02. Options include powder coating over hot dip galvanizing or galvanized only