

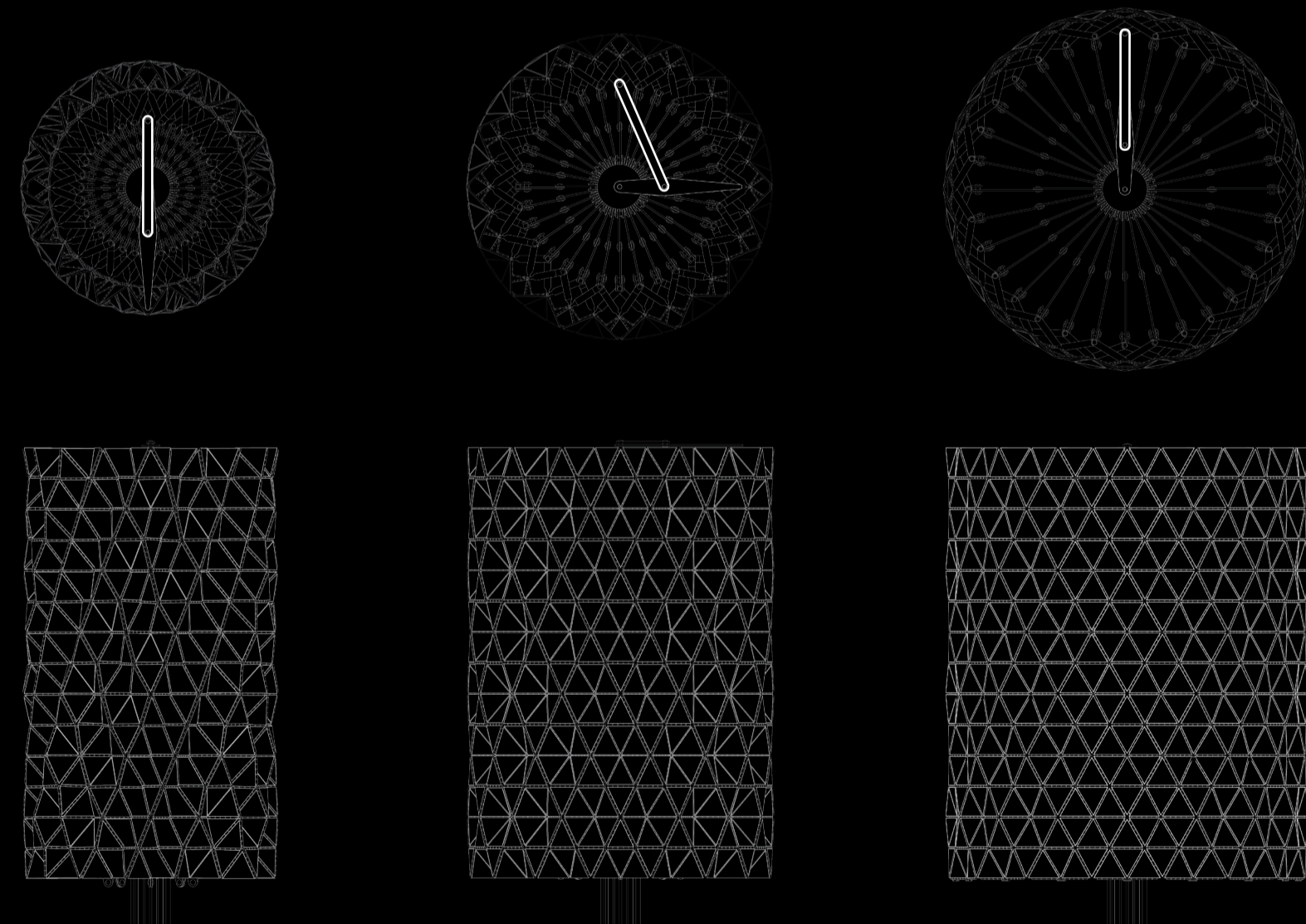
1:30 Section

Natural Beauty from Structural Beauty

The structure of Yggdrasil was inspired by the natural form of tree and clock tower. Starting from a column as trunk from the ground, the structure was connected to a skeleton, as branches of the tree, and then the triangulated façade as leaves. On top of column is the clock which represent time. The movable structure combined radical, linear, and folding movement to create the whole folding effect.

Located on top of the column, the clock hand was connected to the motor inside the column which gives initial radical kinetic movement to drive the folding of skeletons. The body compose of 6 stacking levels of radial formed skeleton. Each level of skeleton consists of two layers of diamond shaped movable structure. The inner layer composes series of module of four identical steel members with hinge joint on both ends. 8 modules connected the outer layer from the column, allows linear outward movement from the centre driven by the clock and transform wind load to compression applied to the column.

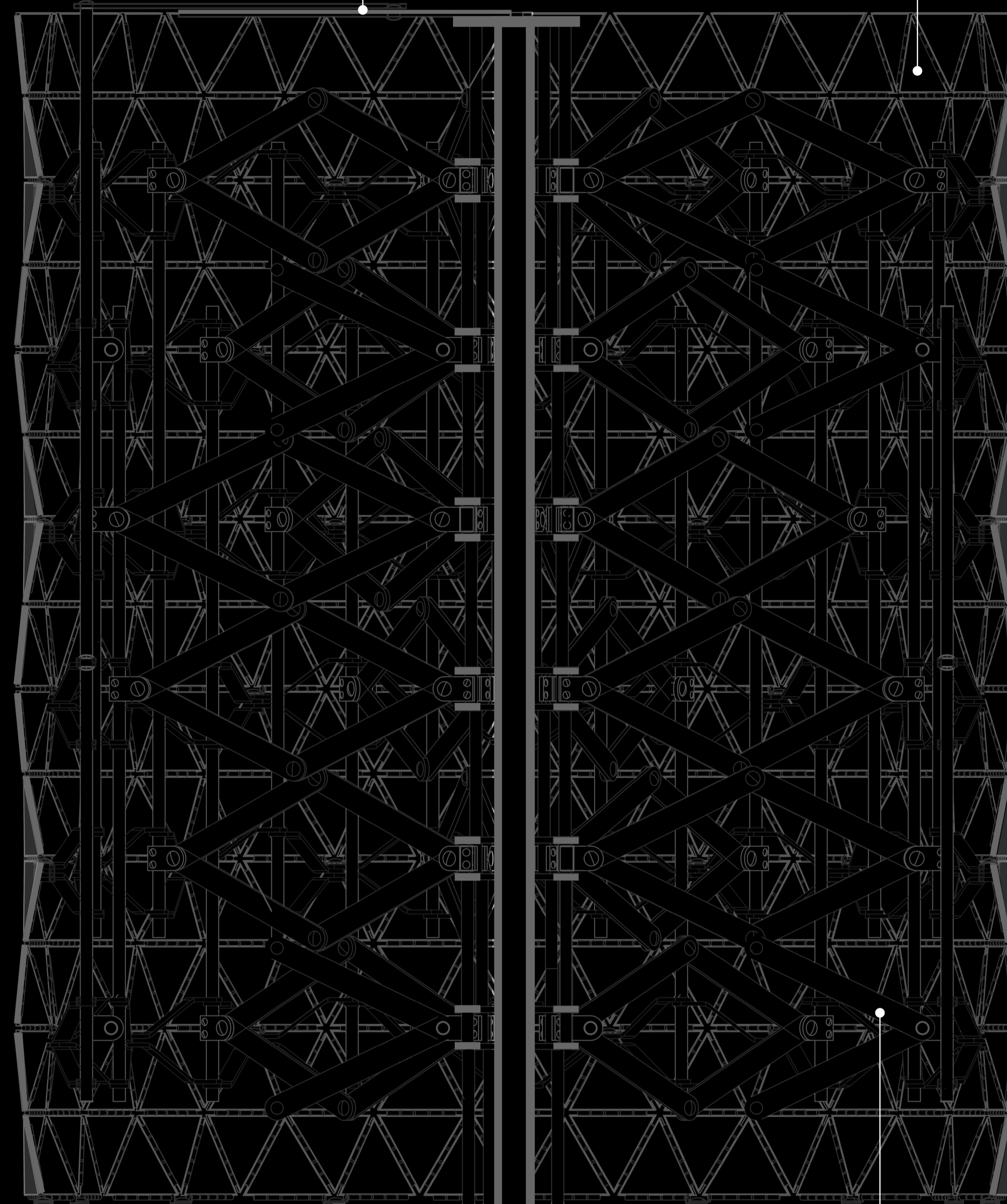
The outer layer was connected the inner layer and the façade. Having similar diamond shaped connection with the inner layer, the module of outer layer consists of a pair of steel members and a pair of hinge joint from the outermost layer of PV panels. The 16 modules connected to in a ring form outside the first layer. With the metal rod chained the skeleton of all levels, the structure transforms the rotation of clock hand to consistent and evenly distributed folding movement along the origami-like façade, echoing the movement of the sun.



Time Indication by Change of Form

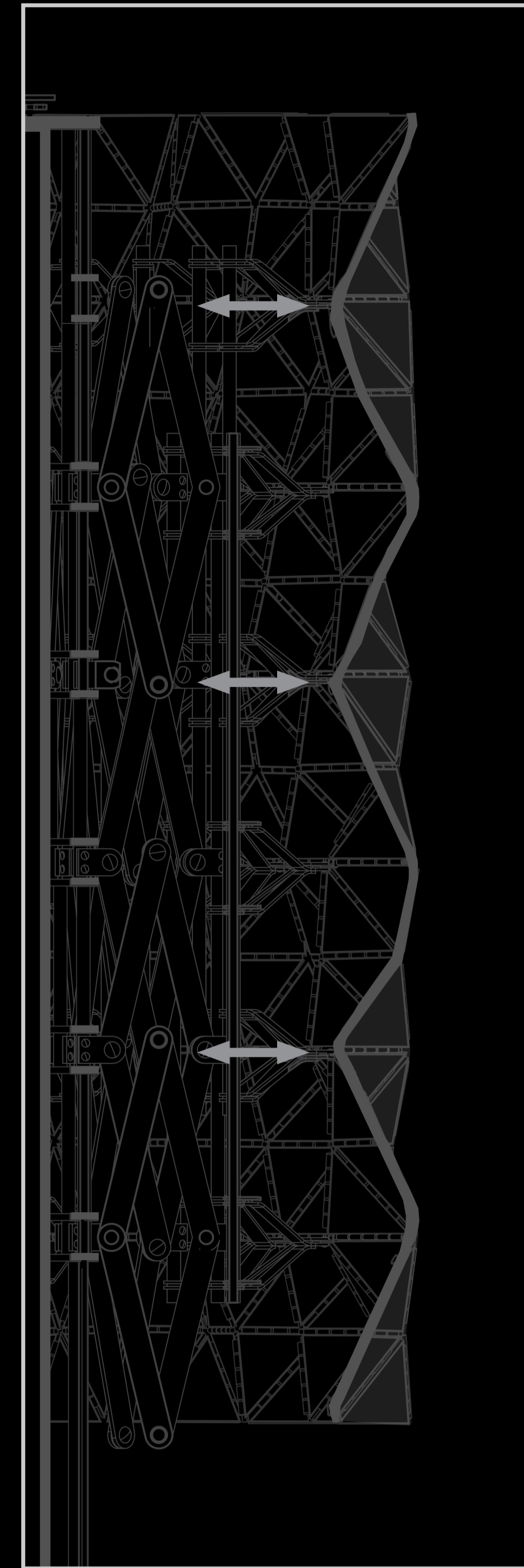
Control Needle with 360 degree rotation to generate expansion and compression to the surface

800mm (W) Equilateral Triangular Polycrystalline PV panel module



Steel column with electrical conduit inside

50mm (thk.) stretcher to connect to the central core



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