

About NPM V-Z-θ Actuators

NPM developed the compact-sized actuator, with three functions: linear motion (Z), rotary motion (θ) and vacuum (V) in one unit. Formerly, each motion type was available with a separate mechanism, but this actuator binds all the movements into one unit to help save space.

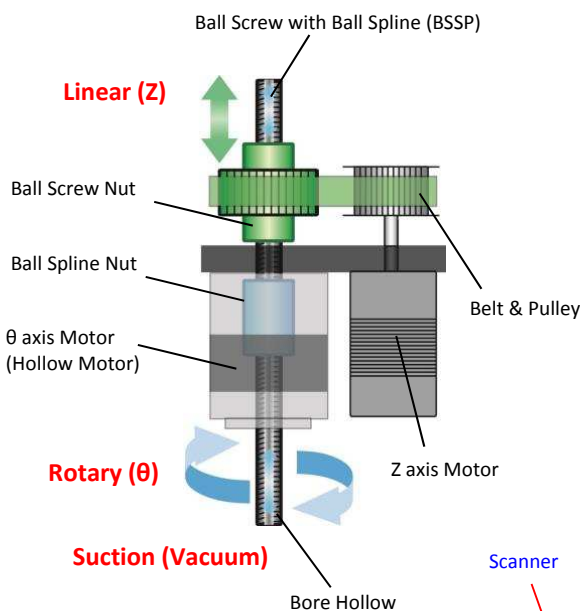


【Features & Benefits】

- This whole unit binds three functions into one unit, so complicated design or configuration is not necessary. This helps to not only save space, but also reduces the number of parts, assembly time and workload.
- Unit combines NPM hollow motor and KSS Miniature Ball Screw with Ball Spline (BSSP).
- The most appropriate V-Z-θ Actuator can be selected according to size and other constraints.

【Internal Structure】

We named this Actuator “V-Z-θ Actuator” because it contains vVacuum (V), linear motion (Z) and rotary motion (θ) functions into a single unit. The hollow motor and BSSP allow the realization of this movement. The hollow motor has a large hole in which to place the ball screw nut, and BSSP's grooved spline thread overlaps the ball screw thread on the shaft thanks to special grinding technology. The screw shaft's hollow hole can also be used for air suction function. The V-Z-θ Actuator cannot be imitated by other manufacturers!



【How it works】

Two motors are required to connect to the ball screw nut and ball spline nut. A hollow or standard motor can be connected to each nut with belt and pulley. As each motor turns, the ball nut makes linear motion possible, and the spline nut makes rotary motion available.

【Application】

NPM V-Z-θ Actuator can be used in medical applications such as pick and place, specimen examination, and test tube transferring, as well as other applications.

