

## A Grip that fits all shapes and sizes

### Problem

Where can you find a Grip that can accommodate any shape or size? There are many types of application-specific Grip adaptations, however these custom made Grips increase both cost and setup time. The principle of locking an item between two faces is thrown into disarray when a curve, a corner or an elbow is present especially when the Grip needs to orient the work piece by “gripping” one of these features.

Common applications include automotive, aerospace, mold making and general machining. The X-Support version is ideal for test and metrology applications.



### Solution

MATRIX, based in Germany, offers a solution to this problem. The concept is similar to that of the concept behind pin-art sculpture. The X-Grip and X-Support systems consist of an array of spring-loaded pins that can be locked into place once the form of the object has been “imprinted” upon them. When resetting, the pins can be released to their original extended position in order to custom fit the next work piece. In the X-Support version, the spring loaded pins are secured by simply turning a handle. The X-Grip system on the other hand, uses grip to provide a holding force that is strong enough for machining. Available as part of a modular system, the grips and support systems can be “built up” using connectors, angle pieces, and extensions in order to hold the pins in a variety of positions. Securing these pieces into place requires only one tool. The simplicity of the modular design allows for many different applications.

### Applications

Due to the fact that each work piece has a unique shape, there is a great need for this type of device. Design for manufacturing often takes into account the process of manufacturing, but fails to recognize part fixturing during manufacturing. Failure to consider part fixturing makes testing applications very difficult. There is no way to hold the work piece while measuring. This is where the X-Grip and X-Support systems come in. They form directly to the work piece and their modular design allows for maximum versatility.

