

### 2.3.2 Vertical Blade Cutting Engine

The machine consists of a head with a motor, a wheelbase and an auxiliary part in where the knife moves within the head.



Picture 2.6.

### Round Blade Cutting Engine

It is a cutting machine with automatic sharpening system, which takes action from the engine and cuts with a knife that moves vertically up and down. The cutting heights (capacities) of these machines are determined by the distance between the base and the head. This measure is called a stroke.

There are cutting machines with cutting head perpendicular to 70mm to 300mm.



### **Picture 2.7. Cutting with Vertical Blade Cutting motor**

The machine is vibrated because it works with the submersible movement. As the difference between the cutting height (stroke) and the height of the fabrics cut, the vibration of the machine increases. It should be used in cutting high-rise layer fabrics to reduce vibration. The ability to cut high layers and to cut smoothly in curved areas increases the usage areas of the machine.

The structure of the processing blades varies according to the properties of the material to be cut. These are;

- **Straight knife:** It is used for cutting all fabrics which are not hard enough to prevent knife movement.
- **Saw blade:** It is used for cutting hard and plastic surfaces.
- **Gear knife:** Used for cutting hard materials (work clothes, tents, rubber, synthetic leather etc.).
- **Inner twist knife:** Used for cutting synthetic and plastic surfaces.
- **Interior carved knife:** Used for cutting adhesive materials.



**Vertical Motor Blade**

**Picture 2.7.**

