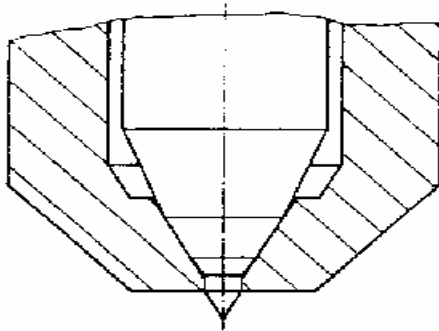


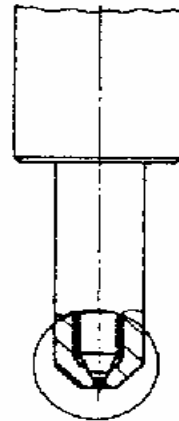
THE ELSBETT FUEL INJECTION SYSTEM

The fuel in the **ELSBETT** engine is injected locally and tangentially inside the central combustion area within the chamber. This process prevents the fuel and its residue from making contact with the walls, thus minimising the loss of heat.

For this reason the injection nozzles have one aperture with a self-cleaning needle, and are arranged in a specific position and at a specific angle.

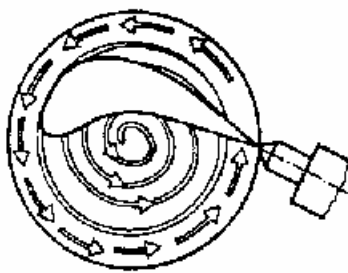


Injector nozzle

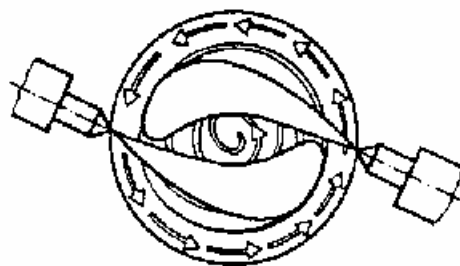


Detail of pintle nozzle

The built-in injection control system, which is a feature of **ELSBETT** engines, adjusts perfectly to the specific characteristics of each engine, and renders an additional injection pump unnecessary, thus reducing the number of parts and the weight of the engine.



Simple injection



Double injection

Larger engines are fitted with a dual injection system to minimise emissions. Each cylinder is fitted with two injection nozzles which are tangentially symmetrical.

Soot forms when the temperature, caused by the combustion of fuel at the beginning of the injection process, causes the decomposition of the fuel injected at the end of the injection process. The inclusion of a second injection nozzle in each cylinder makes it possible to reduce the injection time by almost 50%, and this substantially reduces the emission of soot and allows soot filters to be dispensed with.