

SERDI Profile

Single Point Cutting System

The **SERDI Profile** features the most advanced technology for machining of valve seats and valve guides. The extremely powerful spindle will allow machining of all types of cylinder heads from the smallest multi-valve heads up to heavy duty diesel heads.

The machine spindle is **numerically controlled** and gives automatic machining of valve seats and valve guides, assisted by a **depth control system** which determines with precision the position of the cylinder head fire deck allowing full control of the **machining depth** of each valve seat.



The **work head** of the machine is also under **numerical control**, allows automatic movement from one seat to another, giving a **complete machining cycle** for a given type of seat.



User friendly! The computer monitoring the whole system gives easy access to the different functions of the machine: The CAD CAM system, the cylinder head library, the automatic machining cycles. The operator needs no long and costly training to be highly performing with this machine.

The maximum performance of an engine is achieved through a perfect tightness between the valve and the valve seat. This condition requires a **perfect concentricity** between the valve and its environment.

SERDI PROFILE offers you the possibility to ream valve guides, to machine valve seats and valve seat bores, both in manual mode and in automatic mode, thanks to the machines unique learning system and uncomplicated operation.

The pilot passing through the valve guide assures the machining of the seat concentric to the guide.

A horizontal and a spherical air cushion will allow the **centering of the tool** in the valve guide using as reference the exact axis of the valve. When the workhead is locked to the machine bed, **machining** of valve seats or valve guides remains concentric to the real valve axis.

The SERDI PROFILE workhead features 2 different air floated movements.

- The workhead assembly can be moved freely thanks to a horizontal **positioning** air cushion - lengthwise movement.
- The sphere-cylinder built into the workhead is equipped with its own horizontal **centering** air cushion.
- The sphere carried by the sphere-cylinder is floating on a **spherical** air cushion.

The combination of these three movements guarantees a fast and extremely exact machining.