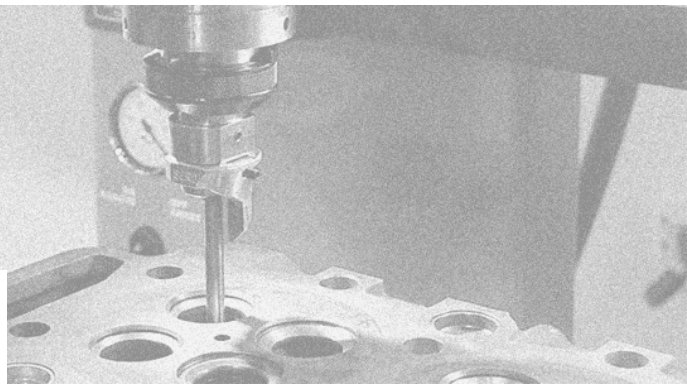
SERDI

FORM TOOL
VALVE SEAT MACHINES



2.0 ES

Machining process
Form tool

Operating
Manual

Power
2.2 kW

Centering technology
Double air cushion

Valve seat capacity
28 to 120 mm
1.1" to 4.72"

Spindle speed
80 to 840 rpm

Automotive

Heavy duty

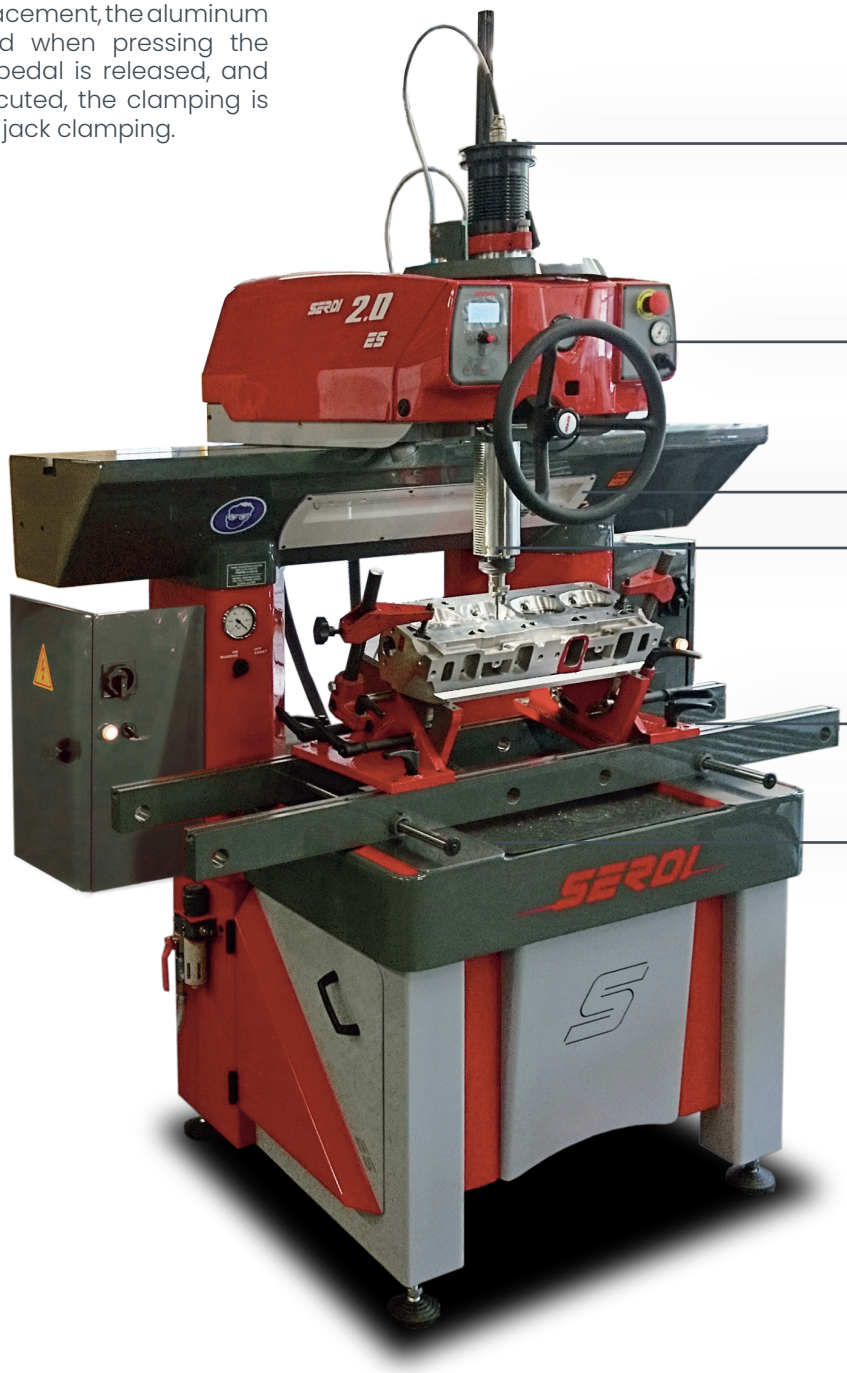
Best budget machine designed on the working principle of the double air-float centering system, with a built-in motor spindle delivering powerful torque, a very high rigidity machining head and frame, being able to carry any conventional heads.

40
YEARS AND MORE OF EXPERTISE

ADVICE & SERVICE

WORLD CLASS TECHNOLOGY

AIR FLOATED MACHINING HEAD
For guide to guide displacement, the aluminum based head is moved when pressing the foot pedal. When the pedal is released, and centering process executed, the clamping is ensured by pneumatic jack clamping.



2.2 KW BUILT-IN MOTOR SPINDLE

CONTROL PANELS

LED LIGHTNING

CSSV

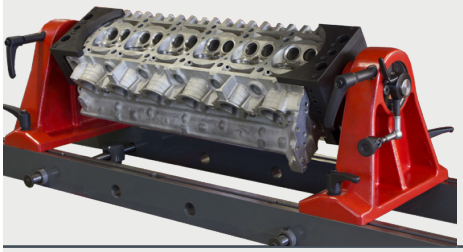
ELECTRIC CABINET
Storing most of the electrical components, including the V20 Siemens VFD, driving the built-in motor spindle.

SINGLE AXIS ROLLOVER FIXTURE

CYLINDER HEAD SUPPORT TABLE
The parallels can slide back and forth on the machine frame, and then are firmly clamped by two pneumatic jacks for machining purpose.

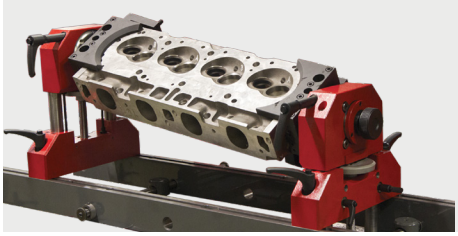
CAST IRON MACHINE FRAME
Redesigned and FEA optimized cast iron machine base for improved rigidity.

OPTIONAL FIXTURES



SINGLE AXIS ROLLOVER FIXTURE

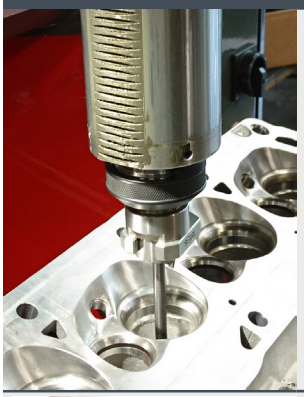
Allows quick positioning of parallel and non-parallel side heads with tilted valve guides. Sturdy clamping thanks to two large jaws. 360° rotation to get an easy access to all sides of the cylinder head for various jobs. Firm locking of the jaw's shafts through two handles for a perfect clamping while machining.



DUAL AXIS ROLLOVER FIXTURE

Heads with tilted or canted valve guides can be positioned quickly, even if sides are parallel or not. Set the cylinder head at the desired level and roll it over. Sturdy clamping thanks to two large jaws. Sphere centering handles to get a quick mount of the head. Firm locking of the jaw's shafts through two handles for a perfect clamping while machining.

STANDARD EQUIPMENT



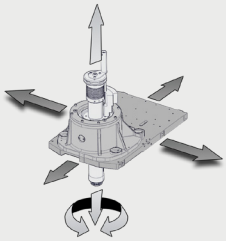
2.2 KW BUILT-IN MOTOR SPINDLE

Built-in motorspindle paired with a 2.2 kW Siemens Inverter, with a maximum torque from 40 to 385 rpm and a maximum speed of 840 rpm. Stator cooled by heat sink. Rigid heavy duty motorspindle of 80 mm (3.15") diameter for machining without chatter. Ensure a considerable machining accuracy thanks to a high precision tooth rack and a whole spindle assembly rigid and concentric to the valve guide.

ISO 30 spindle taper welcoming any tool holder from our valve seat tooling range. Spindle locking by electronic device for tool changing.

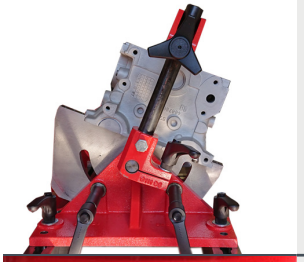
CONTROL PANELS

Spindle control buttons located just behind the handwheel to change with ease the spindle speed rotation, switch spindle direction or reset the depth control measurement. Digital depth control accurate until 0.01 mm (0.0004"), displayed in inch or millimeter. Two switch buttons to fastly activate both sphere and flat cushions, or lock them. Large handwheel for a better control of machining depth.



DOUBLE AIR CUSHION CENTERING

The centering is made by association of a spindle floating on a spherical air cushion and a rigid light weight aluminium head plate floating on a plane air cushion. It does automatically align each valve guide regardless of any misalignment or angular deflection thanks to live pilot technology.

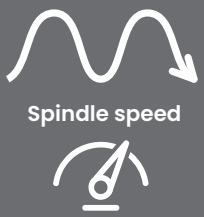


CLAMPING FIXTURE

The machine is supplied with a clamping system allowing to setup and clamp cylinder heads with both vertical and inclined valve guides. Several types of spacers or clamping bars are supplied to adapt the most common cylinder heads. The cradle can tilt from +42° to -15° from vertical.

INTEGRATED VACUUM TESTER

Graduated vacuum tester from 0 to -1 bar, linked to a vacuum generator on one end and to a foam pad on the other, in order to make a fast valve sealing check with the valve mounted on the valve seat, before disassembling the cylinder head from the machine.



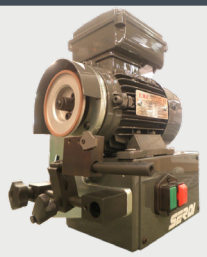
CONTINUOUS SPINDLE SPEED VARIATION-CSSV

This function allows the spindle speed a permanent oscillation around the nominal speed, in order to snap machining shattering when the cutting profile is too large.

SERDI VALVE SEAT TOOLING

Machine fully compatible with our valve seat tooling range, including tungsten carbide pilots, tool holders, bit holders and cutting bits. See our dedicated catalog for more information.

OPTIONAL ACCESSORIES



SERDI SHARPENER 3500

Allows you to increase the lifespan of your carbide cutting tools in a fast and easy way. Now sharpens original and new design bits, without removing from the tool holder. Supplied with a Ø75 mm diamond wheel. More tilt settings for a better surface grinding accuracy.

TOOL RACK

Fits on the right side of the machine and welcomes up to 50 pilots, 8 tool holders and small accessories. Includes three drawers for smaller tooling such as cutting bits boxes or cutting bit holders.

SERDIGITAL

Digital display micrometer allowing to measure and adjust accurately the position of the cutter to the seat diameter, without unmounting the tool-holder from the machine. This can be used with a counterboring bit and any cutter bit.

TECHNICAL SPECIFICATIONS

SPACE REQUIREMENTS
Length : 1690 mm - 66.54"
Width : 1050 mm - 41,3"
Height : 2170 mm - 85.43"
Net weight approx. : 1085 Kg - 2392 lbs

HEAD STROKE
Lenghtwise : 1016 mm - 40"
Crosswise : 44 mm - 1.73"

MAXIMUM CYLINDER HEAD SIZE
on parallels with standard 190 mm pilot
Length : unlimited
Width : 500 mm - 19.7"
Height : 360 mm - 14.2"

SPINDLE
Spindle sleeve diameter : 80 mm - 3.15"
Spindle speed : 40 to 840 rpm
Travel : 290 mm - 11.41"
Spindle motorization power : 2.2 kW
Angular stroke : 5°

MACHINING CAPACITY
Valve seat capacity : 28 to 120 mm / 1.1" to 4.72"

SUPPORT TABLE STROKE
Lenghtwise : 160 mm - 6.30"

CONNECTIONS
Electric supply : 4kVA-230V-AC-1Ph-50/60 Hz
Pneumatic air supply : 6 bars
Maximum air flow : 300 l/min - 15 CFM
Noise level at 400 rpm : 72 Dba
Noise level at 1200 rpm : 82 Dba

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