



SERDI

100 ES

Machine designed on the working principle of the double air-float patented centering system, with an electro spindle delivering massive torque, a very high rigidity machining head and frame, being able to carry very heavy cylinder heads.

Machine mainly dedicated to the high speed machining of big diameter seats.



Machining capacity
from 28mm to 120mm
/ 1.1" to 4.72".

Patented centering
system: double air
cushion, horizontal and
spherical.

Fully integrated spindle
motor, variable speed
from 40 to 840 RPM,
paired to a 3 kW
Siemens inverter.

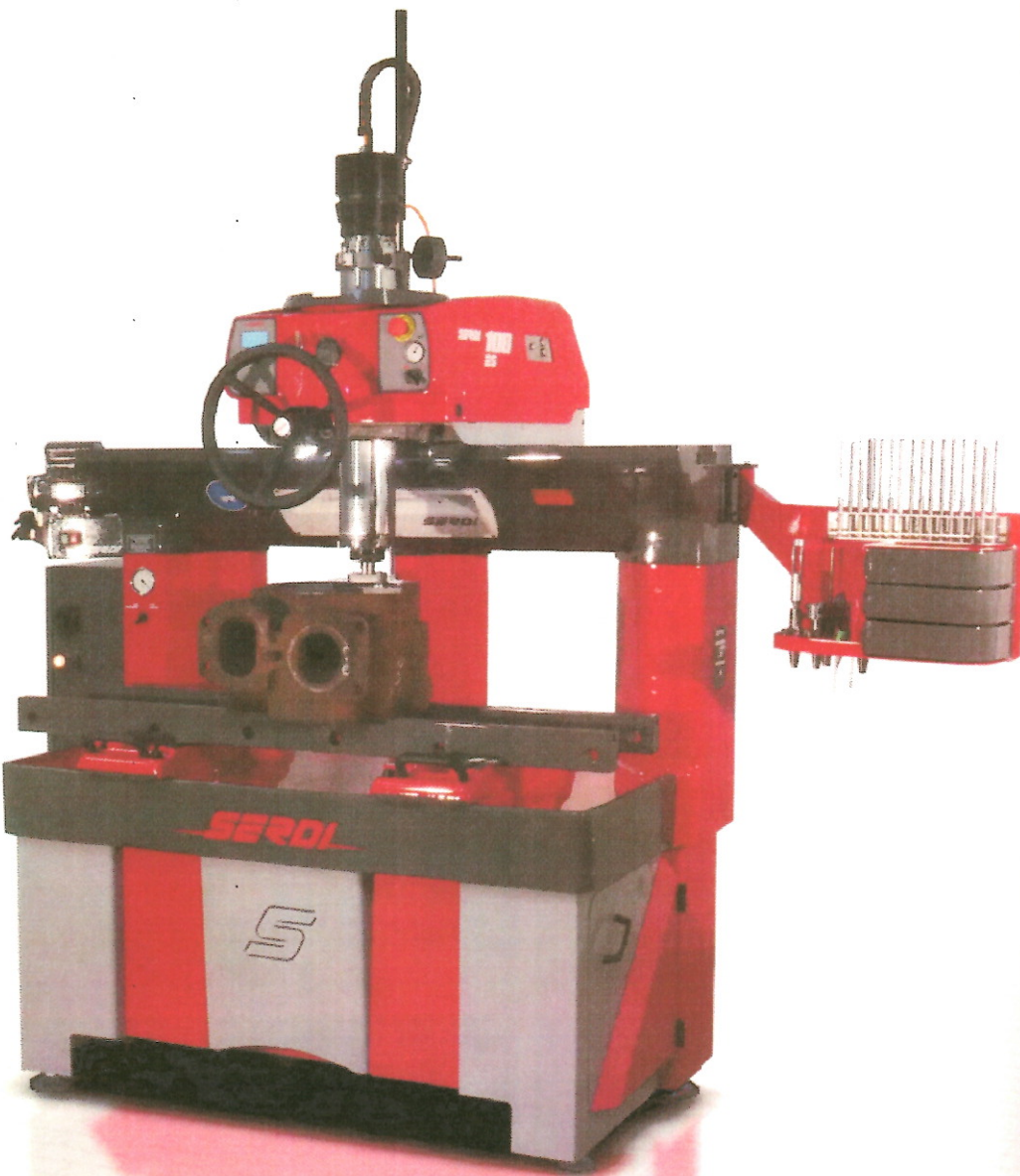
Digital spindle speed
rotation and depth read
out.

The bed can
accommodate
either the tilting fixture
(+ 42° to -15°), the
single axis rollover
fixture, the dual axis
rollover fixture or the
flat clamping fixture.

Modern modular
machine bed made of
cast iron, designed for
improved rigidity.

Front-to-back
displacement of the
cylinder head on air
cushion table and
pneumatic clamping.

Particularly
recommended for
guide diameters bigger
than 7mm/0.27".



Patent U.S.A. N° 4.365.917
European Patent N° E 022.796

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SERVICE QUALITY RELIABILITY

World Class Technology



SPINDLE SPECIFICATIONS



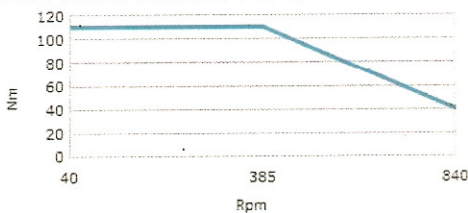
A massive 3 KW (4 HP) built-in motor-spindle with maximum torque from 40 to 385 rpm and a maximum speed of 840 rpm.

Stator cooled by heat sink and fan.

Rigid heavy duty motor-spindle of 4.5" (116 mm) diameter welcoming a motor coupled to a planetary gearbox for a powerful machining without chatter.

Get the best machining accuracy thanks to a high precision tooth rack and a whole spindle assembly rigid and concentric to the valve guide.

MOTOR SPINDLE TORQUE CURVE



CONTROL PANEL

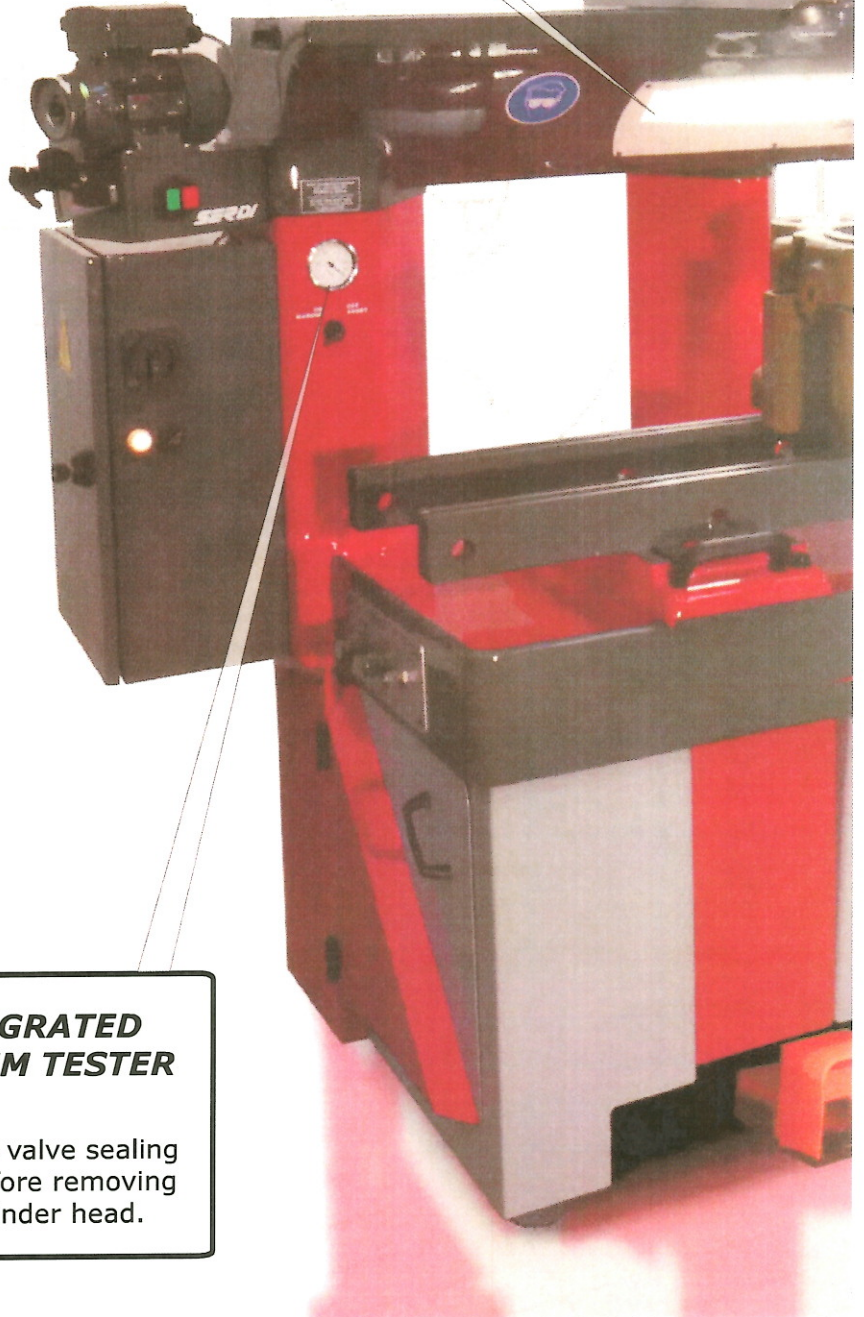
Spindle control buttons located just behind the handwheel to change with ease the spindle speed rotation, switch spindle direction or reset the depth control measurement.

Digital depth control accurate until 0.0004" (0.01 mm). One switch button to fastly enable or lock the sphere air cushion.

Large handwheel for a better control of machining depth.

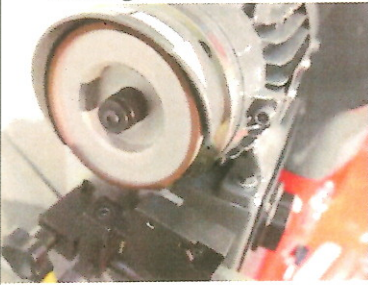
LED LIGHTNING

The machining head and beam are both equipped with LED lightning for an increased light ratio and a better energy saving.



TOOL SHARPENER

Diamond wheel cutting bit sharpener



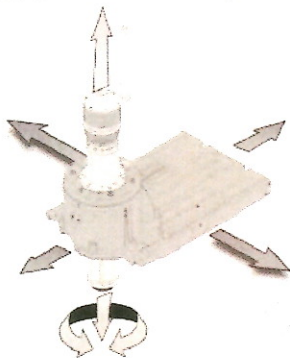
INTEGRATED VACUUM TESTER

For a fast valve sealing check before removing the cylinder head.

DOUBLE AIR CUSHION

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.



TOOLRACK

Ergonomic and tiltable, fitted with three drawers. Designed to welcome pilots, tool holders, bit holders and common tools from Serdi.

AIR FLOATING SUPPORT TABLE



Cylinder heads up to 350 kgs can be moved back and forth without any effort and then locked by two powerful pneumatic jacks.

PNEUMATIC FOOT PEDAL

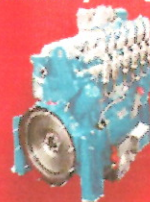
To move the head laterally, or clamp it and to activate the horizontal air cushion for centering.

Applications:

Heavy diesel:



Stationary engines:



Marine:



Railways:



Automotive:



100

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TECHNICAL FEATURES

Space requirements

Length (standard)	mm / inch	2000/78.7
Width	mm / inch	1150/45.3
Height	mm / inch	2500/99

Max cylinder head dimensions

Length	mm / inch	unlimited
Width	mm / inch	500/19.7
Height	mm / inch	500/19.7

Table travel

	mm/inch	160/6.7
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Machining capacity Ø min - max

	mm	28 to 120
	inch	1.1 to 4.73

Workhead travel

Lengthwise (standard)	mm / inch	1000/44
Crosswise	mm / inch	44/1.7

Spindle

Max. spindle inclination	degrees	5
Spindle travel standard	mm / inch	345/13.5
Spindle motor power	KW / HP	3 / 4
Spindle rotation speed	RPM	40 to 840

Connections

Power supply	4kVA-230V-AC-1Ph-50/60 Hz
Pneumatic supply	bar / psi 6/87
Max. air flow	l/mn -CFM 400/11
Noise level at 300 RPM	DbA 72
Noise level at 800 RPM	DbA 82
Net weight approx.	kg / lbs 1400/3086

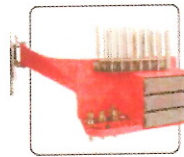
BASIC EQUIPMENT

Clamping system kit 020641

011915	Universal quick clamp x 2
010416	Short clamping bar x 2
010426	Long clamping bar x 2
010432	End clamping plate x 2
011425	Clamping block x 2
013958	Tilting fixture
014039	U parallel x 2
010434	2 Parallels 30x50x242 mm (1.18x1.97x9.53in)
017577	2 High parallels 20x38x300mm (0.787x1.5x11.8in)
009796	Set of 6 long pins
017576	Set of 6 short pins

Optional accessories

034048
Toolrack



033828
Carbide bit sharpener



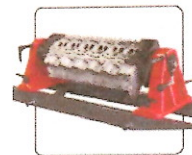
405580
Setting device SERDI 4200



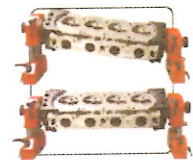
024298
Bubble level



033622
Single axis rollover fixture



033763
Dual axis rollover fixture



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