



STronik

STD

Machine working by interpolation between the cutting tool radius and spindle axis. The single point cutting tool generates the profile of the valve seat through an integrated design system, using radii and straight segments.

Machine specifically appropriate for mass production machining of medium size cylinder heads.

Machining capacity from 14 mm to 124 mm / 0.55" to 4.88".

Patented lightweight workhead : built-in spindle motor and triple air-float centering system. Minimal workhead inertia and maximal floatation for unmatched centering sensitivity.

Built-in hollow shaft spindle motor, variable speed from 0 to 2000 RPM. High machining accuracy even at low speed due to total lack of mechanical transmission.

U axis controlled by induction motor can reach a cutting feed rate up to 300 mm/min. Intake and exhaust seats can be performed simultaneously without tool holder changes.

Mechanical clamping of the work head on the machine bed with pneumatic clamping jack.

Modern modular machine bed design for improved rigidity. Computer enhanced static and dynamic characteristics provide the latest in machining technology.



PCT Patent 2011/147770
Patent U.S.A. N° 5,769,576
European Patent N° 0833711

www.STronik.com

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SERVICE QUALITY RELIABILITY

World Class Technology



SERDI

TRIPLE AIR

Our triple air cushioned spindle decreases the weight of floating parts which improves stability.

It does automatic leveling and guide regardless of the workpiece or angular position. Self leveling spindle.

SPINDLE SPECIFICATIONS



Built-in motor-spindle with maximum torque from 0 to 2000 rpm generated by a CNC spindle machine tool type with rotor «rare earth» magnets.

This spindle includes the U axis Komtronic system by Komet, powered by a induction driven brushless motor with no backlash and minimum temperature rise. The whole weight is equally divided above and below the sphere, which keeps the self-centering light and accurate.

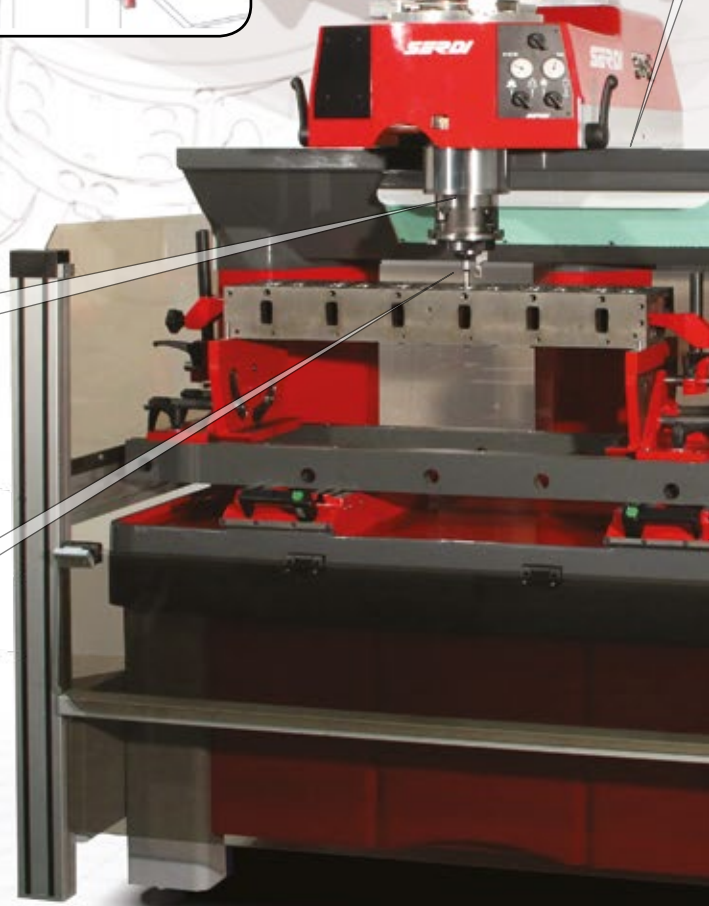
The 310 mm (12.2") stroke allows the combined machining of the seat and guide with lengths exceeding 100mm.

The most powerful single point spindle on the market (4 KW - 5.5 HP) allows both rough (cutting depth up to 0.5 mm) and finishing machining.



Z-axis stroke

245 mm



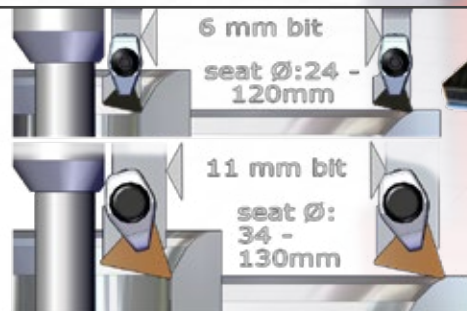
U-AXIS



22 mm

radius stroke

The 22 mm (.86") carriage travel is the largest range in the market: if the tool holder is set with a diameter of 24 mm (.95"), the maximum machining diameter without repositioning the tip holder will be 68 mm (2.7").



6 mm bit
seat Ø: 24 - 120mm

11 mm bit
seat Ø: 34 - 130mm



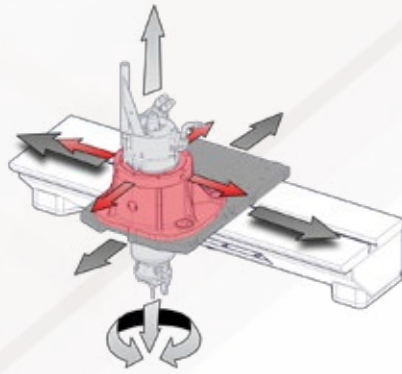
Our standard tool holder allows diameter machining from 12 to 124 mm.

Seats with hardened inserts, which is especially suitable for high speed application, can be used thanks to full CE certification.

SPIN CUSHION

...ion and built-in motor
...dramatically the free
...ght during centering
...speed and accuracy.

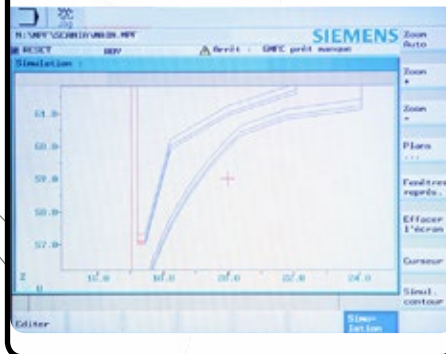
...ally align each valve
...of any misalignment
...r deflection.
...dle into head guide.



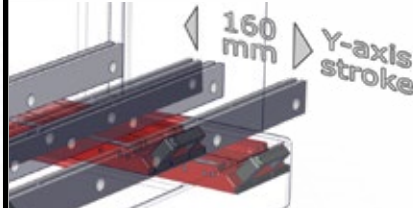
CONVERSATIONAL CNC

Z and U axes are digitally controlled by a standard CNC Siemens 828D. Single point cutting allows to machine any profile you want.

The collaboration between Serdi and Siemens will ensure a continuous development of the product and a worldwide customer service.



SUPPORT TABLE



Cylinder heads up to 350 kgs can be moved back and forth without any effort.

...ing allows a seat
...g range from Ø 14
...mm.

...ess over 60 HRC,
...y common in gas
...e easily machined
...BN cutting bits.



co-developed with **KOMET**
driven by **SIEMENS**

Applications:

Heavy diesel:



Stationary engines:



Marine:



Racing:



Motorcycle:



Automotive:



TECHNICAL FEATURES

Space requirements

Length	mm / inch	2000/68.9
Width	mm / inch	1150/45.3
Height	mm / inch	2320/91.4

Max cylinder head dimensions

Length	mm / inch	1370/54
Width	mm / inch	500/19.7
Height	mm / inch	475/18.7

Table travel (Y-axis CNC optional)

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

mm	14 to 124
inch	0.55 to 4.88

Workhead travel (X-axis CNC optional)

Lengthwise	mm / inch	950/37
Crosswise	mm / inch	40/1.6
Sphere-cylinder travel	mm / inch	14/0.5

Spindle

Max. spindle inclination	degrees	5
Spindle travel	mm / inch	310/12.2
Spindle motor power	KW / HP	4 / 5.5
Spindle rotation speed	RPM	0 to 2000

Connections

Power supply	6.3kVA-3x400V-N+PE-50/60 Hz
Pneumatic supply	bar / psi 6/87
Max. air flow	l/mn -CFM 400/15
Noise level at 400 RPM	DbA 72
Noise level at 1200 RPM	DbA 82
Net weight approx.	kg / lbs 1560/3439

OPTIONAL FEATURES

Automated CNC X-axis

Allows an automated move of the machining head along the X-axis. This means you can machine all of your seats if they are in the same alignment. Requires an external supplied protection

Automated CNC Y-axis

Works only in application with automated CNC X-axis. Allows an automated move of the cylinder head support table along the Y-axis. This option means you can machine all of your seats even if they are not in the same alignment.

Cooling through spindle

Allows you to avoid excessive cutting heat damaging cutting bits on the hardest seats. Improves lubricity, increases tool life and the finish level.

Laser probing

Allows you to machine the seat automatically to the most accurate distance from the sealing face, if the sealing face differs from a cylinder head to another.

STronik XL



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