



STronik

XL

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 and large size cylinder heads.

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

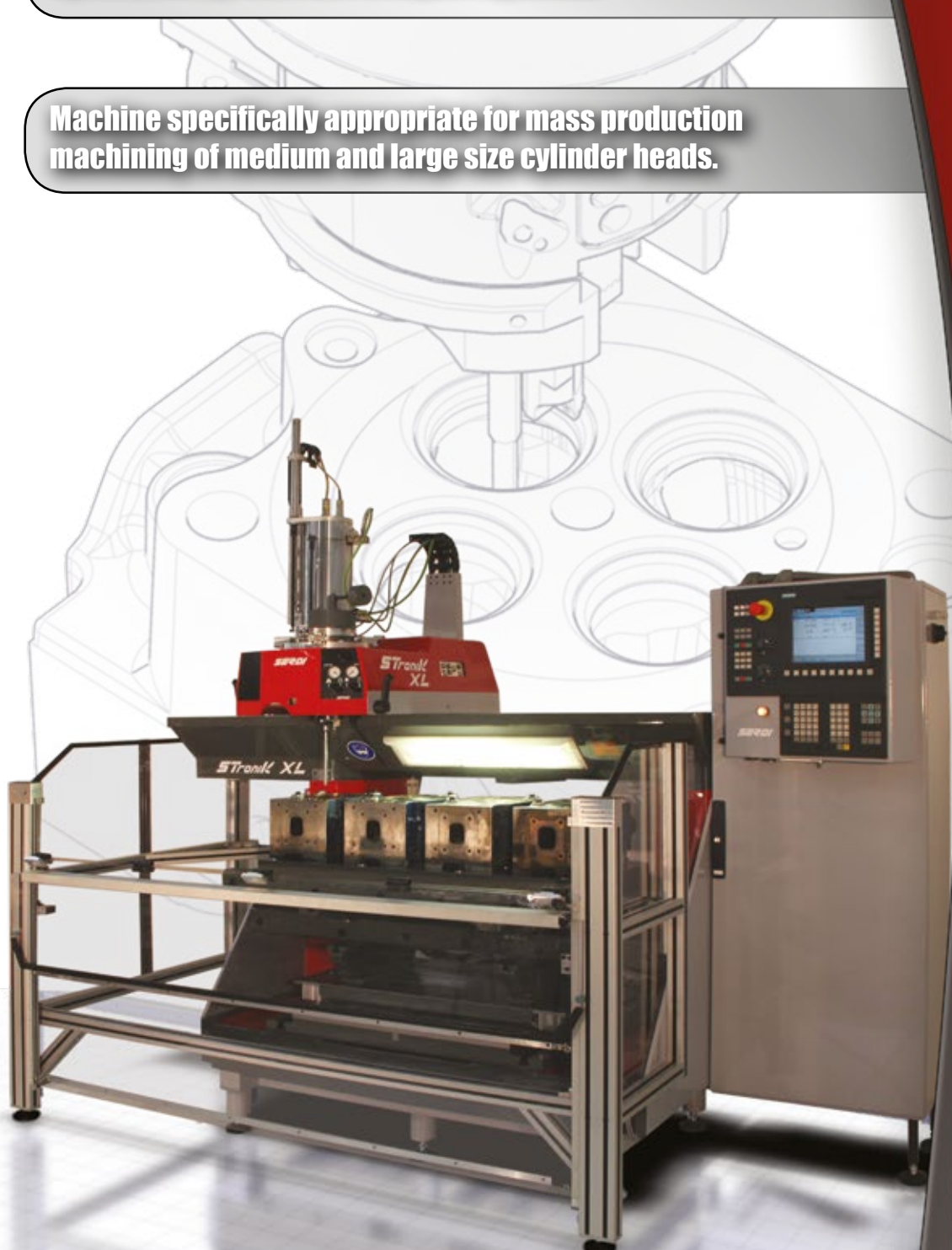
Patented lightweight workhead : built-in spindle motor and triple air-float centering system. Minimal workhead inertia and maximal floatation for unmatched centering sensitivity.

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

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SERVICE QUALITY RELIABILITY

World Class Technology



SERDI

SPINDLE SPECIFICATIONS

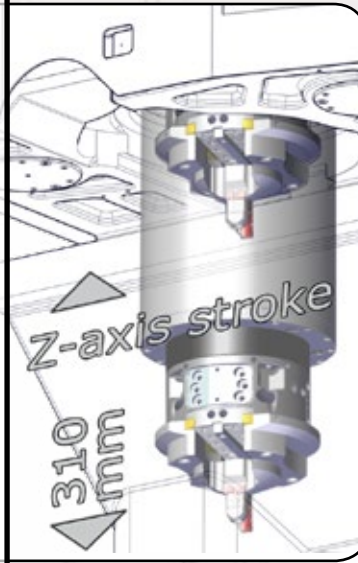


Built-in motor-spindle with maximum torque from 0 to 2000 rpm generated by a CNC spindle machine tool type with rotor «rare earth» magnets.

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.

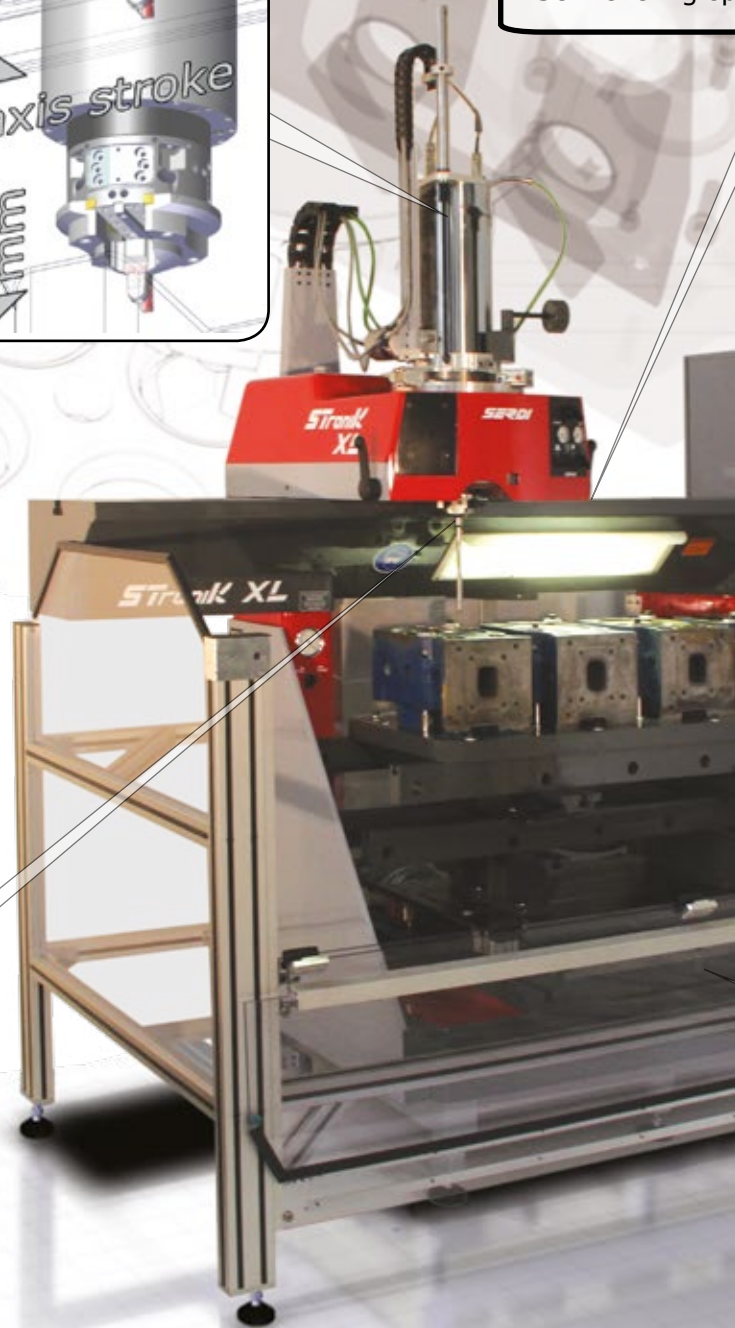
The 310 mm (9.64") stroke allows the combined machining of the seat and guide with lengths exceeding 100mm.

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.



TRIPLE A
Our triple air cus
spindle decrease
floating parts w
which improve

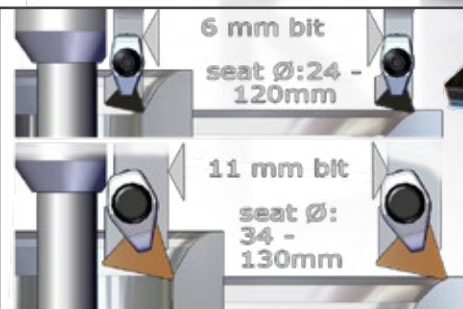
It automatical
guide regardless
or angu
Self leveling sp



U-AXIS



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").



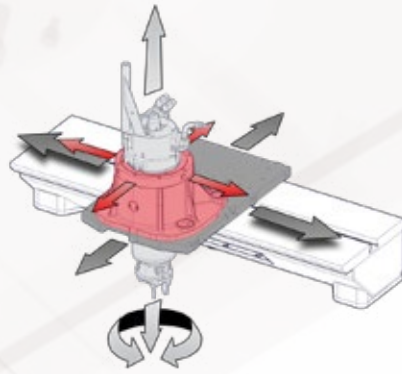
Our standard tool
diameter machining
to 124

Seats with hardne
which is especially
application, can be
thanks to full CF

AIR CUSHION

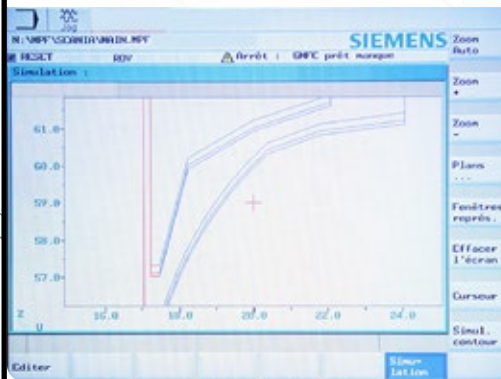
...ion and built-in motor
...es dramatically the free
...eight during centering
...s speed and accuracy.

...ly aligns each valve
...s of any misalignment
...lar deflection.
...indle into head guide.



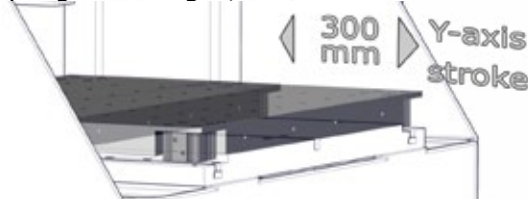
CONVERSATIONAL CNC

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

The support table is mounted on two guiding rails. It can move cylinder heads up to 850 kgs (1870 lbs) back and forth without any effort. Beyond this weight, CNC drive is recommended.



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

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

Applications:

Heavy diesel:



Stationary engines:



Marine:



Racing:




Motorcycle:



Automotive:



co-developed with  KOMET®

driven by  SIEMENS



TECHNICAL FEATURES

Space requirements

Length	mm / inch	2765/109
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	820/32.2

Table travel (Y-axis CNC optional)

mm/inch	300/11.8
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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	1440/56.7
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 1750/3439

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 finishing 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.

STONIK STD



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