

LASERSMART® 510 FEMTO

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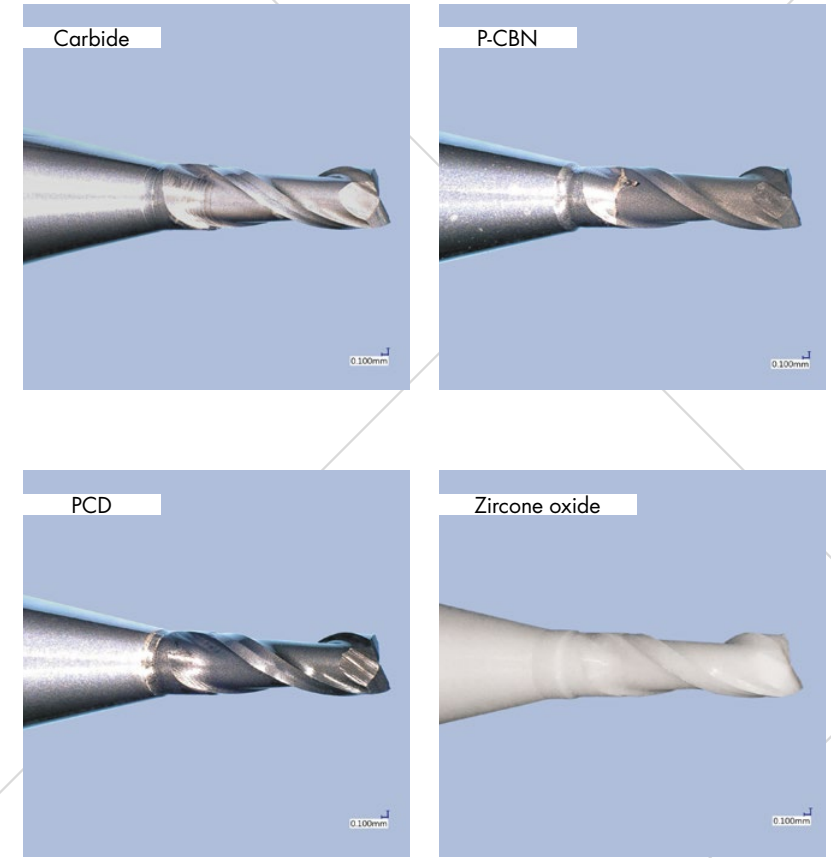


LaserSmart® 510 femto

INNOVATIVE LASER TECHNOLOGY ENABLES SHORTER PROCESSES AND MAXIMUM PRECISION

The LaserSmart®510 femto with its innovative and powerful femto laser source provides unlimited machining possibilities. Maximizing productivity, precision, and surface quality; the femto laser source builds upon the success of the LaserSmart series. Not only are PCD, P-CBN, CVD, MCD, and natural diamond materials feasible, but also Ceramics, Carbide, Sapphire, Glass, or even new material combinations. These revolutionary machine processes allow customers to achieve the results that set the new standard in ultra-hard material machining.

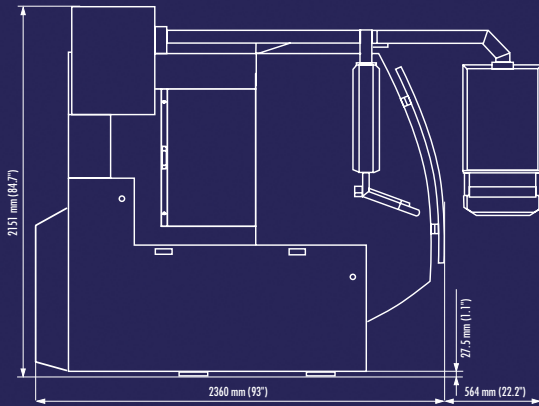
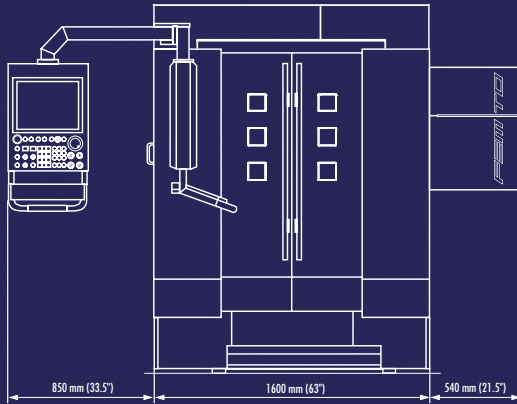
Equipped with five interpolating axes with linear and torque motors, the LaserSmart®510 femto can produce complete tools, including cylindrical margins and chip breakers, in one single clamping. Combined with the precision of the femto laser, it enables the design of tools with previously unmatched quality compared to other laser sources. Thanks to the SmartMachining software, complex geometries are programmed intuitively in the simplest and fastest way, regardless of the machine model or material to be machined.



ADVANTAGES

<p>Finest quality</p> <ul style="list-style-type: none"> > Super fine surface finishes, as good as Ra 0.04µm > No cleaning process needed > Superior surface finishes combined with crisper and sharper edges, drastically increase the performance of the tool 	<p>Fast as femto</p> <ul style="list-style-type: none"> > Up to 30% faster > No compromises between good quality and high productivity 	<p>Flexibility</p> <ul style="list-style-type: none"> > Wide variety of applications including cutting, chip breakers, cylindrical margins, SmartFluting (3D machining), and SmartSharpening > Unlimited range of materials or material combinations > Complete machining in one single setup 	<p>First-class software</p> <ul style="list-style-type: none"> > Extremely intuitive and user-friendly interface > Ultra flexible programming with convenient and efficient predefined parameters > Adapts the machining processes automatically according to the material
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LASERSMART® 510 FEMTO TECHNICAL DATA



MACHINING RANGE

Diameter range	0.1 - 80.0 mm (.004" - 3.2")
Overall tool length	up to 190 mm (7.5")

CONTROL

FANUC 30iMB

Z axis Type Fanuc servo motor and ballscrew

Stroke 100 mm (3.9")

Fast travel 20 m/min (787"/min)

Encoder Linear scale 0.00005 mm (.000002")

Y axis Type Linear motor, oil cooled

Stroke 400 mm (15.7")

Fast travel 30 m/min (1180"/min)

Encoder Linear scale 0.00005 mm (.000002")

X axis Type Linear motor, oil cooled

Stroke 125 mm (5")

Fast travel 30 m/min (1180"/min)

Encoder Linear scale 0.0001 mm (.000004")

B axis Type Servo motor, oil cooled

Stroke 260° (+130°)

Fast rotation 10000°/min

Encoder Rotary scale 0.0001°

C axis Type Servo motor, oil cooled

Stroke Continuous

Fast rotation 300 rpm

Encoder on AC motor, 0.0001°

LASER HEAD

Laser Scanner with integrated digital position detector and digital servo control board

Oil cooling of the electronics and the galvanometer scanners

TOOL CLAMPING

Clamping Collet SK 32, Nann

Clamping HSK63 (A, C, E, F)

ROBOT LOAD & UNLOAD (optional)

Number of tools Up to 1000 (3 cassettes)

Shank diameter 2.0 - 32.0 mm (.08" - 1.25")

Clamping Pneumatic

HSK Tool magazine HSK63, max. 18 tools

MACHINE

L x W x H 2360 x 2140 x 2151 mm
(93" x 84" x 84.7")

Weight 3200 kg (7050 lbs)

Total power Maximum 5 kW

3 x 400V/25A

Laser product Class 2M

Classified EN / IEC 60825-1 : 2014

* Specifications are subject to change without notice