

*utimac*  
multimandrini  
**CNC**

*utimac* 

CNC MULTI SPINDLE AUTOMATIC LATHES  
SCN 26/32HT - SCN 35HT



## THE MULTI SPINDLE AND MULTI FUNCTION LATHE

Ever since 1992 UTIMAC produces and offers Multi Spindle Automatic Lathes equipped with CN systems suited for an easy managing of the machine and its machining functions (spindle speed, axis feed rate, tool life etc.)

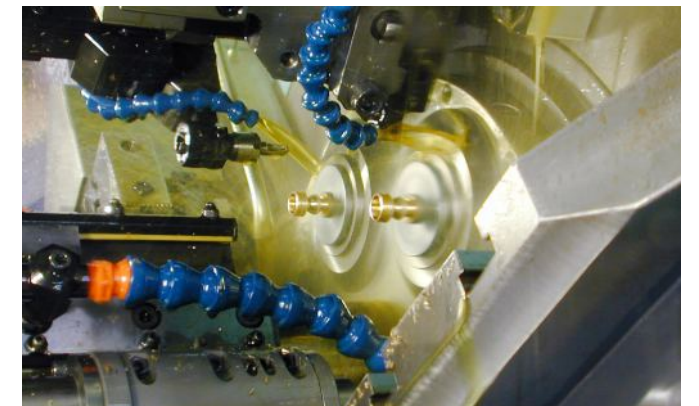
As of today UTIMAC, one step ahead in the technological innovation for automatic lathes, has expanded its range of machines with the new Series of SCN 26/32 and 35HT Multi Spindle Lathes, completely controlled by CNC systems and totally without cams.

Designed with a modular conception, the SCN HT Series are the result of accurate research and application of state of the art components and systems, suitable for the production of high quality, reliable and long lasting flexible machines.

The Multi Spindle Automatic Lathe SCN HT Series, with bar size of 26, 32 and 35mm is designed with high quality Cast Iron for Bed and Columns, which ensures top-level rigidity, thus allowing high stability during the machining process and precise control over fine tolerances and high quality surface finish.

The powerful and stable CNC SIEMENS 840D (in single or double CPU configuration with digital drives) allows the control of over 24 master axis and 9 auxiliary axis, with simplified programming.

The lathes of the HT Series, thanks to their high-end performances, are especially suited where high power / full reliability and high productivity are required.



## REDUCED TOOLING TIMES

The ease of use programming system, customized by Utimac together with Siemens programmers, ensures quick tooling settings thanks to the simple machine interface.

The goal here is to be ready and competitive in giving proper answers to our customers: the right "just in time" reaction they need.

For this reason the SCN HT Series Multi Spindles are suitable for production of both high and small quantity lots with reduced production times and especially in the case of families of parts with similar geometry.



FASTER - MORE RELIABLE - MORE PRECISE - MORE ECONOMICAL  
FASTER CYCLE TIMES - REDUCED PRODUCTION COSTS FOR MORE PROFIT



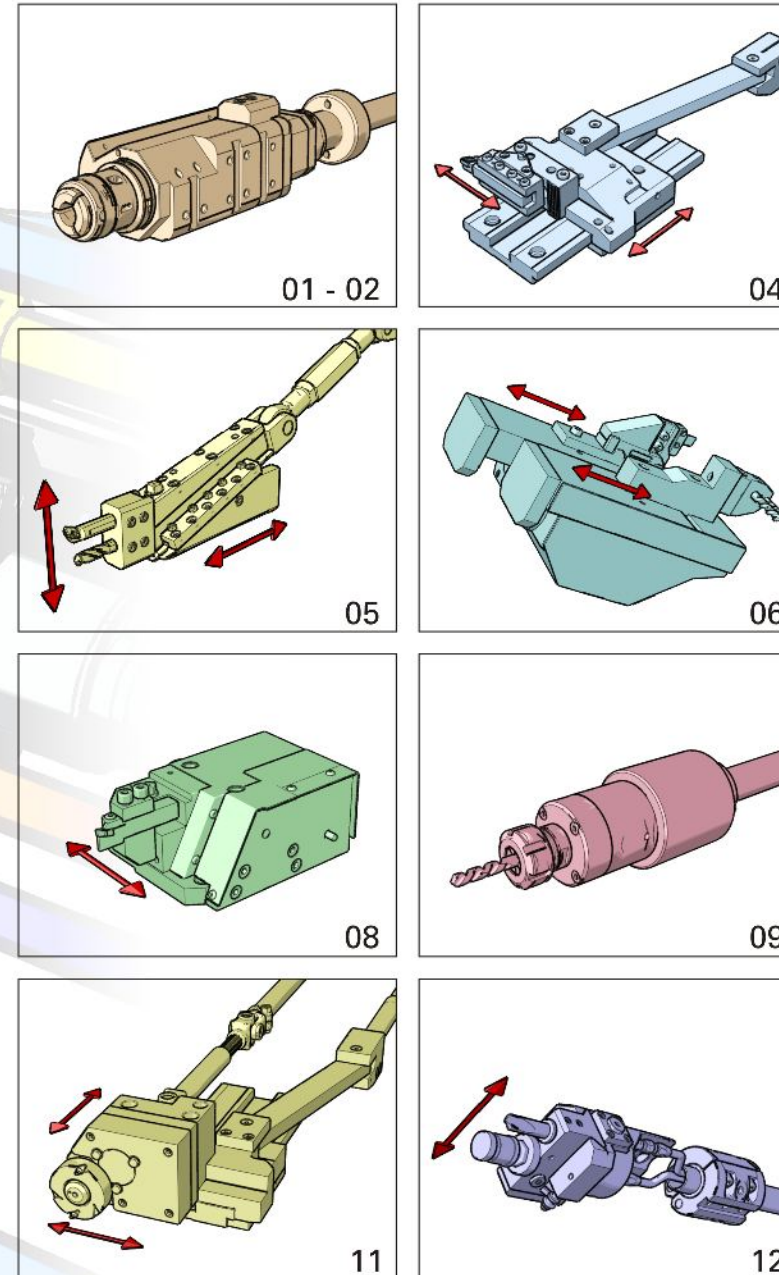
## ATTACHMENTS AND ACCESSORIES

The capability and flexibility of the SCN HT Series Multi Spindles are completed by a wide range of attachments and accessories, mostly standard in the market.

Useful help while machining, such equipment allow the complete finishing of the parts, without further needs of second operations and handling, thus reducing the risk of damage to the parts themselves with consequent reduction of production costs.

Quick-change tool holders and collets guarantee fast setup and tool grinding procedures.

### SOME EXAMPLES:



- 01 - Synchronized Pickup Spindle for pos. 6
- 02 - Synchronized Pickup Spindle for pos. 3 (double cycle).
- 03 - CNC Differential thread cut.
- 04 - Cross Compound Slide (Max 5 units).
- 05 - Front Compound Slide for inner machining (Max 5 units).
- 06 - Auxiliary cross slide (7<sup>th</sup> pos.) for back side machining.
- 07 - Auxiliary cross slide (8<sup>th</sup> pos.) for back side machining (double cycle).
- 08 - Compound Slide for cutting tool for pos. 6 (and pos.3 when in double cycle)
- 09 - Rotary drilling.
- 10 - Rotary milling.
- 11 - Polygonizing and thread milling.
- 12 - Combined double holder for bar stop and drilling.
- 13 - Rotary spindles for drilling /milling / back side threading.
- 14 - Collet opening unit for pos. 3 (double cycle).
- 15 - High speed spindles for drilling / milling operations.
- 16 - Main spindles with independent speed control.
- 17 - Profiles generator.
- 18 - Eccentric turning.
- 19 - Off-center drilling.
- 20 - Rotary broaching.
- 21 - Cross chamfering / drilling.
- 22 - Cross drilling / threading.
- 23 - Tool breakage control devices.
- 24 - In-process measuring devices.
- 25 - Hinge type chip conveyor.
- 26 - Scraping type chip conveyor.
- 27 - Magnetic type chip conveyor.
- 28 - Integral auto bar loaders.
- 29 - Short part auto loaders.
- 30 - Oil mist collectors.
- 31 - High pressure coolant units.



## ITALIAN TECHNOLOGY WITHOUT COMPROMISE

Leader in Italy for innovation on single and multi spindle automatic lathes, Utimac pays much attention to today's needs of modern workshops: productivity and reduced costs.

The Multi spindle CNC HT Series incorporate high technology in a simplified but efficient structure, designed to obtain high standards with cost reduction.

The Utimac R&D department works constantly to enhance quality and efficiency of the products, by testing and comparing different technologies suitable for such high level targets.

Second to no one, conceived for the modern workshops targeting productivity, our multi spindle is guaranteed by a quick and reactive customer service.

This is what we mean by leading Italian industry.

## OPERATING PERFORMANCES

Simple programming also in case of complex parts.

Simplified tool setup without the use of cams.

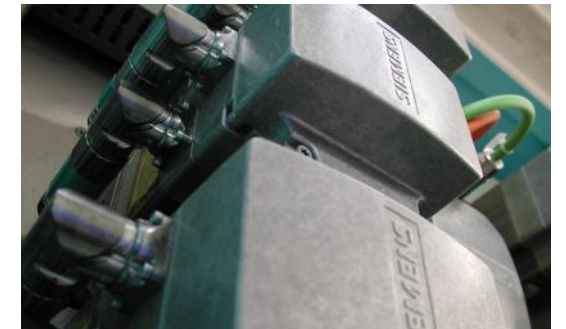
Use of Compound cross and front CNC slides which avoid the use of shaped tools, leading to a consequent reduction in machining time and costs.

The use of a cross and a front Compound slide enables the contemporary machining with 2 tools on the same spindle.

Complex and precise machining are easily obtained by the use of multiple tool compensations for each spindle.

Extremely short cycle times (12 tools working simultaneously).

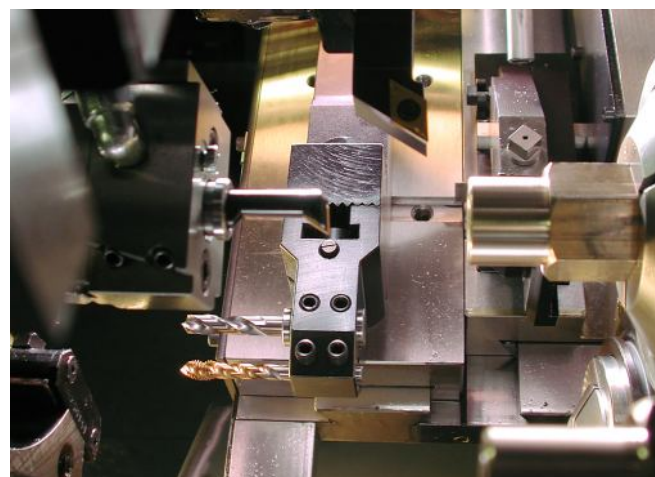
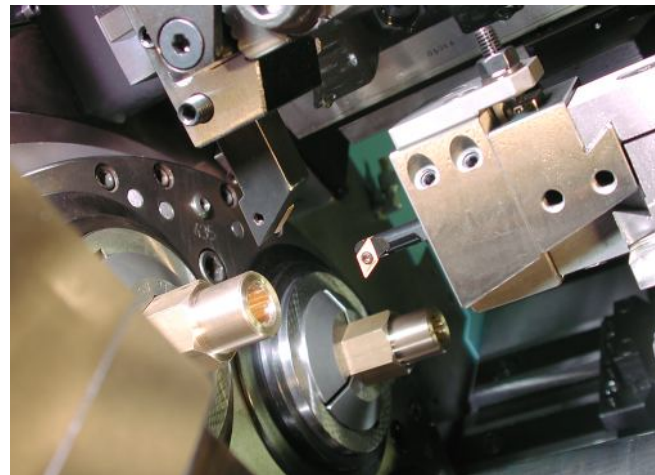
24 master axis and 9 auxiliary axis.



## SCN HT AND THE ENVIRONMENT

The energy savings obtained thanks to the use of regenerative amplifiers ensures reduced manufacturing costs while optimizing the energy needs of the machine.

This also achieves a consolidation on manufacturing methods that consider even more the environment as a resource.





## CROSS AND FRONT COMPOUND SLIDES

Six heavy-duty and stable cross slides easily perform any kind of machining.

4,500 N of feed force exceeds the performance of our competitors, allowing plunge-cut feeding in the same way that it was done with the conventional cam machines.

The optional installation of up to five cross compound slides allows the execution of complete turned profiles as well as thread chasing, thus providing full features for an even more precise and complex manufacturing of parts.

Two tools may be installed on each slide which by mean of different workpiece origins can turn different sides of the part.

For any need of production or maintenance such slides are easily removable.

## ROUND-SHAPED FRONT SLIDES

The front slides - with long strokes that range from 160 to 230mm and feeding forces of 4,000 N - are the result of careful design based on our decennial experience.

The round-shaped guides where the slides move ensure high precision and rigidity.

Moreover the SCN HT series are one of the few multi spindles capable to install up to five front compound slides.

Such compound front slides may contain two tools that by mean of different workpiece origins can work different sides of the part such as inner profiles and threads.

## PICKUP AND 7<sup>TH</sup> CNC CROSS SLIDE

The pickup of the SCN HT series works as a second spindle with CNC free programmable speed, position synchronization with main spindle, indexing and C axis functions.

By means of specific tool holders installed on the 7<sup>th</sup> cross slide the pickup can execute operations such as profile interpolation, thread chasing, off center drilling, milling, etc.

## OFFSET COMPENSATIONS AND TOOL LIFE CHECK

In order to obtain the highest performance in tolerance during automatic work, a special Spindle Compensation Function allows the single tool offset compensation of each working position in relation to spindle under machining.

A customized software function allows the easy programming of tool life for each working position.

It is always possible to install in-process measuring systems to perform direct compensation / part selection during machining.



## CNC SIEMENS 840D

The extreme power and flexibility of the CNC Siemens 840D Powerline are the base of the simple and complete operating interface.

Nowaday's availability of faster processors and the multi-channel configuration allow the modular composition of the electronical equipment of the machine, which suits any customer requirements.

The orientating Operating Console is installed with a high brightness TFT color panel equipped with Industrial PC and 12GB program memory.

## SOME SPECIFICATIONS OF THE CNC SYSTEM:

Multichannel configuration with single / double CPU with up to date microprocessors.

Remote bus communication with I/O peripherals.

Advanced operator interface with Industrial PC.

Extended program memory, 12GB on operator interface and 3MB on CNC.

Dynamic operations with process parameters.

Continuous tool load monitor during machining.

Handwheel for axis motion in JOG mode.

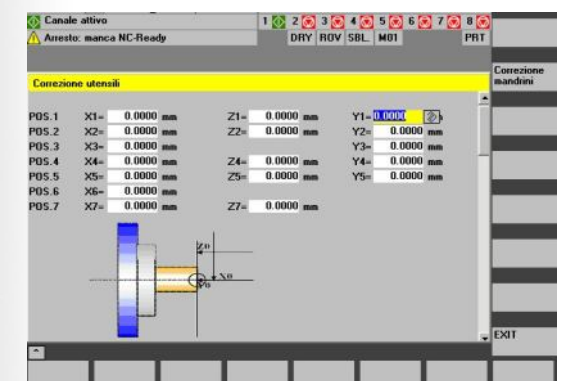
Adaptive Control.

Remote diagnosis function for remote attendance of machine troubles via modem/internet.

Open architecture for integration of custom-specific applications.

Simplified programming.

Network and USB ports on Operating Console.





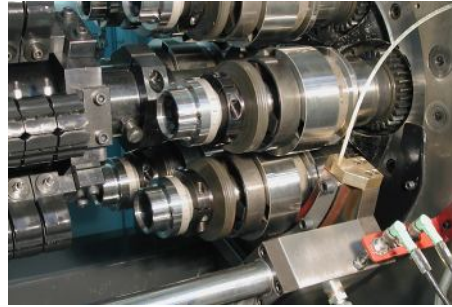
## COLLET OPERATION AND BAR FEED IN 1<sup>ST</sup> POSITION

By using a device installed in position 1, the bar feed as well as a front machining operation may occur all in the same station.

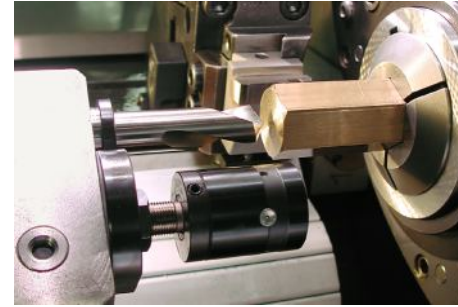
The part length is adjustable by CNC program, thus considerably reducing the setting time.

The advantage of such installation is the increase of available machining time in pos. 6, thus allowing a better cycle optimization.

Moreover, a special CNC function is capable to control the proper bar feed execution and stop the machine in case of abnormal situation.



Collet open/close device in position 1



Combined double holder device for bar stop and front tool (available for several positions)



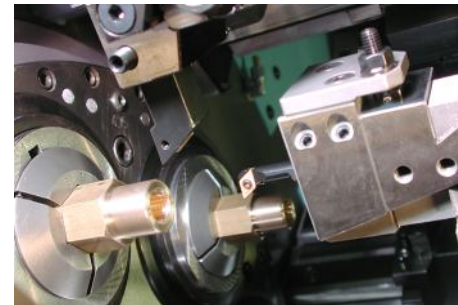
Synchronized pickup with additional cross slide for back working operations



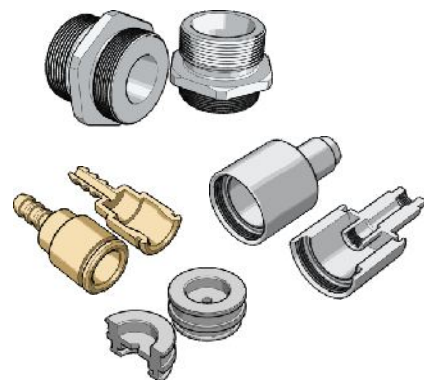
Part collector and Part conveyor



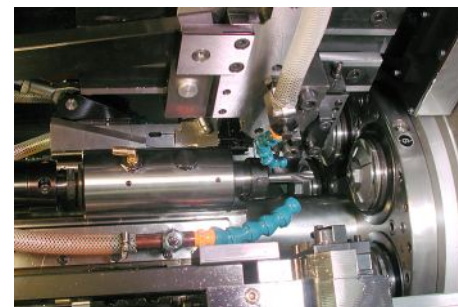
Cross Compound slide



Machining with two Compound slides on the workpiece



Rotary milling device



Rotary Thread cutting device

## TECHNICAL DATA MULTI SPINDLE SCN 26/32/35 HT

		SCN26HT	SCN32HT	SCN35HT
<b>Capacity</b>				
Max bar diameter	mm	Ø 26	Ø 32	Ø 36
Distance between spindles	mm	275	275	275
Standard bar feed	mm	120 *	120 *	120 *
Max number of linear axis	#	24	24	24
Max number of rotary axis	#	5	5	5
<b>Front/long slides (Z axis)</b>				
Max number of front slides	#	6	6	6
Stroke of Z1 - Z2 - Z3 axis	mm	220	220	220
Stroke of Z4 - Z5 axis	mm	160	160	160
Stroke of Z6 axis	mm	230	230	230
Rapid feed rate	mm/min	30,000	30,000	30,000
Feeding force	N	4,000	4,000	4,000
<b>Compound front slides</b>				
Max number of compound front slides	#	5	5	5
Stroke of Z axis	mm	160	160	160
Stroke of X axis	mm	25	25	25
Rapid feed rate	mm/min	30,000	30,000	30,000
Feeding force	N	4,000	4,000	4,000
<b>Cross slides (X axis)</b>				
Max number of cross slides	#	6 (+2)	6 (+2)	6 (+2)
Stroke of X1 - X6 axis	mm	70	70	70
Stroke of X7 - X8 axis (additional cross slides)	mm	100	100	100
Rapid feed rate	mm/min	30,000	30,000	30,000
Feeding force of X1 - X6 axis	N	4,850	4,850	4,850
Feeding force of X7 - X8 axis	N	3,500	3,500	3,500
<b>Compound cross slides</b>				
Max number of compound cross slides	#	5	5	5
Stroke of X axis	mm	70	70	70
Stroke of Z axis	mm	140	140	140
Rapid feed rate	mm/min	30,000	30,000	30,000
Feeding force of X - Z axis	N	4,850 / 4,000	4,850 / 4,000	4,850 / 4,000
<b>Compound slides for part-cut tools</b>				
Max number of compound slides for part-cut tools	#	2	2	2
Stroke of X axis	mm	70	70	70
Stroke of Z axis	mm	40	40	40
<b>Main spindles</b>				
Speed range	RPM	450 - 4,500	400 - 4,000	400 - 4,000
Main spindle motor power	kW	22	22	22
Spindle stop, indexing and C axis	#	yes (option)	yes (option)	yes (option)
<b>Synchronized CNC pickup device</b>				
Speed range with separate motor	RPM	0 - 4,500	0 - 4,500	0 - 4,500
Spindle stop, indexing and C axis	#	yes (option)	yes (option)	yes (option)
Available speed motor powers	kW	2.6 - 4	2.6 - 4	2.6 - 4
Max bar capacity of collet	mm	Ø 32	Ø 32	Ø 32

\* Upon request it is possible obtain extended strokes, especially when using automatic bar loaders.

All specifications are subject to change without notice.

## AUTOMATIC BAR LOADERS INCREASE PRODUCTIVITY

As a standard, UTIMAC supplies "Turn in key" machines.

In this case the machines are delivered complete of all the equipment necessary for the production, including the automatic bar loaders.

These solutions, integrated with the machines, guarantee the secure automatic bar change while increasing the capacity of bars size and bar feeding length.

The automatic bar loaders proposed by UTIMAC are produced by the most important Italian manufacturers.

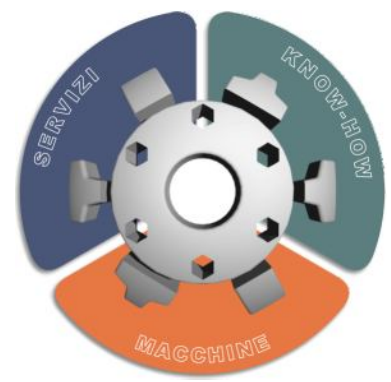
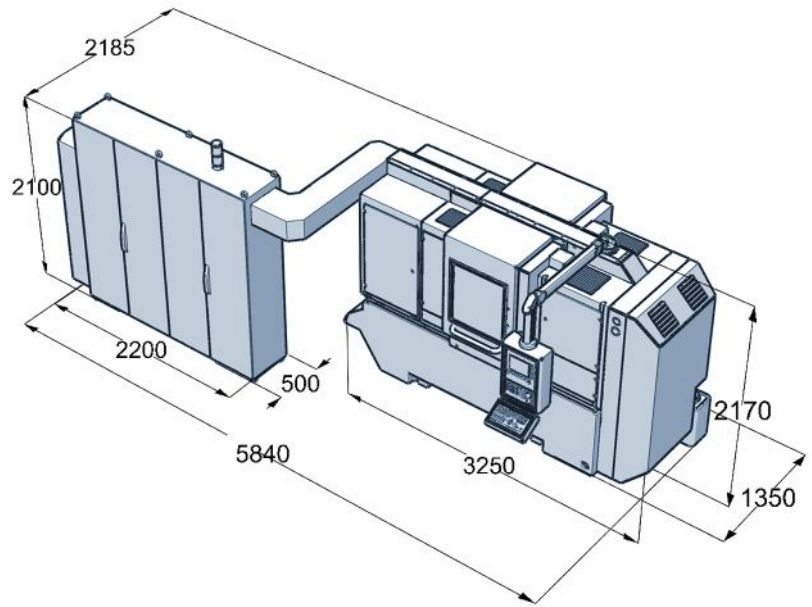




- Italy Network**
- ★ Head Office
  - Agency
  - Showroom
  - Service
  - ◆ Spares

design: www.delpiano.com

**SIZE AND MACHINE FOOTPRINT**



Local Agent:

**UTIMAC Torino srl**  
 Via Cristoforo Colombo 4 - 10070 Robassomero (TO)  
 Tel. (+39-011) 924-1451 - Fax (+39-011) 924-1192  
<http://www.utimac.com> - [info@utimac.com](mailto:info@utimac.com)