



**2/4/6-AXIS CNC WIRE MACHINE**

**SNM-WI-6CN**

## The technology

Wire cutting machines are increasingly used for block cutting, mainly in hard stone, and for automatic cutting of curved shapes (profiling and contouring). They are based on a system of axes, each with a specific function. Each machine is equipped with a PC-based CNC which runs all system operations and manages the axes movements.

### Main benefits of wire cutting

Although tool costs for wire machines are still currently greater than those for the cutting wheel, the signs are reversed in terms of energy cost: wire machines have distinctly lower power consumption and the high cutting speed also partly compensates for the higher tool costs.

Because the wire is constantly in contact with the stone to be cut, the speed advantage is up to 30 percent depending on the material and the wire condition.

### Types of wire cutting machines

Our range of wire cutting machines includes 4 types:

- The 2-axis,
- The 2-axis jumbo
- The 4-axis
- The 6-axis

Axis X: horizontal trolley movement

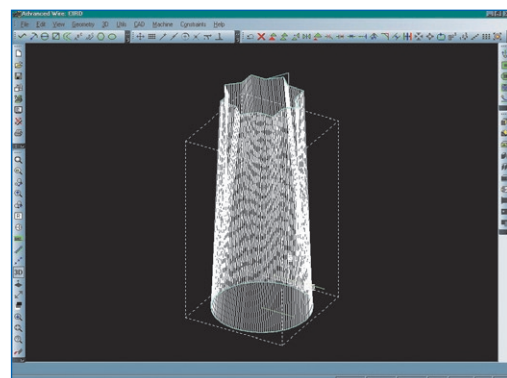
Axis Y and V: vertical independent movements for the columns

Axis B: 360-degrees rotating table

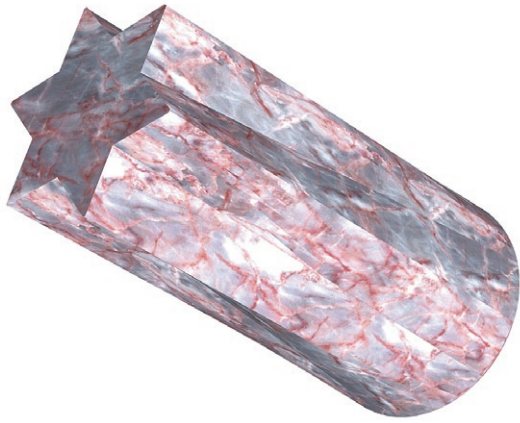
Axis C and Q: rotating heads

The 2 and 4 axis models will provide the same cutting and contouring possibilities but the 4-axis works faster.

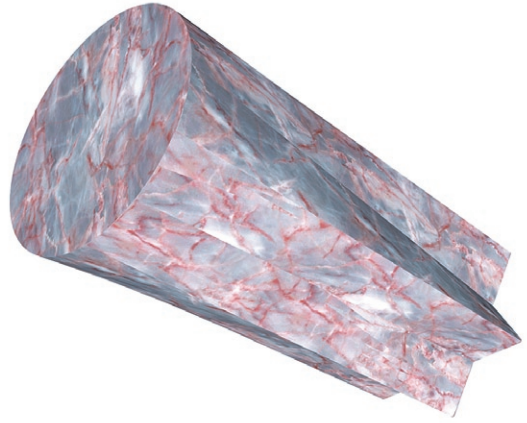
The main advantage of the 6-axis model is that it can cut helicoidal, conical and asymmetrical shapes thanks to its fully computerized 6 axis ECS CNC system which controls 6 brushless AC servo motors.



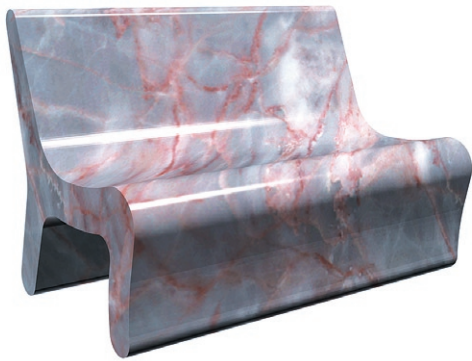




Cut by the 6-axis machine



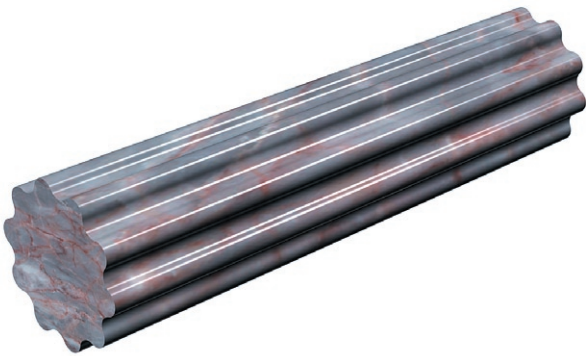
Cut by the 6-axis machine



Cut by the 2, 4 and 6-axis machine.



Cut by the 2, 4 and 6-axis machine.



Cut by the 2, 4 and 6-axis machine.



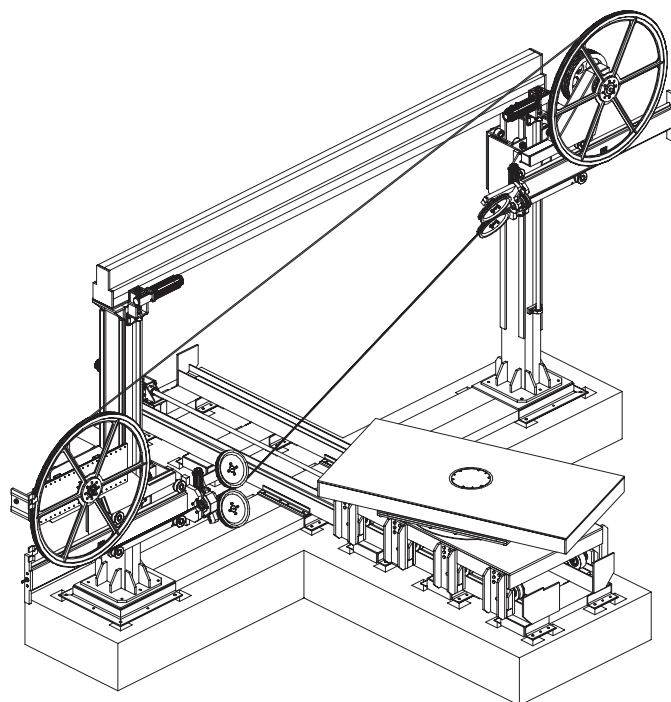
Cut by the 2, 4 and 6-axis machine.



Cut by the 2, 4 and 6-axis machine.



Cut by the 2, 4 and 6-axis machine.



## Technical data

Specifications	2-axis wire 2CN	2-axis jumbo wire 2JCN	4-axis wire 4CN	6-axis wire 6CN
Number of axis	X, Y	X, Y	X, Y, C, Q	X, Y, V, B, C, Q
Number of brushless motors	2	2	4	7
Wire motor output (hp)	20	20	20	20
Wire length (m)	15.50	20.50	18.25	18.25
Block length (m)	2.60	3.50	2.60	2.60
Block width (m)	1.50	2.00	1.50	1.50
Block height (m)	1.50	2.00	1.50	1.50
Block holding carriage (m)	2.50 x 1.20	3.00 x 2.00	2.50 x 1.20	2.50 x 1.20
2 Flywheels diameter (m)	each: 1.50	each: 2.00	each: 1.50	each: 1.50
4 Wire control flywheels diameter (m)	each: 0.35	each: 0.35	each: 0.35	each: 0.35
Table rotation	Manual at 90°	Manual at 90°	Manual at 90°	2 servo motors with anti-backlash

- A PC-based CNC operates the entire system and manages the axes movements. The general management program includes fixed cycles and special executions. The input of data is very easy and the system allows for a graphic simulation of the profile, also showing the path of the tool. The starting point of the operations is from a block with automatic repositioning and the resolution of the tangential connections is done automatically. A RS-232 connector and a printer plug are installed on board.
- The inverter allows for a variety of wire speeds and the cutting of both marble and granite at optimum speeds.
- Pneumatic wire tensioning system.
- CAD-CAM Alphacam.
- The wheel covers are made of aluminum composite panels and their structure is stainless steel. The stainless steel strip around the wheels prevents the diamond rope from getting tangled in the wheel in case it breaks.
- All covers are in stainless steel.
- The guides on the column are in stainless steel, hardened and then covered with hard chrome.
- All axes are equipped with high precision ball-screw assembly.

SNIC reserves the right to improve the product specifications and designs at any time without prior notice. Therefore, data provided in catalogues is indicative and approximate.