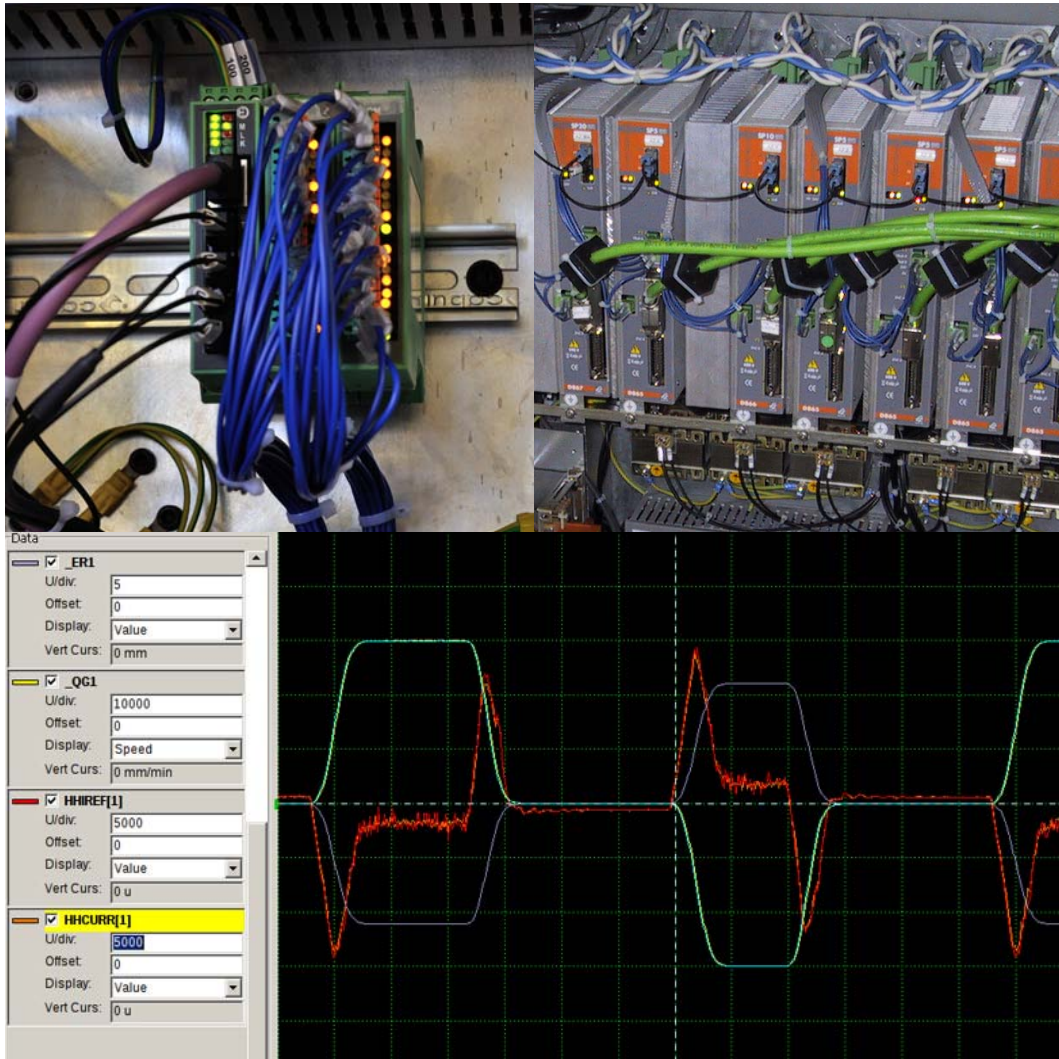


Z32 NUMERICAL CONTROL



NC Hardware

Built on basic PCs, it is transformed into numerical control thanks to the presence of the Master Link board that is housed inside the control cabinet and manage the axes at the top of the high-speed performance. It is a PC dedicated to the exclusive use of the electronic steering of the machine and therefore does not permit the installation of other programs. The data exchange between the PC and the Master Link board is via an Ethernet cable made with special care. If the evolution of the soft NC would require more computing power (which in the past has happened more than once), you can replace its PCs with a more powerful at really very low cost.

In case the customer decides not to buy our software Peace complete with its Pc in Windows 10 environment, you can transfer data processing to be performed by the company network on cable (not via a wireless connection), or via USB stick.

PC Hardware Characteristics Used as Numerical Control

- Installed RAM 4 GB
- Processor Intel Dual Core 2Ghz
- disk solid state disk (SSD) 64GB

Modules Input / Output

The data exchange with the inputs and outputs (I / O) is via dedicated modules each of which is equipped with a signaling LED for each input or output to simplify any troubleshooting. The connection to the Master Link is via optical fiber

Axis Drives

The drives are connected to the Master Link via optical fiber and are free of the usual electronic cards pilot. In other words they are constituted only by the power modules.

Basic Software

As operating system uses FlorenZ namely a modified version of Linux with proprietary software to meet optimally the needs of Real Time typical of a numerical control.

Drives Software

The most innovative part of this control is constituted by the fact that the whole part of the drives logic is contained directly within the NC soft, this solution that has permitted to abolish the usual electronic cards piloting drives. All to the advantage of a better degree of finish on the working piece, and especially of a greater reliability.

Diagnostic Software

Very many are the diagnostic programs and putting into service of the machine which, above, shows, by way of example, only some screens shots.

Software Calculation Proactively Working Time

Very useful can be the provision of know in advance, without requiring the real execution of the working piece, the actual time of a machining operation with a calculation error of a few seconds, and this also in the case in which the machine is carrying out in the same time a real machining. The calculation is performed by a virtual copy of NC in Windows programming Pc, while the data display and the interface to the user is carried out by our soft Peace.

Data Exchange with the Windows PC on which the Software is Installed Peace

It was achieved through a conventional network card and its crossover cable

The manufacturer of this numerical control is D.Electron (Italy) – www.delectron.it.

OS FLORENZ

The D.Electron has also developed its own operating system to have total control over their NC



Hardware

On the left you can see the Master Link and on the right a group of inputs and outputs



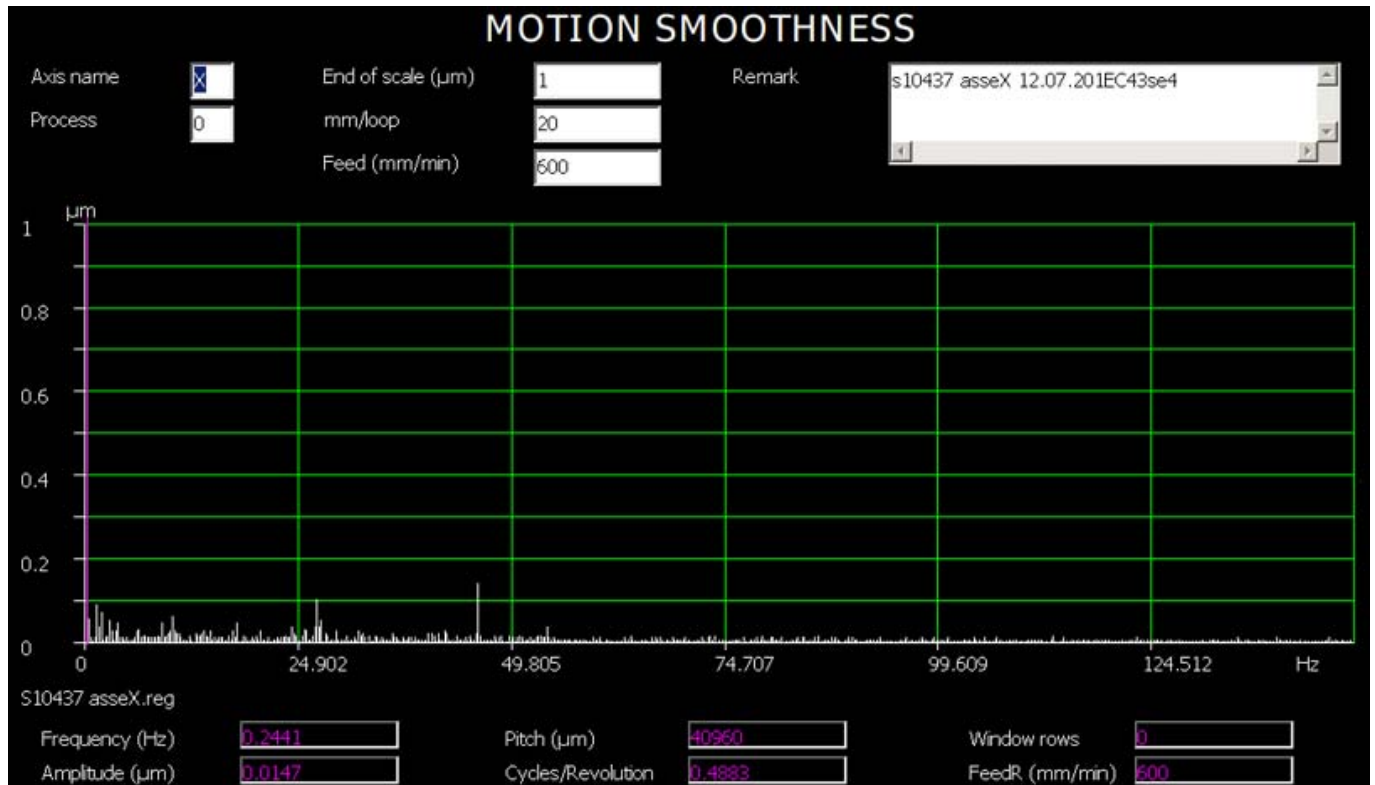
Hardware

In this picture you can see the power part concerning seven servo controlled axis

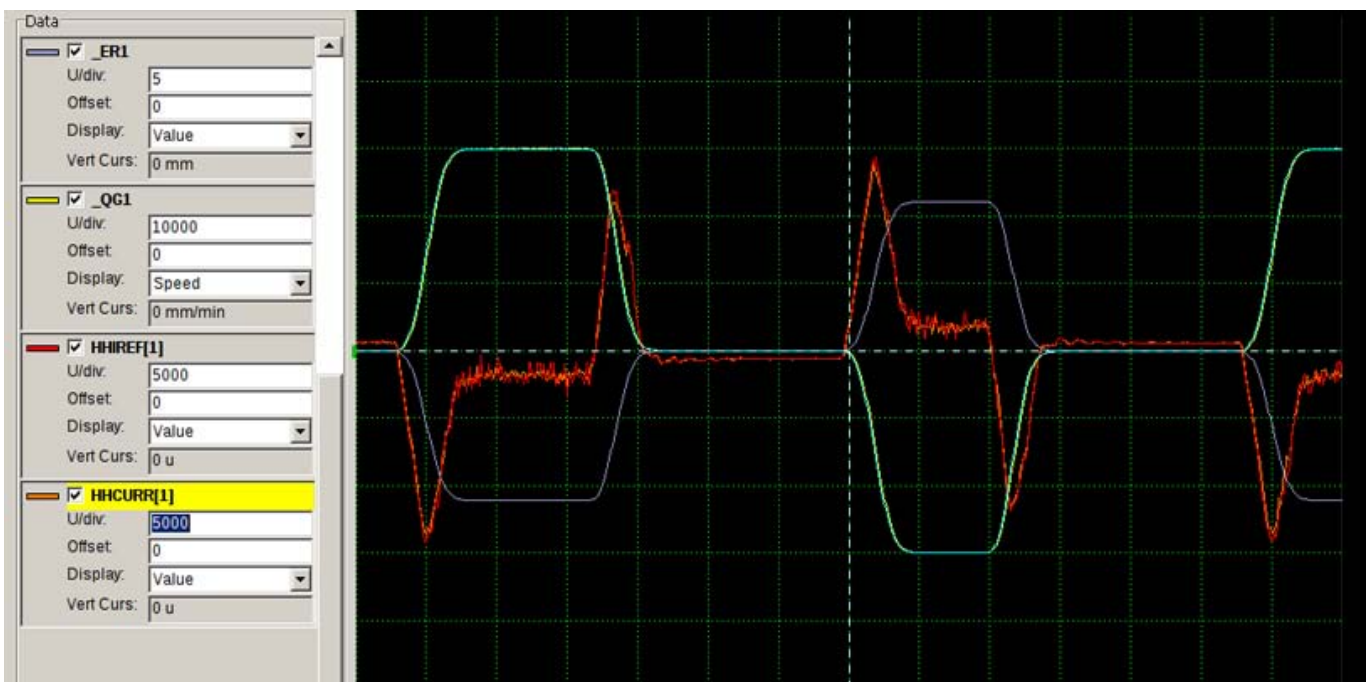


Diagnostic Software

For a flawless finish level is essential the regularity of motion. Note that a box corresponds to 0.1μ



MLScope - It is a real digital oscilloscope with which you can see, for example, the way in which the axes move



Software for Placing in Service the Machine

MLdeb - This is the soft with which it is written and updated all the logic machine

The screenshot displays the MLdeb software interface. The main window shows a list of machine logic lines (rows 2203 to 2229) with comments in Italian. Line 2219 is highlighted in green. The interface includes a toolbar with navigation and editing icons, and a right-hand sidebar with function keys (F2-F11) for various operations like restoring sessions, viewing variables, and debugging.

MLDEB - centav 06/03/2013 12:53:04 + MLNF2.Z32 Row: 2219

\D ZZBUFQUO[0]	-319975	1M2	0
\D FCXN	-565061	1RB	1

Software to Calculate Proactively Working Time

The calculation is performed by a virtual copy of CNC Z32 while viewing data through our soft Peace

Working times visualisation

Data estimated from Nc Z32 performing processing in virtual mode			
<i>General information about calculating working time</i>			
Memorization date	18/01/2016	Time of storing	12h32'40"
Length of the file for calculating the working time	14.853.243 Bytes		
Number of program blocks	558.790	Number of blocks per second	3386
Time used for calculating working time	2'45"		
<i>Auxiliary functions performed by the machine</i>			
Number of tool changes	4	Time for tool changes	40"
Number preset tools made	2	Time for preset tool	16"
<i>Tool path to be executed</i>			
Length rapid movements	67.021 mm	Length feed movements	192.866 mm
Total	259.887 mm		
<i>Labor-time foreseen</i>			
Time to perform auxiliary functions	56"		
Work time for rapid movements	20'39"		
Work time for feed movements	05h17'53"		
Total time estimated	05h39'28"		

Data from works performed	
<i>Employed time</i>	
Times N. working started	0
Total time spent	0
Start last working hour	0
Used time for last working	0
Reset all value - F5	
<i>Standard time</i>	
Memorization date of standar time	26/09/2013
Relative standard time	05h39'13"
Standard time memorization	

Purpose of this program
 Cancel - Esc



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