Turning your world

APPLICATIONS
INDUSTRY 4.0 SOLUTIONS

INDUSTRY 4.0 OPPORTUNITIES IN CMZ CNC LATHES

In the current industrial scenario **Industry 4.0** is a trend that many companies are adopting. In CMZ we are working to help our customers achieve their goals into this matter. All CMZ CNC lathes equipped with the IHMI interface have several options related to this philosophy.

Using your computer from the machine screen or using the CNC control from your own desktop are one of the main opportunities that we are presenting to our customers. You can also get information from the machine and we can even offer you solutions to get **live data from the machine**.

CONNECTIVITY

Machines provided with Fanuc **IHMI interface** allow you to **connect your PC to the machine** and **machine to your PC**. In both cases the machine and the computer need to be connected to the **same network**. This is something that your IT department can do but do not hesitate in contacting our service department if you need further support.

MACHINE >>> COMPUTER CONNECTIVITY

If both pieces of equipment are in the same network

1 / Press on PC Operation in the home screen

2 / Write the IP or name of your computer

3 / Write your ID and password

4 / Operate your PC from the lathe

The possibilities that remote desktop can give to your company are many. For example, if you are working with CAM software you do not need to return to the office every time to change the program and postprocess it. You can do the changes from the machine, introduce the new file in the shared folder and rerun the program with no lost time.

COMPUTER >>> MACHINE CONNECTIVITY

To visualise and control the machine from your computer, first you need to download a remote desktop software compatible with Windows Embedded Compact such as VNC Viewer and install it in the computer you want to connect to the lathe. This software is also installed in all our lathes with IHMI interface.

These are the steps to configure the software

1 / Configure the password

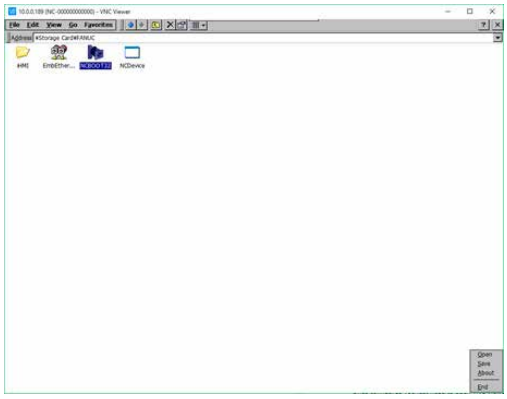
CONTROL+ESC/EXPLORER/ StorageCard2/CMZ/vncconfig/Authentication

2 / Restart the connection

CONTROL+ESC/EXPLORER/ StorageCard2/CMZ/WINVNC

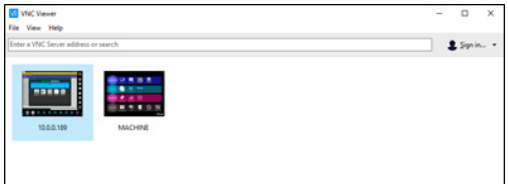
3 / Save the configuration for startup

CONTROL+ESC /EXPLORER/StorageCard/Fanuc/NCboot/Save



4 / Open visualisation software in your computer

5 / Write the IP of the lathe into the main screen. You can save the machine so that you do not need to write the IP every time.



6 / Write the password

Once you are connected you will see the machine screen. However, in order to change modes and other things the machine panel, CMZ has developed a CMZ Virtual Operator Panel. For safety reasons start program and machine movements are removed from this option.

CMZ Virtual Operator Panel

!

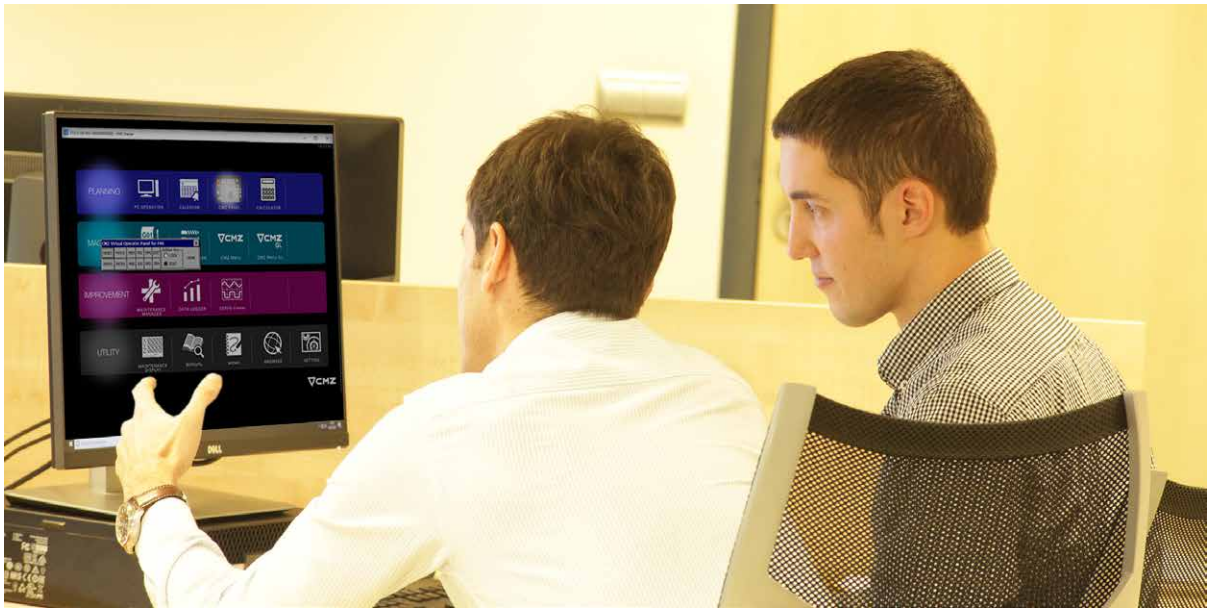
It is very important that the panel is closed once you finish the connection (Alt+Tab > Virtual operator panel/End task).

REMOTE DIAGNOSIS

The connection between machine and PC is very useful for **REMOTE DIAGNOSIS**. Our service department uses it to help customers **fix their machines over the phone** without the need of an intervention.

To use remote diagnosis the **service department would connect to your computer** with a software like Teamviewer. At the same time your computer will have to be connected to the machine. **Permitting control to your computer to our service engineers** they will operate the machine and investigate whichever issue you may have to solve it and, if needed, properly plan an intervention.

MACHINE | **CUSTOMER COMPUTER** | **TEAMVIEWER** | **CMZ SERVICE COMPUTER**



DATA LOGGER

IHMI also gives you the possibility to **capture some information** in the machine for **production analysis offline**. The information needs to be taken from the machine and there is no possibility to have live data.

Different data can be captured, such as **operational results,** macro variables, PMC signals... All of them are saved in **table like format** and can be exported into a CSV file so that they are analysed later.

1 / Press Data Logger
2 / Edit
3 / Add
4 / Select the data you want to log and press OK
    Group
    Data name
    Cycle
5 / End edit
6 / Display Data
7 / Input Output
8 / Export log CSV

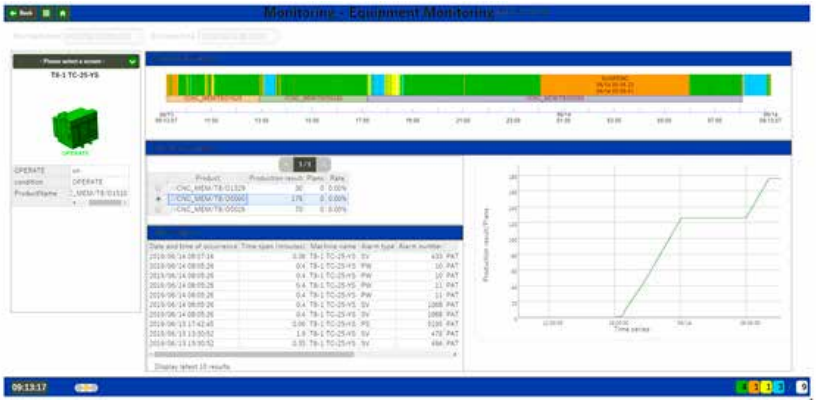
LIVE DATA CAPTURING (MT-LINK)

If offline data capturing is not enough for your production and you need **live data**, we can offer you stand alone software for this purpose. This software is called Fanuc **MT-link**. To use this software IHMI is not required and, if compatible, you can even connect machines that are not from Fanuc.

MT-Link allows you to visualise your machines in real time to easily identify how your production is doing and also get significant information from the machine. All machine **variables and signals** can be **monitored and saved**. The software can even send you daily production results to your email.

In CMZ we are currently using this software in our production facilities so do not hesitate in contacting us for further information.

General factory layout in CMZ turning production facility Precitor



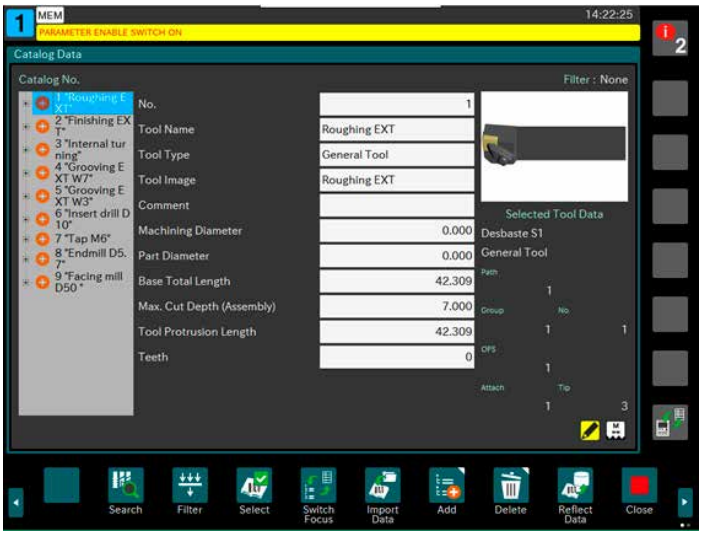
Individual machine production data

TOOL CATALOGUE (MACHINING CLOUD)

Online tooling catalogues are spreading very fast over the internet and Machining Cloud is outstanding over the rest. **Machining Cloud** is a free software that allows you to work with different tool manufacturers within the same platform and create your tool assemblies. You can download it from the following link:

IHMI allows you to **download** your **tooling assemblies from Machining Cloud** and save them into the Tool Manager tool catalogue. Geometries and images to help operators identifying what they need to mount in the machine.

Machining Cloud main screen



Tooling catalogue in the Tool manager

TA SERIES

Z400 MODEL

Z640 MODEL

Z1100 MODEL

TX SERIES

Y3 MODEL

Y2 QUATRO MODEL

TD SERIES

Z800 MODEL

Z1350 MODEL

Z2200 MODEL

Z3200 MODEL

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