

CNC CONTROL SYSTEM FOR GAS AND PLASMA CUTTING MACHINES



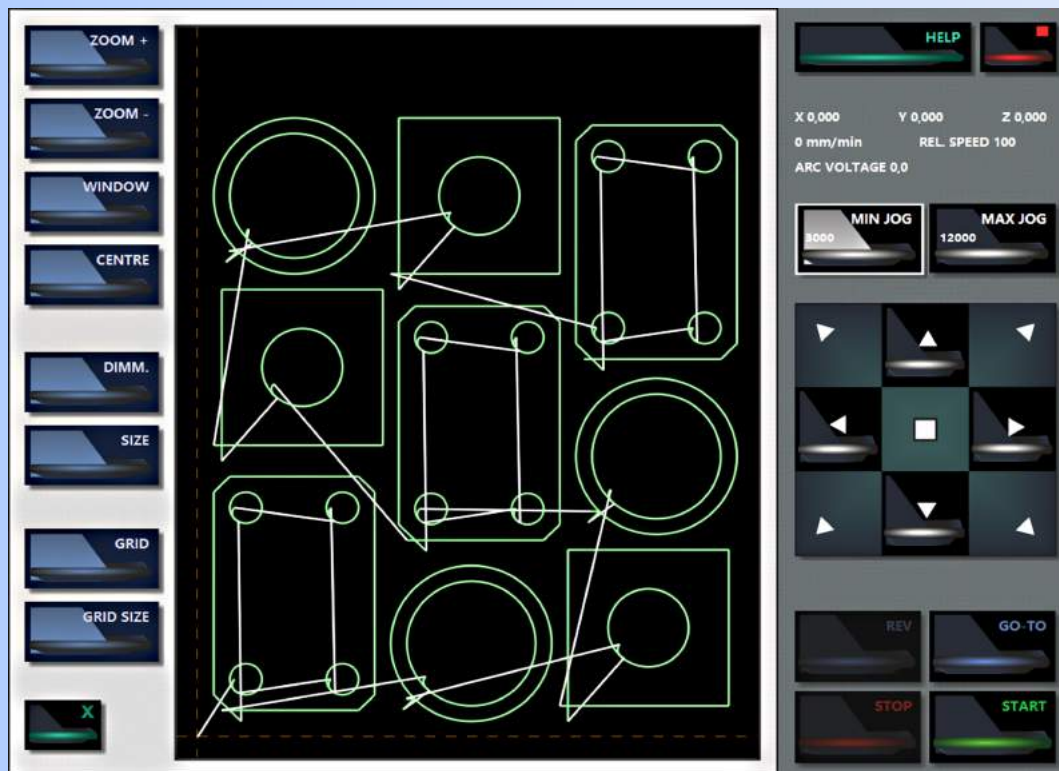
CHECK HOW SIMPLE THE GAS AND PLASMA CUTTING PROCESS CONTROL CAN BE. INTUITIVE AND SIMPLE SYSTEM CONTROL SCREENS, LARGE BUTTONS AND MANY BUILT-IN PARAMETERS MAKE YOUR WORK A SIMPLE AND FUN GAME.

CNC CONTROL SYSTEM FOR GAS AND PLASMA CUTTING MACHINES

CUTTING PROCESS SCREEN:



GRAPHIC SCREEN:



DESIGN:

The modern TFC control system has been developed and optimized specifically for cutting technology. The development of the system placed great emphasis on simple and intuitive control, reliable operation and easy diagnostics. An industrial computer equipped with a flash memory communicates with servo units and peripherals via the ETHERCAT digital bus. Planetary-gear servomotors are equipped with units involving absolute position sensors. The system is controlled by a colour LCD touch display, and its vertical position can be easily adjusted for the comfort of each operator.

To load programs into the system, it is possible to use the USB port or Wi-Fi connection to the corporate network.

The digital speed potentiometer allows you to select a range according to the operator's needs and automatically reduces sudden speed changes.

The E-STOP button ensures an immediate and safe stop of the machine, including turning off of all activated functions.

CONTROL:

Machine control is provided via a colour touch screen. The communication interface (HMI) is designed to be simple and intuitive for the operator. The control screens automatically adjust to the selected cutting technology. The system features many pre-set parameters that are constantly updated. The set parameters are stored in the system memory and automatically offered during the next use.

MANUAL MOVEMENT:

Eight directional press buttons allow easy movement of the machine to the desired position. Movement speed is chosen by simply switching between the minimum and maximum, or any desired speed can be selected via the screen. The system automatically recognizes short and long pressing of the directional button to select the minimum or maximum speed of movement.

AUTOMATIC CUTTING MODE:

In auto mode, you can choose between test mode and cutting mode. The test mode allows you to control and move the program on a sheet as required.

The GO-TO Function allows you to move the machine to a position with specified coordinates, to a selected point of the cutting trajectory and the nodal points, or to the laser cross position.

The REVERSE Function allows you to stop the cutting process and to reverse the machine along the trajectory up to the desired position, and to restart the cutting process.

TECHNOLOGY:

The control system incorporates technologies for plasma cutting, autogenous cutting, labelling and related processes. The built-in database of technological parameters for autogenous and plasma burners of various manufacturers facilitates operation. Other technologies or their enhancements can be easily customized according to the user's requirements.

As standard, advanced features are available for plasma cutting such as automatic setting of the burner's initial height, height monitoring during the cutting process, controlled material piercing, precision hole cutting technology, and others.

The autogenous cutting process features functions including automatic ignition of the burner, height monitoring, quick preheating and automatic piercing of the material.

GEOMETRIC FUNCTIONS:

- Scale - Zoom in or zoom out, according to the selected scale
- Rotate - Rotating the shape according to the specified angle
- Selection of the initial cutting position
- Comparison - Program rotation according to the sheet position
- Arrangement into rows and columns
- Defining the number of pieces
- KERF compensation for external and internal shapes

INFORMATIONS A DIAGNOSTICS:

The system records the necessary information about the cutting process: number of ignitions, cutting time, cutting length,

The operator is continuously informed about the machine's condition, the ongoing process, required machine maintenance, and any service recommendations.

OPERATING ENVIRONMENT:

- Standard range of operating temperature 0 - 50 °C
- 95% humidity (non-condensing)

The logo for TFC, consisting of the letters 'T', 'F', and 'C' in a bold, stylized, outlined font. The 'T' and 'F' are connected at the top, and the 'C' is positioned to the right of the 'F'.

CNC CONTROL SYSTEM FOR GAS AND PLASMA CUTTING MACHINES

CUTTING MACHINE CONTROL STRUCTURE

TOUCH SCREEN



INDUSTRIAL PC

ETHERCAT

SERVO CONTROLLER



AC SERVOMOTORS
WITH PLANETARY GEARBOXES



INTERFACE CARD



PERIPHERALS

CONTACT:

TECHFORCUT s.r.o.

Production:

Ostrava

CZECH REPUBLIC

Phone: +420 777691308

E-mail: sales@techforcut.com