

# Flame Cutting Machine **CODIMAT UL – N**

## **F A Q**



**???QUESTIONS???**

**Here are the answers!**

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## 1.0. Questions regarding flame cutting technology

*What can be cut by means of an autogenous cutting torch?*

### Suitability of various steels for flame cutting

10 CrMo 910	HY 80
13 CrMo 44	Low-perlite steel
15 Mo 3	St 35.8
17 MnMoV 33	St 37
17 MnMoV 64	St 52
20 MnCrSiMoZr 43	St 70
20 MnMoNi 55	St E 36
22 NiMoCr 37	St E 43
Concrete reinforcement steel	St E 70
GS-C 25	WT St 37
HII	X 8 Ni 9

Thus: Standard black steel

*What cannot be cut by means of an autogenous cutting torch?*

No special steel (VA), no aluminium, no other metals

*What material thicknesses can be cut by means of an autogenous cutting torch?*

In theory, it depends only on the cutting torch and on the pressure of the cutting gases, especially on the pressure of the cutting oxygen. But in practice, metal sheets and plates with thicknesses up to **100 mm**, seldom also up to 200 mm, are cut by means of machines which correspond to the CODIMAT UL-N as to their construction and size.

*What can be cut by means of a plasma cutting torch?*

In principle, all electrically conductive metals can be cut, i.e. Stxx, special steel, aluminium, brass, copper, etc. In practice, plasma cutting is applied mostly for special steels and thin black metal sheets and plates up to 30 mm.

## **2.0. Programming systems, CAD applications, data transmission**

*Can I continue using my existing programming system?*

If the customer has already a programming system, e.g. FINEST, COLUMBUS or from similar manufacturers they are normally usable also for producing the program for the CNC of the CODIMAT UL-N. This CNC „understands“ the ISO code under the standard DIN ISO 66025 and the so-called ESSI-CODE. Thus, the marketable program formats can be used.

*Can the machine process any DXF formats?*

No, that cannot be done so directly by any flame cutting machine. The DXF format describes only the geometry of the parts to be cut. Thus, for flame cutting there is lacking the information about where the cutting of the part shall begin, about the cutting direction, i.e. clockwise or anti-clockwise, as well as the width of the cut joint. These so-called technological data can be generated from the DXF data by the program cncCUT of IBE Software (see options).

*How are the programs transmitted to the CNC?*

Normally this is done by means of an optical waveguide that is installed between a PC and the CNC.

## **3.0. Equipment of the machine**

*Do I need a height regulator?*

If the customer cuts mainly thick material, i.e. Stxx with thicknesses of more than 30 mm, it can be dispensed with because these plates are scarcely distorted when being cut.

In case of thin plates <30 mm the use of a height regulator is always to be recommended because these plates are rather distorted when being cut.

In case of plasma cutting one should always recommend the height regulator because here one cuts always with high speeds and the operator has scarcely any chance to compensate any unevenness by means of the button LIFT or LOWER the torch.

*Do I need a remote ignition in any case?*

In case of these relatively small machines a remote ignition can normally be dispensed with.

### *Is the operation of the CNC complicated?*

NO! This CNC can be operated very easily; on each page there are some text aids telling the operator what he should do. An instruction about the basic functions of the CNC takes only approx. ONE HOUR!

## **4.0. Flame cutting tables**

### *What does a flame cutting table cost?*

There exist ready-made flame cutting tables to be bought at a price from approx. 5.000 EUR upwards. The total price depends then on the size and the equipment, e.g. with individual sections in the table which are cleaned by a suction plant. There are scarcely fixed any upper limits, there exist e.g. also automated changing cutting tables. In case of this system one table is loaded with raw metal sheets/plates, on the 2nd table the cutting is done, and on the 3rd table the cut parts are removed. These 3 tables move automatically into the flame cutting area of the machine. Such tables are profitable only for enterprises which cut big series.

## **5.0. Suction plants**

### *Do I need a suction plant?*

In Germany: always, there are only very few exceptions

In Europe: almost always, depending on the country's regulations

In other foreign countries: has to be checked with the local authorities.

### *What does a suction plant cost?*

As approx. price of a small suction plant, a price **from 10.000 EUR upwards** can be named. Depending on the kind of cutting, the number of torches, and material thicknesses this price increases. A suction plant has then to be dimensioned for the individual case.

Indicated price ideas are based on German marked 2006/2007.