

## **C4-C5 SPECIFICATIONS**

REV 1 06/11/2015

### **Electrical Specifications**

110VAC 50/60hz 4A average 10A peak inrush (10A fuses at power input)

220VAC 50/60hz 2A average 7A peak inrush (10A fuses at power input)

### **Air**

The absolute maximum pressure allowed is 150 PSI

255 L/min at 5.5 bar

9CFM at 80 PSI

### **Blade opening**

C4 Standard stroke

The maximum material thickness is 1/2".

C4 Power stroke

The maximum material thickness is 1/4".

C5 Standard stroke

The maximum material thickness is 1/4".

C5 Power stroke

1/3 of length of the blade never opens. This is why it is not recommended to use power stroke on a C5

### **Material width**

C4 The maximum width of the material is 5.875 inches 150mm

C5 The maximum width 13.5 inches 343mm.

Both these machines use a guiding system that will allow multiple strips of material to be fed and cut. The width of the guide that would go between the strips of material is .375 inch 9.5mm

### **Material types**

Many types of material can be cut on this machine. Some examples are Hook and loop, heat shrink, cloth, steel, grounding strap material, paper products, wire and screen.

### **C4C / C5C length resolution**

As a standard the machine comes set for metric mode and for whole millimeters.

Jumpers can be set in the machine for the following modes

Metric whole millimeter 99999

Metric tenth millimeter 9999.9

English tenth inches 9999.9

English hundredths inches 999.99

## Length accuracy

The feed roller is moved in 0.004inch 0.1mm steps until the programmed length is reached. This feed motion will always repeat exactly, due to the way the rollers are mechanically linked to the motor.

There are two things to understand about the length.

1. The overall length of the part is dependent on the roller wear, softness of the material and thickness of the material. The length on this machine cannot be calibrated. If you program in a length of 1000mm and the part comes out at 995 then you need to program 1005 to get the correct length.
2. The length repeatability is highly dependent on the type of material. Materials that smooth, do not stretch and have only a small amount of compression will have very repeatable length. Heat shrink is an example. A material that is soft and stretches or is very smooth will be less repeatable. Cloth is an example. The repeatability can be optimized though because these machines have and large feed bed, control over the feed roller pressure, acceleration and feed speed. The material dependency described here is physical material property and is not limited to the C4/5 machines. Any machine that feeds and cuts will experience this dependency. The good thing about the C4/5 machine is that there is programmability to minimize the effect.

## Cutting force

Standard stroke 706 lbs

Power stroke 1059 lbs

Calculation at 80 PSI

Area of piston 2.5" – area of rod .789" = 4.420

$80 * 4.420 = 353$  force on cylinder

Standard stroke =  $353 * 2 = 706$  lbs of force

Power stroke =  $353 * 3 = 1059$  lbs of force

## Blade Life

The blade is a very rigid design that leads to a long life verses other types of blades. Because the life of the blade is highly dependent on the material being processed we do not publish a specification for the number of cuts you will get before a blade needs to be replaced.

There are two types of blades. One is tool steel the other is a special high strength steel. For maximum blade life on any material the high strength steel (HSS) is recommended.

## Production Rates

Cuts per hour\*

Length of material	C4	C5
6 mm	11500	11500

25 mm	10900	10300
50 mm	10300	8800
125 mm	9045	7250
250 mm	7500	5750
750 mm	5450	4050
1500 mm	3740	3000
5000 mm	1570	1380

- Pieces per hour can be increased by feeding multiple material strips.