| Machine Model | CD-23 Coiling Bowls for MTX-10 | Owners Manual |
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| | Rev. 1.0 | Date 08 July 2015 |

PICTURE OF CD-23 MACHINE

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# Contents



## SAFETY WARNING

Do not remove the wire from the bowl while it is still spinning.

## GENERAL DESCRIPTION

The CD-23 Dual Bowl Wire Coiling System has been designed as an optional collection system to coil long wires processed by the Artos **MTX-10**. This dual bowl design system allows the operator to collect wire from one bowl while the machine is loading wire into the other bowl. With this design, the machine can process wire continuously improving wire production efficiency.

## LIMITS OF USE

The CD-23 machine is intended for use in a dry indoor working environment. The machine cannot be exposed to liquid spray or mist, damages will result. Circuits should never be removed or tampered with or injuries may result. The electrical cabinets should only be opened by trained and authorized personnel. Use of the machine for purposes other than those stated in the general description may result in damage to the machine or personal injury.

# SPECIFICATIONS

**ELECTRICAL**

Power Supply:
115±10% VAC 47-63 Hz. Single Phase 6 amps (Nominal)
Connection to Supply: Hooded connector into CR machine
Protection Against Electric Shock: Grounded metal enclosure

**AIR SUPPLY**

Average air requirement 2 cfm (56 L/m) 80 psi (5.5 bar)

**DIMENSIONS**

Bowl Height from floor 39.7 inches (1051mm)
Bowl Height from floor with leg extensions 42.7 inches (1085mm)

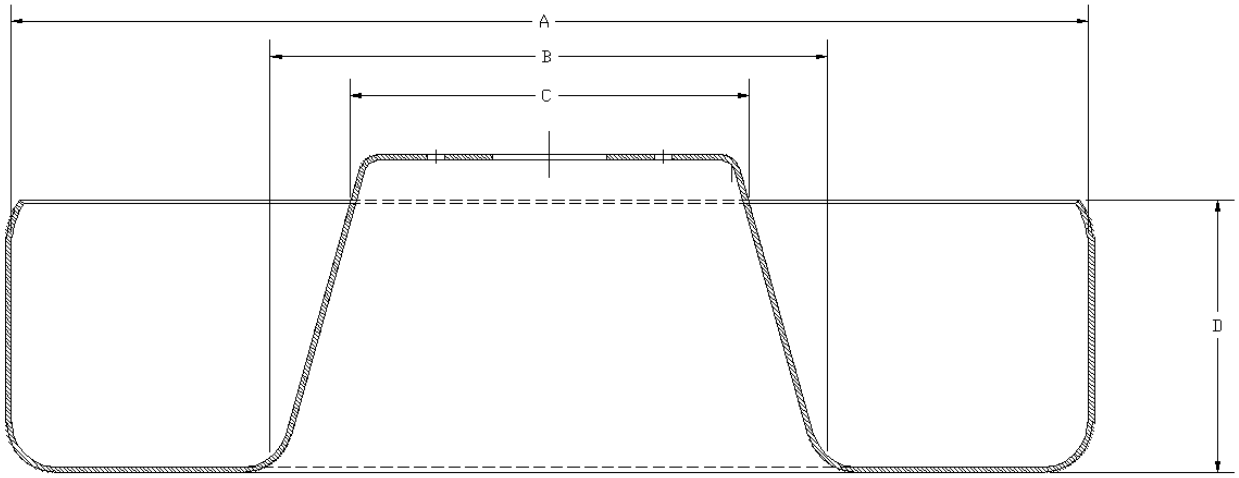
**OVERALL ASSEMBLY**

Height 44.5 inches (1130mm)
Height with leg extensions 47.5 inches (1207mm)
Length 74.3 inches (1270mm)
Depth 51.3 inches (1303mm)

**WEIGHT**

180lbs (82kg)

# BOWL DIMENSIONS




**24” BOWL 143690 IS INCLUDED WITH THE COILER**

**For bowl 143690  24 inch 610mm diameter**

**Outer dimension of coil**

A=23.8 inches 605mm

**Inner dimension of coil**

B=11.6 inches 297mm at bottom of bowl

C=8.8 inches 224mm at top of bowl

**Height of coil**

D=5.8 inches 147mm at top of bowl

**For bowl 143689  18 inch 457mm diameter**

**Outer dimension of coil**

A=17.8 inches 452mm

**Inner dimension of coil**

B=10.4 inches 264mm at bottom of bowl

C=8.8 inches 224mm at top of bowl

**Height of coil**

D=3.8 inches 97mm

## GUIDE TUBE SIZE

The inside of the guide tube is 0.870 inches (22mm).  The maximum terminal width that can be run is dependent on the flexibility of the wire.  A more flexible wire will allow the terminal to go through at an angle so extra space is needed to accommodate the length of the terminal plus the wire extending out from the terminal.

## BOWL CAPACITY

**How much wire will fit in the bowl?**

**The volume of each bowl is as follows:**

143689 (18in dia.) =  635 cubic inches

143690 (24in dia.) =  1963 cubic inches

- The wire will randomly coil in the bowl, this cris-crossing and uneven stacking  means that you can only use a portion of the volume available. From experimental data the volume of wire that can fit into the bowl is about 40% of the volume of the bowl.
- The volume of 1 foot of wire is 3.1416*r^2*12

**To compute the length of wire in feet that would fit in the bowl.**

r = (outside diameter in inches/2)

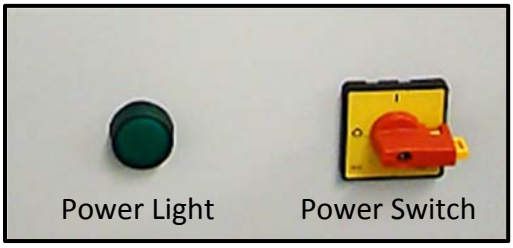
**For Bowl # 143689 18 inch 457mm**

(635*.4)/(3.1416*r^2*12) = 6.7376/(r^2)

**For Bowl # 143690 24 inch 609mm**

(1963*.4)/(3.1416*r^2*12) = 20.8281/(r^2)

# CD-23 CONTROLS





**Power Light** – Lights up when the MTX machine connected to the CD-18 is on. Also when the CD-18 is plugged in and the power is on.

**Power Switch** – ON/OFF switch. Turn CLOCKWISE to “I” symbol to turn ON and COUNTERCLOCKWISE to “O” symbol to turn off.

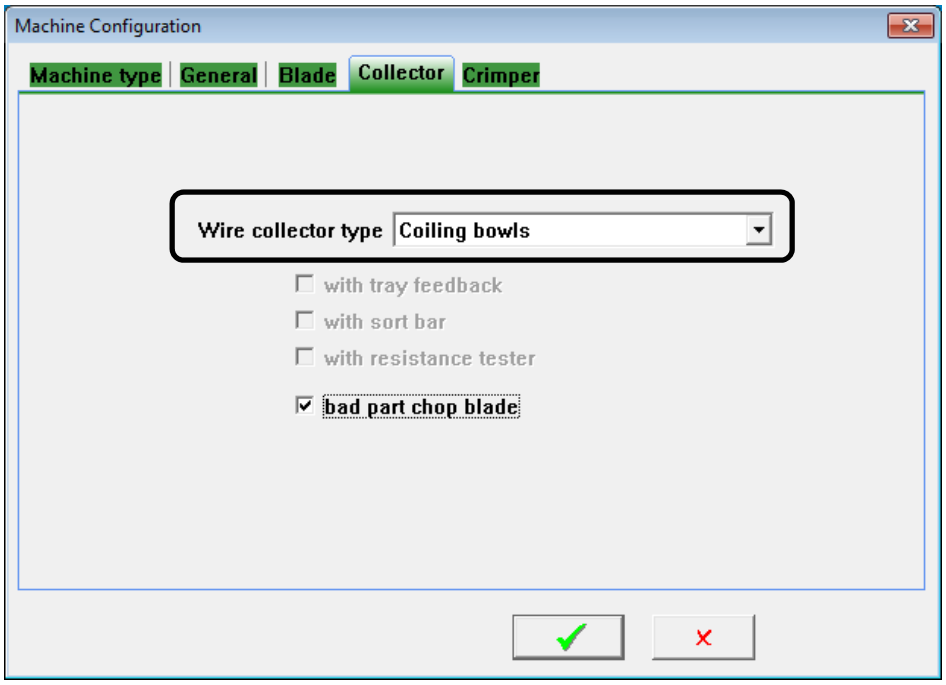
**Break Pressure** – This controls both the brake pressure and the main air on the manifold. You want to set this gauge low enough that the bowl does not slam to a stop causing the wire to spin and tangle up in the bowl.

**Clutch Pressure** – This controls how hard the bowls are pulling on the wire. There are times that the MTX machine is holding the wire tight (like during the cut and strip) so the bowl needs to slip so the wire does not pull out of the bowl. You also want to be able to safely touch the bowl while it is spinning and it will stop easily. Keep in mind that as you increase the clutch pressure the brake pressure will slightly decrease, this decrease is not visible on the gauge.

The pressure for the sliding tube and bowl select cylinders comes from the main air pressure in the MTX machine.

# MTX-10 MACHINE CONFIGURATION

**In Machine Settings**

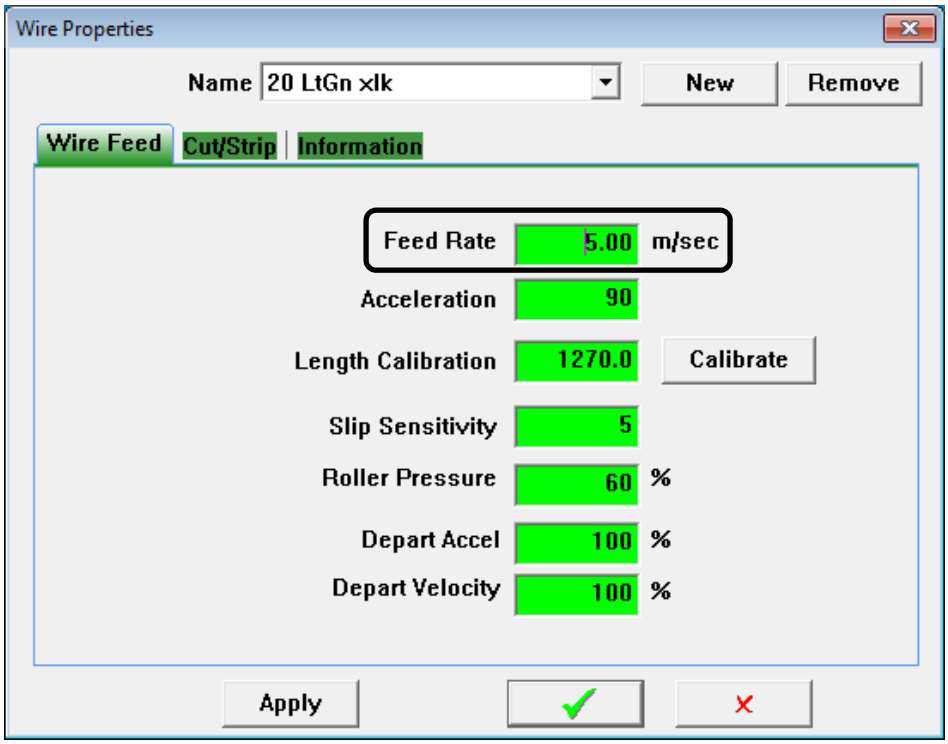



For the wire collector type select, Coiling bowls.

**Programming the wire feed speed.**

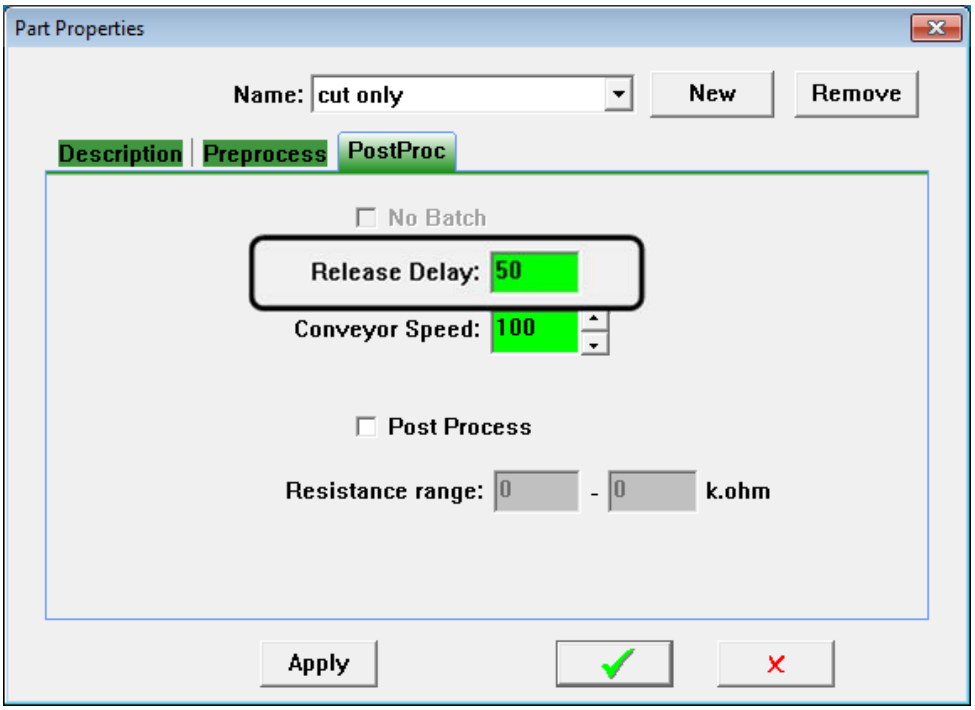
In the wire properties screen set the Feed rate for 5 m/sec or less. This is the maximum speed that the bowl is capable of.

When the coiling bowl is connected, the machine will not use the programmed Feed Pivot position. It will always feed the wire in line with the cut blades.



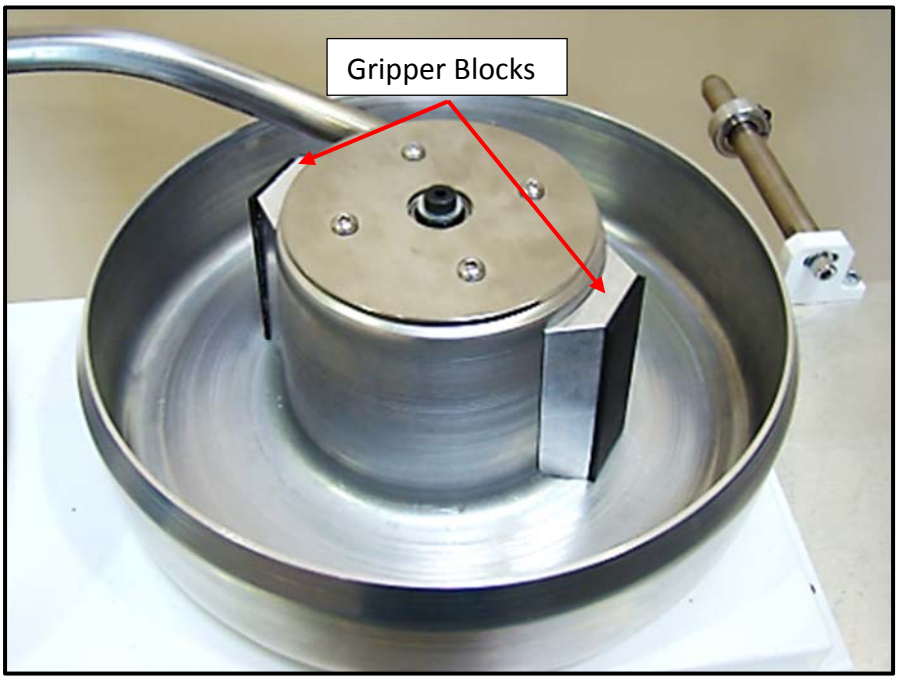
**Programming coiling bowl speed**

The speed of the coiling bowl is determined by the Conveyor speed setting. You need to program higher speeds for higher feed rates. A speed of 10 corresponds to a feed rate of 0.5m/S. A speed of 100 corresponds to a 5m/S.



## OPTIONAL COILING ASSIST

During the coiling process, the wire may have trouble coiling in the bowl due to a lack of friction between the bowl and wire. This optional coiling assist features two rubber **GRIPPER BLOCKS (5-148001)** built into the bowl, 180° apart, to help in the coiling process as the wire is being transferred into the bowl.



# MAINTENANCE

- Check the control buttons and switches monthly to ensure they are working properly.
- Monthly, while the coiling bowl is spinning use your hand to stop the bowl. If it is too difficult to stop, then adjust the clutch pressure (see section **CD-23 CONTROLS** on page **6**).
- Once a year, check the Brake Clutch Pads for a buildup of dust or dirt.

- Once a year check the Belt for wear or missing teeth.