# **Advanced CNC Metal Spin Forming Machines**

With its new Spin forming machine line, MJC has developed the future within Spin forming technology. MJC Spin Forming Machines are specially designed for the manufacturing of rotary and shear formed precision components. MJC customers benefit from the best service and support in the industry through locally authorized service centers.



- Superior Feed Rate
- Better Balance in Forming Forces
- Faster Cycle Times
- Rugged Construction
- Oversized Linear Slide Bearings
- Servo Ball-screw Drives
- Rigid X Slide Units
- Trouble-free Operation
- Quick Tooling Changeovers
- Simple Diagnostics
- Low Maintenance
- Siemens Sinumerik Control System
- Custom programming software

Maximum workpie Reject thickness i Reject thickness i Reject thickness i Reject thickness i Reject thickness i

#### www.mjcengineering.com

## **DESIGN FEATURES**

### **CAPACIDAD DE LA MÁQUINA:**

ece diameter	600 mm
n stainless steel material	2 mm
n soft steel material	3 mm
n brass material	3mm
n soft copper material	3mm
n 99.5 Aluminum material	5 mm

# **ESPECIFICACIONES DE LA MAQUINA**

20 kW

2500 RPM

375 mm

375 mm

400 mm

15 kN

840Dsl

S700

2022

9000 mm / min.

9000 mm / min

6000 mm / min

**Oil/Industrial Fat** 

40 kN

40 kN

#### Main spindle:

AC-Vector drive motor (100% CDF) at 1500 min-1 Spindle speed range

Machine shaft:

X axis stroke (longitudinal displacement) X axis force (thrust power) X axis speed Z axis stroke (cross travel length) Z axis force Z axis speed Slide lubrication method

#### **Counterpoint:**

Tailstock travel (tailstock travel length) Tailstock force (tailstock contact pressure) Tailstock Fast speed

Sistema de control CNC:

Sistema de control Siemens **Control PLC: Siemens** 

#### Información técnica general:

App. Requisito de energía: Voltaje de control Max. Fluctuaciones de voltaje Año de Fabricación:

220V-3ph 60Hz - 100 Amps DC24V ± 10%

To avoid system failures, good grounding according to DIN standards must be made within the plant to ground all machines, electrical cabinets, etc.





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# **Machine Programming Software**





#### SpinCADtm CNC programming software features:

- Windows based software.
- Separate programs for programming and operation of the machine.
- The programming software can be run on any PC compatible computer.
- Rapid feed linear contouring and / or cubic grooving.
- Trapezoidal speed profiling.
- Spreadsheet-style data entry simplifies programming. The friendly environment allows for quick changes. Both control and contour information are displayed on the same screen.
- Powerful CAD graphics input using a mouse provides instant graphic views of programmed contours. Features include zooming, scrolling, and snapping.
- The control program contains password-protected calibration and diagnostic screens for  $\geq$ quick system checks and configurations.
- Times and / or pyrometric control of the heating process.  $\geq$
- See separate file with more technical information.
- Includes software and programs support for the NC and PLC of the lathe and peripherals (bar feeder); as well as necessary equipment and accessories (interface for connection between the mobile equipment and the machine) to reload the aforementioned software and programs.

#### Software options:

Programming software	SpinCAD TM
Configuration utility software	SetupPRO ©



**Machine Operator Panel** The operator panel is a separate unit and the operator interface includes:

- With Touch screen, USB port.  $\triangleright$
- $\geq$
- Manual control of all axes and peripheral equipment.  $\triangleright$
- $\triangleright$ machine.
- status of all input and output devices will be displayed in real time.
- A shutdown screen to be used as a guide to shutting down the machine.  $\triangleright$
- robot-machine interface.
- Current equipment alarms and alarm history screen.
- $\triangleright$ intranet connection.

#### Scope of supply of the machine

Machine work cell as described above.

One (1) set of foundation anchors.

One (1) set of manuals and one electronic copy (Adobe pdf format) Installation information.

(This information will contain drawings showing the location and sizes of all required electrical, air, water, drain, and other utilities, including consumption (flow rates), minimum and maximum inlet pressures, head drop, maximum pressure through equipment and interconnections between equipment accessories.)

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A graphical interface panel that allows operators to easily select programs from a library or by directly downloading programs from a central production intranet system.

Password protection is provided to allow access to various capabilities within the

Maintenance screens that help maintenance personnel troubleshoot the machine. The

An operator status screen that displays automation information on the status of the

All monitored data can be downloaded for analysis via a solid state hard drive or an

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### **GENERAL DESCRIPTION:**

#### 6 station turret

Turret with tools for rejecting (FLOW FORMING) the pieces, as well as a set of tools for additional spinning operations (deformation of the material without changing the thickness). A 6 station programmable turret is mounted on the X-axis slide. The turret can be equipped with tools such as rollers, flanging rollers, trimming accessory, machining accessory, etc. The turret is fully programmable through SpinCAD and with proper tool management, repeated parts are easily reproduced.

#### Ejector

An ejector is provided to remove the workpieces from the tool after the forming process. The ejector rod passes through the hollow main shaft and is guided through a bronze bushing, installed in the nose of the main shaft. The ejector functions are integrated into the automatic cycle of the machine and are controlled by non-contact limit switches.

#### Blank lubrication / Auto greasing / Forming spray

A high volume, low pressure spray system is mounted on the upper slide, close to the forming roll. The system provides a precisely targeted spray to the workpiece without fine atomization of the coolants, eliminating unwanted coolant mists or mists being carried into the surrounding air and also reducing waste. The reservoir is located in a convenient location for easy filling. Through the CNC system the lubrication is fully programmable.

#### **Control system**

The machine is equipped with a "Siemens" Sinumerik 840Dsl computer numerical control system. The CNC programming software is specifically designed for use on MJC metal spinning machines.

With remote diagnostics, MJC can monitor and adjust machine settings anywhere in the world. Requires Ethernet connection.





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