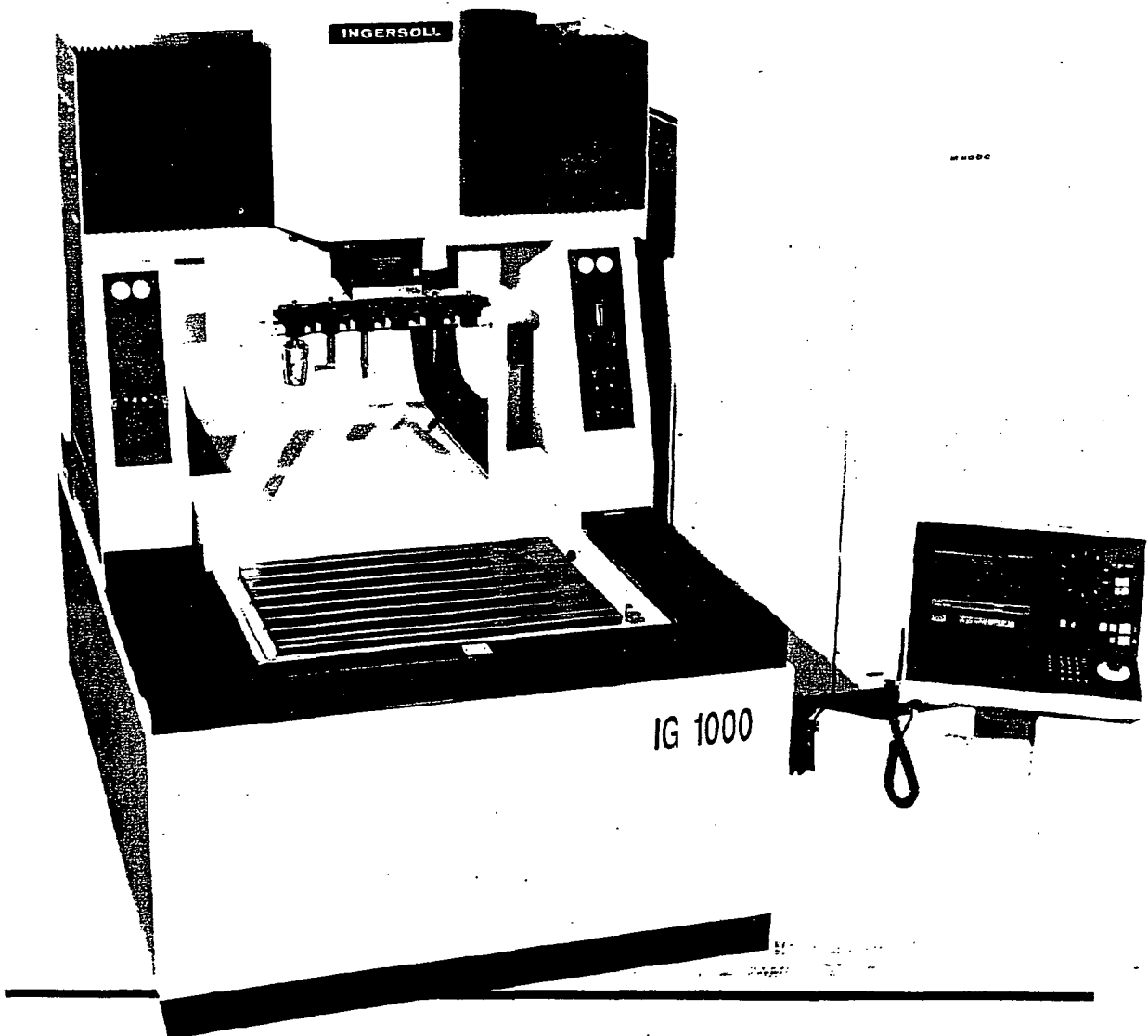


**Ingersoll GmbH IG Series**

# **CNC Gantry Style EDM's**



Optional  
C Axis and  
Tool Changer

Flushing System

Control  
Cabinet

INGERSOLL

Dialog  
Programming

Control  
Pendant

IG 1000

Rise and Fall Tank

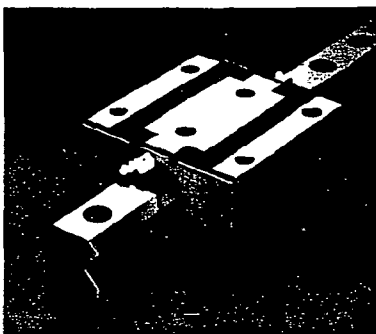
Exhaust Vent

The IG Series EDM is designed to move tool and mold making closer to full automation, permitting unattended operation. This impressive combination of features allows EDM machining with accuracy measured in microns.

**Ingersoll GmbH IG Series**

# CNC Gantry Style EDM's

The innovative Ingersoll Gantry (IG) family is a unique EDM machine utilizing a gantry design concept. The gantry provides high precision, extensive axis travel, high workhead and table load capacities and excellent four-sided table/workpiece accessibility.



## Bearings

To add to the high degree of accuracy and rigidity, precision bearing packs are used to support and guide the IG Series gantry.

These linear recirculating roller bearing and guideway assemblies are capable of taking high loads from all directions perpendicular to the guideway and moments around all the axes.

These bearing assemblies consist of at least one carriage, and one hardened and ground guideway with four raceways perpendicular to each other. The cylindrical rolling elements move in four individual recirculating channels with narrow clearance.

Linear recirculating roller bearings ensure smooth, fluid travel on all axes, providing the highest possible degree of EDM accuracy.

## Temperature Control

The Ingersoll Gantry EDM family includes an automatic temperature control system maintaining thermo-stability and consistent accuracy. The IG

Series also features an integral automatic lubrication system for unattended, around-the-clock operation.

## Drive Motors

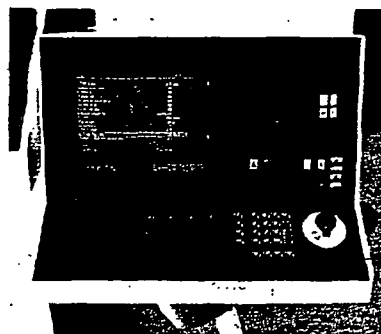
The IG Series EDM family incorporates maintenance-free AC brushless drives to accurately control the movement of the three servo-directed axes: X, Y and Z.

Unlike conventional DC servomotors, brushless AC servomotors are maintenance-free. There are no brushes and the bearings are lubricated for life, thus there are no electromechanical parts to wear out or require routine service.

AC servomotors have several additional advantages over DC servomotors. These include full torque at any speed, faster acceleration and deceleration, 60 percent better power-to-weight ratio and more efficient heat dissipation.

## Control Pendant

The user-friendly dialog CNC control is conveniently placed for easy operation. The control features ITS, or Ingersoll Integrated Technology System for simple programming and optimum results. Also included in the control design are collision protection and simultaneous four-axis contour EDM machining.

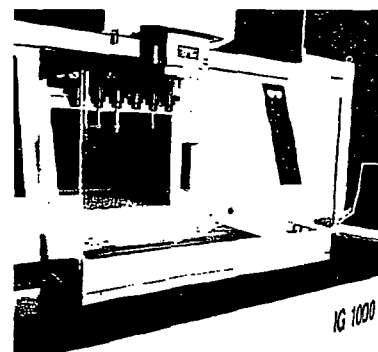


The ergonomically designed control also features a self-diagnostic display and a microprocessor-controlled generator with automatic process adaptation. To maximize production time, the control allows programming while machining.

## Worktable

Ingersoll's gantry-style construction allows far more extensive axis travel than conventional EDM designs.

This wider range of axes movement also creates a much more efficient use of the work table, thus allowing a much larger workpiece clamping area than normal.



A ten-position, rise and fall work-tank is ideally suited to automation with the addition of automatic pallet changers.

When combined with the gantry design, the rise and fall work tank allows full accessibility to the work area on four sides. While the gantry design allows for greater utilization of worktable space with increased axis coverage, it also allows extra clearance for changing electrodes and table loading.

Additional benefits of the IG Series include high head and table load and maximum useable open height for utilization of electrode changer.



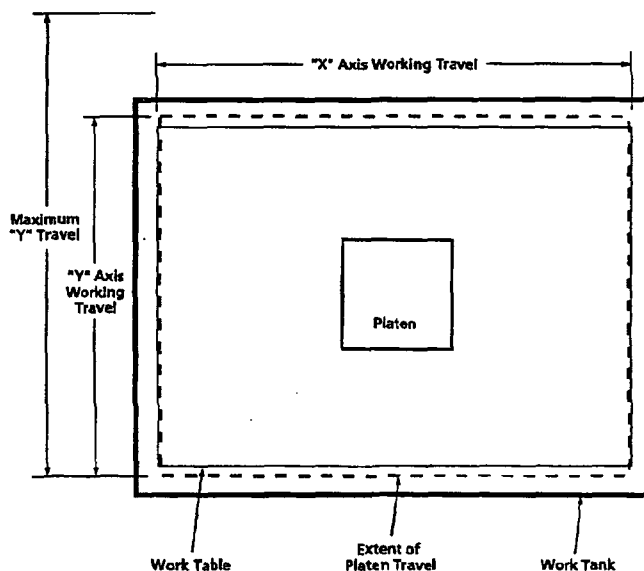
## Options

A variety of optional features are available to take the IG Series EDMs into the 1990's. These include a C axis with rotation and angular positioning and EDM machining capabilities, automatic electrode changers from 6 to 20 stations, an interface for DNC and FMS operation, and a programmable flushing unit.

## Four Models

The IG family of CNC EDMs is available in four sizes with worktables ranging from 25.5" x 21.6" to 45.2" x 80.7" and are capable of handling workpiece weights from 2,200 to 16,500 pounds, respectively.

## Extensive Work Area Accessibility



The above diagram illustrates the relationship between the worktable, worktank and platen travel. The table below lists the respective sizes and capacities of the worktank, worktable and platen and the extents of axis travel.

## Specifications\*

Model Number	Platen Size	Working X Axis Travel	Working Y Axis Travel	Max.† Y Axis Travel	Working Z Axis Travel	Work Table Size	Table Load Capacity	Head Load Capacity	Rise & Fall Work Tank Size	Max. Height of Tank Over Table
IG750	7.8 x 7.8	19.6	15.7	27.5	15.7	25.5 x 21.6	2200 lbs.	660 lbs.	29.5 x 25.5	17.7
IG1000	8.0 x 8.0	27.1	18.5	31.1	15.7	35.4 x 25.5	4400 lbs.	1100 lbs.	38.1 x 29.1	19.6
IG1300	14.9 x 15.3	35.4	27.1	48.8	21.6	45.2 x 37.4	8800 lbs.	4400 lbs.	51.1 x 43.3	23.6
IG1300E	14.9 x 15.3	35.4	70.8	92.9	21.6	45.2 x 80.7	16,500 lbs.	4400 lbs.	51.1 x 66.6	31.4

\* Unless otherwise specified, all dimensions are given in inches.  
† To facilitate tool changing and workpiece loading.

**Ingersoll GmbH IG Series**

# **CNC Gantry Style EDM's**

## **General Features**

- **Gantry Design:** The Ingersoll Gantry (IG) design based on CMM technology, provides high stability and accuracy.
  - **Bearings:** Precision bearing packs ensure high rigidity and accurate positioning and machining.
  - **Automatic Temperature Control:** Machine temperatures maintained at ambient air temperature for high accuracy.
  - **Drive Motors:** Maintenance-free AC brushless drives provide responsive, accurate control over all axes.
  - **Control Pendant:** Dialog CNC control features Ingersoll Integrated Technology System.
  - **Worktable:** Four sizes to accommodate a wide range of workpiece configurations and applications.
  - **Rise and Fall Worktank:** Allows easy loading of workpieces.
  - **FMS and DNC Interface:** Connects your EDM to the latest CAD/CAM technology.
  - **Automatic Tool Changer:** Permits unattended machining.
-

**We also offer a wide  
range of conventional  
EDM machines.**

Ingersoll GmbH has been a leader in EDM technology for over thirty years. We currently offer a wide range of unique gantry, C-frame and portal CNC EDM machines.

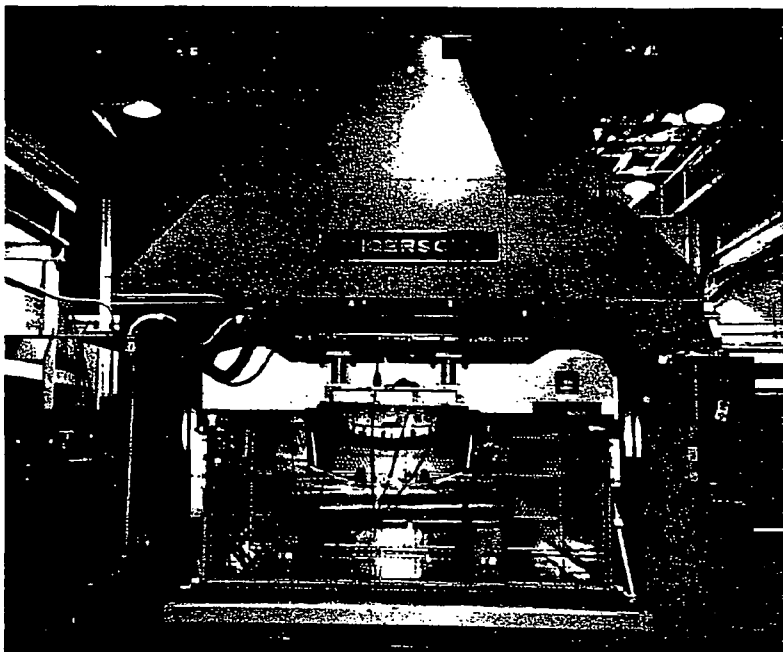
Our market research has indicated the need for better, more precise and more user-friendly EDM machines and controls.

Our extensive experience with EDM technology has lead us to the development of our revolutionary precision gantry-style CNC EDM.

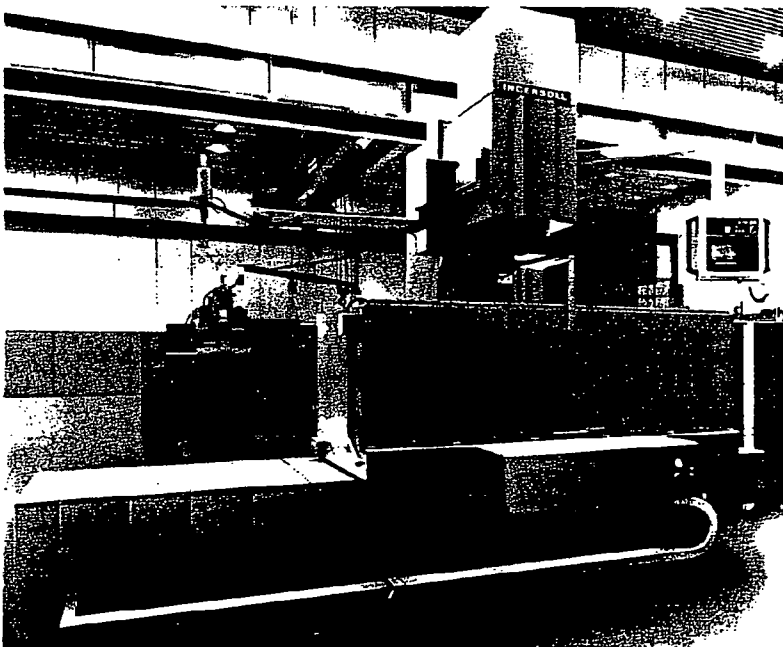
This new product line will fill many previously unanswered needs in the field of EDM technology.

Ingersoll's new IG Series CNC EDM is just one more example of Ingersoll GmbH's dedication to innovation and technological advancement.

We are committed to making EDM machining easier and more productive for metalworking professionals the world over.



ICC 612 Portal-Style CNC EDM



IC 480 C-Frame CNC EDM

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