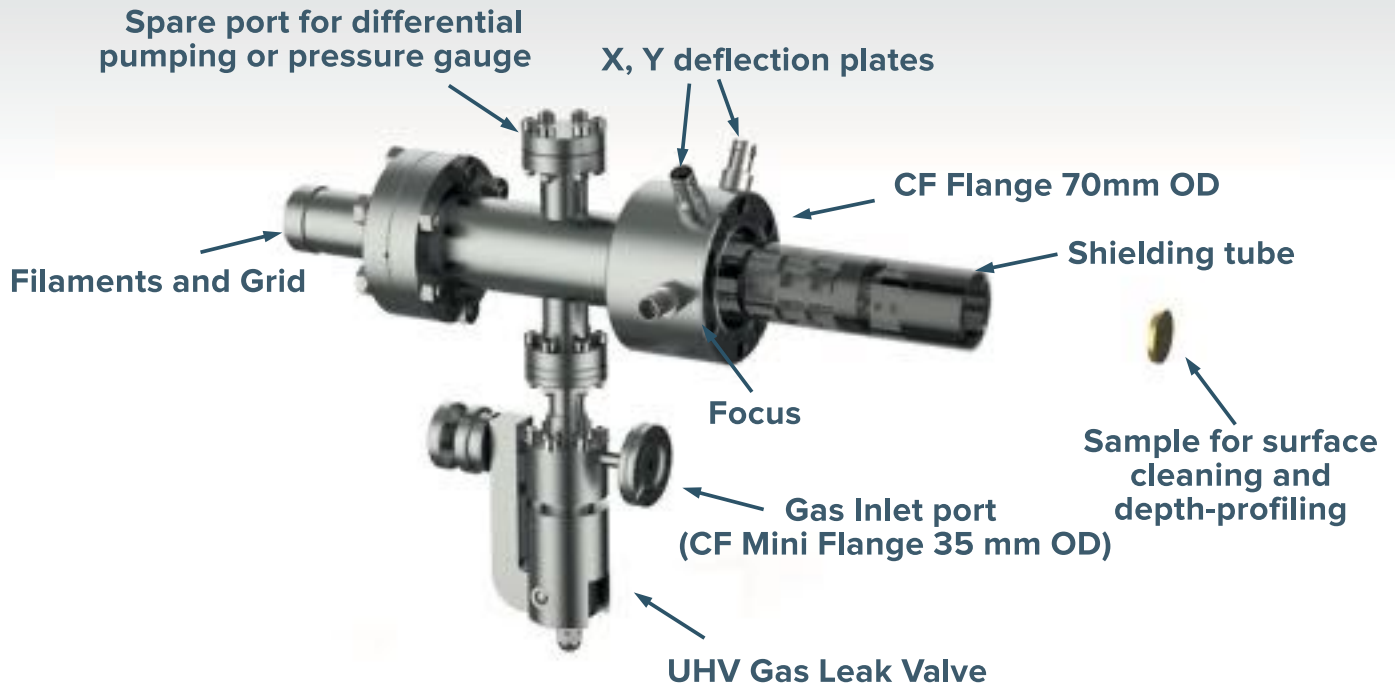


# IONEC - Ion Sputter Gun

Model IG70-XY-DP with exchangeable apertures



## Applications

The IG70-XY-DP Ion gun is designed for sample surface cleaning and depth profiling with Auger electron spectroscopy.

Surface treatments with IG70-XY-DP are applicable to a wide range of materials from metals, semiconductors, and oxides, to thin films and 2D layers.

## Features:

- Precision sputtering for sample cleaning and depth profiling
- X-Y ion beam deflection and rastering
- Low operating gas pressure:  $10^{-6}$  –  $10^{-7}$  Torr
- Wide range of ion beam diameters and sample distances
- Two long life filaments
- Variety of operating gases: Ar, Noble or Reactive

# IONEC - MODEL IG70-XY-DP

## Specifications

<b>Ion Source</b>	Electron impact ionization in magnetic field
<b>Ionization Cathode</b>	Tungsten - rhenium filament directly mounted on 70 mm OD CF flange
<b>Beam Current</b>	1.0 $\mu$ A at 0.25 keV 2.0 $\mu$ A at 0.5 keV 5.0 $\mu$ A at 1.0 keV 10 $\mu$ A at 2.0 keV 15 $\mu$ A at 3.0 keV
<b>Operating Ar pressure</b>	$5.0 \times 10^{-6}$ torr - typical
<b>Beam Energy</b>	0 - 3.0 keV
<b>Beam Size</b>	From 5 to 25 mm in diameter
<b>Beam Uniformity</b>	< 5%
<b>Gas Input</b>	Direct gas input to ion source via leak valve
<b>Mounting</b>	2 3/4" (70 mm) OD CF flange
<b>Bakeability</b>	Under vacuum - 250°C max.

## Precision Power Supply: Model IPS3-D

<b>Outputs:</b>	Filament current: 3.5 A max Grid voltage: 150 V in reference to filament Beam voltage: 0 – 3.0 kV Focus voltage: Factor 0.3 - 0.85x of Beam Energy Emission current: 0 - 45 mA
<b>Monitoring:</b>	Beam Energy Voltage and Currents: Filament Electron Emission, total Ion Beam
<b>Manual Control:</b>	of all voltages and Filament current via rotary dials and selection buttons
<b>On-board Automation:</b>	9 adjustable operating programs: outgassing, stand-by, filament forming, constant emission current and diagnostics programs
<b>PC Control:</b>	Full control of all functions, PC software is required
<b>Display:</b>	Vacuum fluorescent display
<b>Protection:</b>	Short circuit, arc and over voltage protection
<b>Input:</b>	100/110 V AC 50/60 Hz or 220/240 V AC 50 Hz
<b>Size:</b>	19" Rack mount box with 3U (5.25", 133 mm) in height and 17.5" (440 mm) in depth, 12 kg in weight

## Ordering Guide

<b>IG70-XY-DP</b>	Ion sputtering gun with direct gas inlet, X-Y deflection plates, differential pumping, adjustable beam size, and CF 2 3/4" (70 mm) OD mounting flange
<b>IPS3-D</b>	Digital power supply with voltage range 0 – 3.0 kV
<b>LV-UHV</b>	UHV Precision Gas Leak Valve

## Schematic

