IG70 Configuration Guide and Specifications
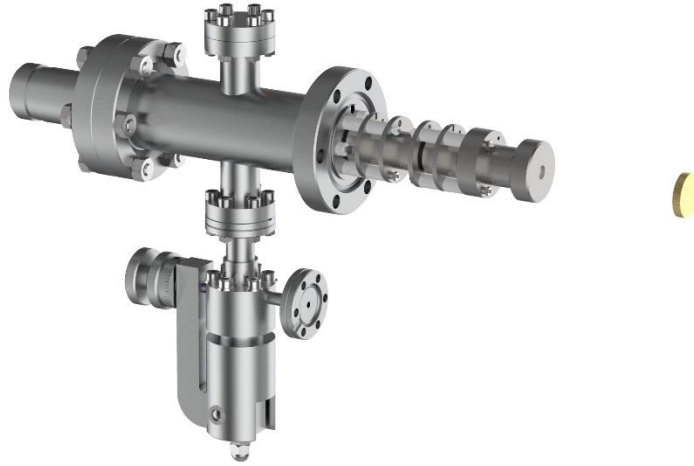
Ion Gun Configuration

Base configuration		
Model	Order Code	
IG70		Ion sputtering gun with direct gas inlet, beam size adjustable by exchangeable exit aperture from 2-20 mm diameter, 15 µA beam current at operating pressure in main chamber for less than 5 x 10^{-6} Torr and mounting flange CF2.75" (70 mm O.D.). Double focussing lenses for large target distances (up to 320 mm). Spare filament set included.
IPS3-D		Digital controller for IG70 with voltage range 0-3.3 kV, front panel or computer control via built in USB interface, front panel timer, PC software with full IPS3-D control via USB and programmable timer. Cable included.

Detailed Specifications

IG70 IONEC	
Ion source	Electron impact ionization in magnetic field
Ionization Cathode	Tungsten-rhenium filament
Beam current	Up to 20 µA
Beam energy	0 – 3.0 keV
Beam size	From 5 to 25 mm in diameter
Beam uniformity	Less than 5%
Gas input	Direct gas input to ion source via leak valve
Mounting	CF2.75"(DN35CF) flange
Bakeability	Under vacuum - 250°C max
Overall size	29 mm lens diameter and 20 – 100 mm drift tube length
Conductance	0.52 l/sec (vacuum path from ion source to exit aperture)

IPS3-D Electronics	
Filament current	3.5 A max
Emission current	0 – 40 mA
Grid voltage	120 – 150 V
Beam voltage	0 – 3.2 kV
Focus voltage	Factor 0.3 – 0.85 of beam energy
Monitoring	Beam energy and emission current
Display	Vacuum fluorescent display
On-board automation	9 adjustable operating programs, outgassing, stand-by, filament forming, constant beam current and diagnostics programs
Manual control	Of all voltages and filament current via rotary dials and selection switches
PC control	PC software for full control of all functions via USB
Protection	Short circuit, over-current and over-voltage protection
Input	115 V, 60 Hz standard
International range	100/120/220/230/240 V AC, 47-440 Hz
Dimensions	19" rack mount box with 3U (5.25", 133 mm) in height and 17.5" (440 mm) in depth, weight: 12 kg

IG70 configuration and specifications.docx