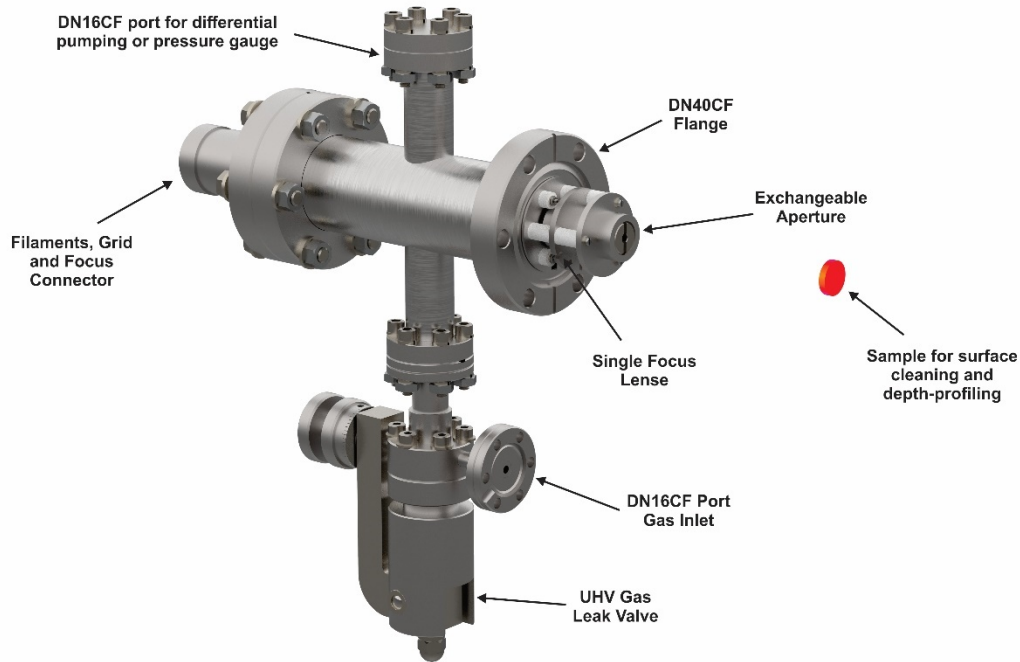


# IG70-SF-DP Configuration Guide and Specifications



## Ion Gun Configuration

Base configuration		
Model	Order Code	
IG70-SF-DP		High-performance ion sputtering gun featuring a direct gas inlet, integrated, and adjustable beam size via interchangeable exit apertures ranging from 5 to 10 mm in diameter. The system delivers up to 15 $\mu\text{A}$ beam current at operating pressures below $5 \times 10^{-6}$ Torr in the main chamber. Equipped with a CF2.75" (70 mm O.D.) mounting flange and single-focusing ion optics optimized for extended target distances up to 250 mm. Supplied complete with a spare filament set.
IPS3-D	AO00049	Digital controller for IG35/70 series with voltage range 0-3 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-SF-DP	
Ion source	Electron impact ionization in magnetic field
Ionization Cathode	Tungsten-rhenium filament
Beam current	Up to 20 $\mu\text{A}$
Beam energy	0 - 3.0 keV
Beam size	From 5 to 10 mm in diameter
Beam uniformity	Less than 5%
Gas input	Direct gas input to ion source via leak valve
Mounting	CF1.33 " (DN16CF) flange
Bakeability	Under vacuum - 250°C max
Overall size	12.5 mm lens diameter and 75-220 mm drift tube length

Conductance	0.52 l/sec (vacuum path from ion source to exit aperture)
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<b>IPS3-D Electronics</b>	
Filament current	3.5 A max
Emission current	0 - 40 mA
Grid voltage	120 - 150 V
Beam voltage	0 - 3 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