



# Glow Discharge Cleaning System



Optimized for TEM Grids

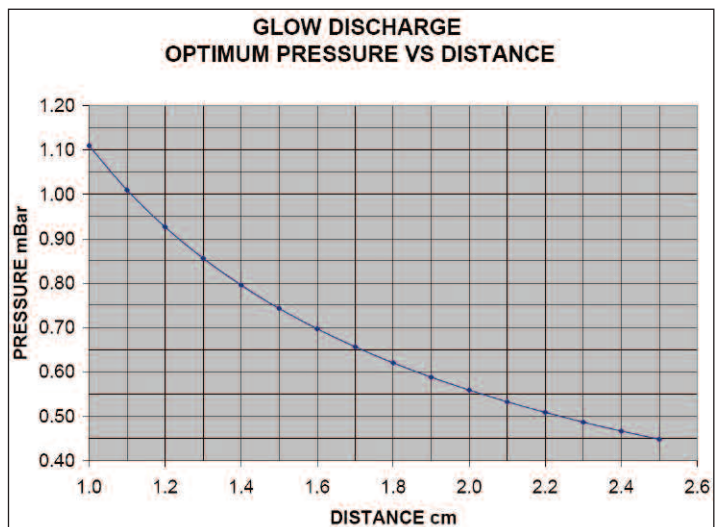


The PELCO easiGlow™ Glow Discharge Cleaning System is a compact, quick and easy to use standalone system. It is primarily designed for hydrophilization of TEM carbon support films which have the tendency to be hydrophobic. A glow discharge treatment with air will make the carbon film surface negatively charged hydrophilic which allows aqueous solution to spread easily.

With increasingly demanding imaging applications, using clean and consistent quality TEM grids and supports has become more important than ever. The PELCO easiGlow™ is an affordable and easy to operate glow discharge system for any TEM lab. The practical chamber size with its newly designed glow discharge head and adjustable stage with glass slide holder allows for easy loading and fast turnaround times. The system is fully microprocessor controlled and includes an intelligent touch screen device for operation and display of operation parameters. The PELCO easiGlow™ supports both hydrophilic and hydrophobic treatment with either negative or positive charge and includes two separately controlled gas inlets. The required vacuum level is set by an electronically controlled precision proportional valve. This novel approach eliminates manual setting with a needle valve. A soft venting procedure ensures that the TEM grids are not disturbed when the system is vented.

<b>Glow Discharge Methods Supported:</b>		
<b>Surface Condition</b>	<b>Charge</b>	<b>Atmosphere</b>
Hydrophilic	Negative	Air
Hydrophilic	Positive	Air (with subsequent magnesium acetate treatment)
Hydrophobic	Positive	Alkylamine
Hydrophobic	Negative	Methanol

Efficient glow discharge performance for the PELCO easiGlow™ with optimum pressure at given distance from sample to glow discharge head. >>>>



For one of the most common glow discharge applications, making TEM support films or grids hydrophilic using air, the PELCO easiGlow™ uses an automated and quick cycle with fully selectable parameters. The microprocessor controlled system also offers full manual control for all parameters and an advanced protocol programming feature for custom designed glow discharge applications. Parameters and protocols can be stored to facilitate consistent glow discharge results.

For those labs which need both hydrophilic and hydrophobic surface treatments on a regular basis, a dual glow discharge system is available to avoid cross contamination of the glow discharge chambers.

Since the optimized vacuum level for glow discharge procedures is in the range of 0.45 to 1.1 mbar, we offer the affordable GD6 dual stage rotary vacuum pump designed for this pressure range.



## Advantages of the PELCO easiGlow™ Glow Discharge System

- ▲ Precise and easy vacuum setting
- ▲ Short cycle times
- ▲ Consistent results
- ▲ Auto, programmed and manual mode
- ▲ Intuitive touch screen for display and operation
- ▲ Supports hydrophilic/hydrophobic and negative/positive modes
- ▲ Affordable, compact, standalone system

[www.tedpella.com/easiglow\\_html/91000.htm](http://www.tedpella.com/easiglow_html/91000.htm)

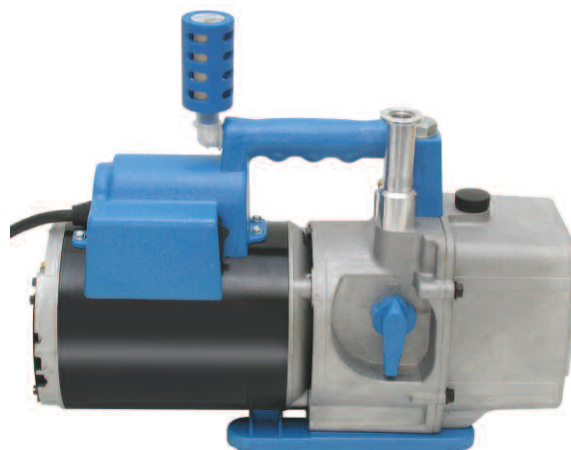
## GD6 Rotary Vacuum Pump Specifications

**Pumping speed** 6.9m<sup>3</sup>/hr, 110 l/min, 4 CFM @ 60Hz  
5.6m<sup>3</sup>/hr, 93 l/min, 3.8 CFM @ 50Hz

**Ultimate vacuum** .27 mbar

**Vacuum connection** KF16

**Exhaust connection** Compatible with 1/4" NPT Thread



## Ordering Information

- 91000** PELCO easiGlow™ Glow Discharge Unit, each
- 91002** Dual Chamber PELCO easiGlow™ Glow Discharge Unit, each
- 91010** GD6 Vacuum System, 6.9m<sup>3</sup>/hr incl. Connection Kit, 115V, 60Hz, each
- 91010-230** GD6 Vacuum System, 5.6m<sup>3</sup>/hr incl. Connection Kit, 230V, 50/60Hz, each
- 91012** GD6 Vacuum System, 6.9m<sup>3</sup>/hr incl. Dual vacuum Connection Kit For Dual Chamber Glow Discharge System, 115V, each
- 91012-230** GD6 Vacuum System, 5.6m<sup>3</sup>/hr incl. Dual vacuum Connection Kit For Dual Chamber Glow Discharge System, 230V, each
- 91050** Replacement Glass Chamber with Sealed Top Plate, each
- 91051** Replacement O-ring for glow discharge chamber, pkg/2
- 91010-16** GD6 Vacuum Connection Kit to KF16 Pump inlet, each
- 91010-25** GD6 Vacuum Connection Kit to KF25 Pump inlet, each
- 91010-30** GD6 Dual Vacuum Connection Kit for Dual Chamber Glow Discharge System, each
- 9609** Exhaust filter for GD6 or #7010 Rotary Vacuum Pump, each
- 91010-10** H-Grade 15 Oil for GD6 Rotary Pump, 1 Qt., each

## Specifications of the PELCO easiGlow™ Glow Discharge System

Plasma Current	.0-30 mA
HV Power Supply	.30W Continuous Rating
Glow Discharge Head Polarity	.User Selectable positive or negative
Process Platform	.ø75mm with recess for 25 x 75mm slide
Glow Discharge Platform Height Control	. . . . .1-25 mm
Preprocess Hold Time	. . . . .0-18 hr.
Process Time	. . . . .1 - 600 seconds
Chamber Size	. . . . .ø120 x 100mm H with sealed Delrin top plate
Process/Vent Gas Inlets	. . . . .2 each ø6 mm barbed, individually user selectable for process, purge or vent
High Voltage Vacuum Interlocks	. . . . .Dual hardware and software interlocked
Vacuum Control	. . . . .Pirani Gauge, Readings from atmosphere to 0.01 mbar
Working Vacuum Range	. . . . .1.1 - 0.45 mbar for optimal glow
System Control / Display	. . . . .3" Touch Panel with LED backlight and 5 function keys
Operation Modes	. . . . .Auto, Programmed (4 user programmed protocols) Manual/Diagnostics
Data Logging Capabilities	. . . . .Step #, Vacuum (mbar), Current (mA), Voltage (V), and polarity, once per second
Instrument Size	. . . . .305 L x 292 D x 230mm H (12" x 11-½" x 9")
Weight	. . . . .6.26 kg (13.8 lbs.)
Pump (optional)	. . . . .381 L x 142 D x 247mm H (15" x 5-½" x 9-½")
Weight	. . . . .12.2 kg (27 lbs.)
Laboratory Footprint with optional pump	. . . . .381 W x 292 D x 330mm H (15" x 11-½" x 13")
Services Needed	. . . . .120V 60Hz 15A or 230V 50Hz 10A Service
Instrument Power Rating	. . . . .100-240VAC 60/50Hz 60W Plus Pump, IEC Inlet
Optional Pump Power Rating	. . . . .120/230V 60/50Hz 250 W (⅓ hp)
Vacuum Pump Minimum Requirements	. . . . .2.9 m³/hr, 48 l/m, 1.73 CFM @60Hz .30 mbar Ultimate Vacuum 2.5 m³/hr, 41 l/m, 1.65 CFM @50Hz .30 mbar Ultimate Vacuum
Vacuum Pump Power Outlet on Instrument	. .8A max IEC Outlet
Vacuum Inlet	. . . . .KF-16 flange
Communication Port	. . . . .USB Outlet



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