

SmartDesiccator™ Bench top Storage Desiccators



No. 1911-17

Shown with optional shelves and stainless steel door frames



No. 1911-02

Program the desired set point in a matter of seconds!

- First-of-its-kind gas control system cuts nitrogen expenses by up to 78%
- Automates clean, dry bench top storage to eliminate moisture-related degradation and optimize yields
- Ideal for semiconductor components, biological and pharmaceutical samples, and other sensitive materials
- Fully integrated turnkey system takes 30 seconds to install!

SmartDesiccator™ maximizes yields of sensitive materials by automatically maintaining a user-determined humidity set point.

Its quick-response feedback system continuously monitors the cabinet's relative humidity level and activates a purge of dry nitrogen only when it is needed. The system thus economizes on gas consumption and minimizes overpressures that can stress cabinet seals. Comparison testing reveals that the SmartDesiccator™ maintains a low relative humidity level using only 22% of the nitrogen required by a flow-meter-based system of the identical size (see sidebar).

The miniaturized LED display and sensor module eliminate the need for external control boxes. This design also simplifies installation—operation requires only one gas and one low voltage power connection.

Smart Performance—and Big Savings!

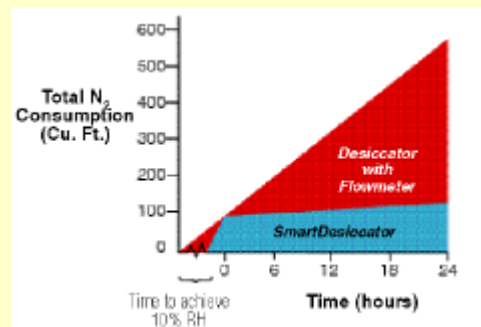
Testing demonstrates the cost benefit of the Smart Desiccator's automated nitrogen control system.

The test below was conducted on a 24"W x 18"D x 24"H desiccator equipped with a flow-meter and then with a SmartDesiccator™ control system, under the following conditions:

Ambient Humidity: 60% RH Temperature: 70°F RH Set point: 10% RH

Test Period: Achieve set point and then maintain it for 24 hours

Chamber Access: Door opened once every 30 minutes; remains open for one minute



SmartDesiccator™ (blue line on chart)

To achieve set point: 85 cubic feet (required 30 minutes @ 170 CFH on high flow)

Maintain for 24 hrs: 40 cubic feet

Total N₂ Consumed: 125 cubic feet

Desiccator with 0 - 20 SCFH flow meter (red line on chart)

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Stainless steel doors (optional on plastic chambers) restrict the door from flexing or bending, thereby preventing the cracks and fatigue that occur in all-plastic cabinets. The rigidity of the doors also ensures a tight seal between door and frame, minimizing contamination influx and gas leakage. A specially designed lift latch eliminates hinge and door damage caused by the strain of twisting and turning conventional latch systems. The SmartDesiccator™ also incorporates a one-piece, nonadhesive, non outgassing gasket specially formulated to retain sealing integrity in extreme low humidity. Because it won't sag or migrate, it extends the service life of the cabinet.



Miniaturized LED monitors humidity and displays set point

Prices include the humidity control module and sensor. To ensure safe pressure release, order the Automatic RB® Valve. Systems are available in stainless steel, acrylic or transparent static-dissipative PVC, which helps control static charges and the particles they attract.

To achieve set point: 85 cubic feet (required over 4 hours @ 20 CFH) Note: set point measured with a hygrometer, since this set up does not monitor humidity level.
Maintain for 24 hrs: 480 cubic feet (24 x 20)
Total N₂ Consumed: 565 cubic feet

SmartDesiccator™ uses 22% of nitrogen consumed by standard cabinet—a 78% saving!



Available in Static-Dissipative PVC for long-lasting ESD & particle control.

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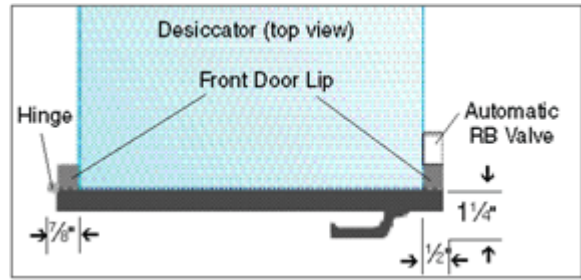
Plastic Smart Desiccators™

Refer to photos below for nominal dimensions. All models include chrome-plated wire racks that accommodate adjustable shelving (order shelves separately). For safe pressure relief, each cabinet must be equipped with an Automatic RB® (Relief/Bleed) Valve (see ordering information below).

Note: All dimensions are nominal. See "Clearance Dimensions" illustration.

Power Requirements: 110/220VAC, 50/60HZ, (universal power supply)

Nitrogen: inlet fitting for .25" - OD plastic tubing, regulated at 100 psi



Hardware Clearances (add to nominal dimensions)



SmartDesiccator™ and corresponding shelves: Select Acrylic or Dissipative PVC						
Type	Chambers	Overall Dimensions W x D x H	Chamber Clearance	Shelf I.D. Clearance	Acrylic	Dissipative PVC
					Cat #	Cat #
A	1	12" x 12" x 13.25"	11.25"W x 10.5"H	9.75"W x 9.25"D	1911-15	1911-21
B	2	17.12" x 18" x 25.25"	16.38"W x 10.75"H	14.25"W x 14.5"D	1911-16	1911-22
	2	22.62" x 18" x 25.25"	21.88"W x 10.75"H	19.88"W x 14.5"D	1911-17	1911-23
	2	22.62" x 24" x 25.25"	21.88"W x 10.75"H	19.88"W x 21"D	1911-18	1911-24
C	3	17.12" x 18" x 37.25"	16.38"W x 10.75"H	14.25"W x 14.5"D	1911-19	1911-25
	3	22.62" x 18" x 37.25"	21.88"W x 10.75"H	19.88"W x 14.5"D	1911-20	1911-26

*Includes stainless steel BowGuard™. For use with acrylic chambers (select stainless steel for dissipative PVC chambers.)

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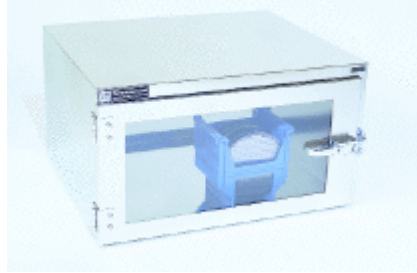
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Corresponding Options for SmartDesiccator™					
Type	Chambers	Overall Dimensions W x D x H	Acrylic Shelf*	Perforated SS Shelf	SS Door Frame
			Cat #	Cat #	Cat #
A	1	12" x 12" x 13.25"	1935-01	1935-02	2200-14
B	2	17.12" x 18" x 25.25"	1976-01	1976-02	2200-70
	2	22.62" x 18" x 25.25"	1977-01	1977-02	2200-71
	2	22.62" x 24" x 25.25"	1978-01	1978-02	2200-71
C	3	17.12" x 18" x 37.25"	1976-01	1976-02	2200-72
	3	22.62" x 18" x 37.25"	1977-01	1977-02	2200-73

Stainless Steel SmartDesiccators™



Overall Dimensions
22"W x 20.75"D x 16.625"H

Features front and rear static-dissipative PVC viewing windows, which help control static charges and the particles they collect. Order one Automatic RB® (Relief/Bleed) Valve separately to ensure proper pressure relief. Power: 110/220VAC, 50/60HZ (universal). Nitrogen: inlet fitting for .125"-OD tubing, regulated at 100 PSI.

Door Opening: 20.25"W x 14.5"H.
Optional Shelf ID: 19.5"W x 19.25"D

Stainless Steel Smart Desiccator		
	Stainless Steel	Electropolished Stainless Steel
	Cat. #	Cat. #
SmartDesiccator™	1911-01	1911-02
Perforated Shelf (order racks separately)	1610-35	1611-04-2
Non-perforated Shelf	1679-45	1611-08-2
Racks (order two)		1504-04

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