



# GEO

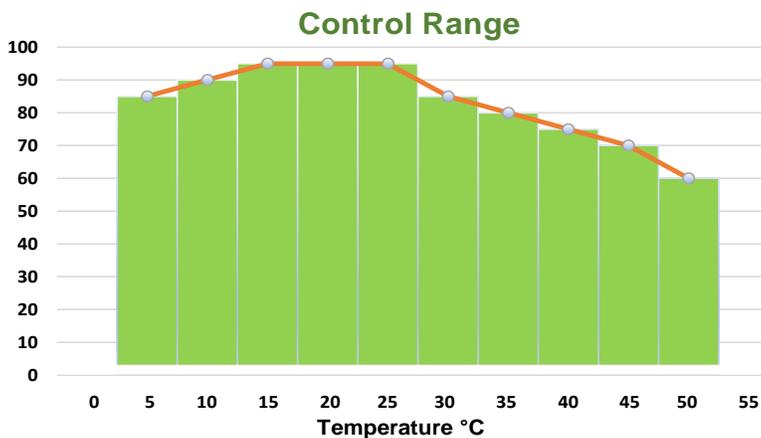
# Calibration

## Model 2000 SHR

PRODUCT OVERVIEW

# GENERAL SPECIFICATIONS

CALIBRATION TO (17025 TRACEABLE TO NIST)	TRANSFER STANDARD	No Charge		
	CERTIFICATE	17025 Validation (Additional Fees Apply)		
OPERATING AMBIENT CONDI- TIONS	TEMPERATURE	18 °C to 28 °C		
	HUMIDITY	Up to 80 % RH		
STORAGE CONDITIONS	TEMPERATURE	-20 °C to 50 °C		
	HUMIDITY	0 % to 95 % RH (non-condensing)		
ALTITUDE	2000 m			
CALIBRATION SYSTEM ACCURACY	TEMPERATURE	± 0.10 °C Or Better	Typically ± 0.05 °C	*Based on Probe Accuracy
	HUMIDITY	± 1.00 % RH Or Better	Specially tuned systems can be as good as ± 0.60 %	*Based on Probe Accuracy
	CONTROLLER TYPE	PID Controller		
UNIFORMITY	TEMPERATURE	0.10 °C Or Better	Typically ± 0.05 °C	
	HUMIDITY	0.30 % RH @ 18 °C to 28 °C Or Better Typically ± 0.25 %		
STABILITY	TEMPERATURE	0.05 °C		
	HUMIDITY	0.15 % RH @ 18 °C to 28 °C		
WARM-UP PERIOD	AMBIENT CONDITIONS	30 Minutes Maximum		
	COLD	30 Minutes		
RESOLUTION	DISPLAY	Temperature	0.01 °C	
		Humidity	0.01 % RH	
		Dew Point	0.01 °C (Calculated)	
	USB	Temperature	0.01 °C	
		Humidity	0.01 % RH	



## RAMP / SOAK RATE OF CHANGE

\*Depends on ambient and desiccant conditions

TEMPERATURE	High → Low	1.50 °C / minute *Typical
	Low → High	5.00 °C / minute *Typical
HUMIDITY	High → Low	5.00 % RH / minute *Typical
	Low → High	10.00 % RH / minute *Typical

## CONTROL RANGE

TEMPERATURE	5 °C to 55 °C		
HUMIDITY @ 18°C	5 % to 95 % RH	HUMIDITY @ 35°C	5 % to 80 % RH
HUMIDITY @ 23°C	5 % to 95 % RH	HUMIDITY @ 40°C	5 % to 75 % RH
HUMIDITY @ 30°C	5 % to 85 % RH	HUMIDITY @ 50°C	5 % to 60 % RH

# CONSUMABLES

WATER	RESERVOIR	200 ml
	SPILL RESISTANT	Yes
	REQUIRED FLUID	Distilled Water Only
	EST. REFILL PERIOD	15 Days to 1 Month (Typical) *Depends on Usage
	FILL INDICATOR	Floating Ball
DESICCANT	TYPE	Molecular Sieve
	REPLACEMENT	When Indicating Desiccant is 3/4 Used
	REPLACEMENT FREQUENCY	Depends Entirely on User Workload
	LOCATION	Front Mounted
	FASTENER	Desiccant Mounting Bracket Provided
RECALIBRATION	FREQUENCY	Depends on User Uncertainty Requirements Once Per Year Recommended

\*\*Information subject to change, please visit our website for updates at [www.geocalibration.com](http://www.geocalibration.com).

# MECHANICAL

GENERATOR DIMENSIONS		Measurement Type	Width	Depth	Height
		Metric	55.33 cm	40.65 cm	24.65 cm
		English	21.78 in	16.02 in	9.70 in
CHAMBER DIMENSIONS		Measurement Type	Diameter	Depth	
		Metric	14.50 cm	20.00 cm	
		English	5.71 in	7.87 in	
WORKING DIMENSIONS AND VOLUME		Measurement Type	Diameter	Depth	
		Metric	12.50 cm	10.90 cm	
		English	4.92 in	4.29 in	
		Volume	1.5 Liter Effective Working Volume		
WEIGHT		Unit Only	Metric	15.5 kg	
			English	34.0 lb	
POWER SUPPLY		Power Supply	12 Volt DC @ 1A		
STANDARD PORT QUANTITY		Depends on doors	Availability: 6 Ports, 5 Ports, 4 Ports, 2 Ports		
CHILLED MIRROR PORTS		In and Out			
PROBE ANALOG OUTPUTS AVAILABLE		0 - 1 Volt	Probe Range	Actual Unit Range	
			Temperature	- 40.00 to + 60.00 °C	
			Humidity	0 to + 100.00 %	
				+ 5.00 to + 60.00 °C	
				+ 5.00 to + 95.00 %	

## Ordering Information

### Standard Supply Package

\*Customization is Available

\* Complete Accessory List is Available at [www.geocalibration.com](http://www.geocalibration.com)

Square 5-Port Door	Desiccant Canister	Fill Syringe
7 Grommets (1/8", 1/4", 3/8", 1/2", 5/8", 3/4", 7/8")	Mains Power Cord	Calibration Documents

### Accessories

Doors	Shape	Port Quantity	Connector Type	Part Number				
	Square / Round	6-Port Door	M36 Connectors	01-001-00-0017 / 01-001-00-0018				
	Square	5-Port Door	M36 Connectors	01-001-00-0013				
	Square / Round	4-Port Door	M36 Connectors	01-001-00-0003 / 01-001-00-0004				
	Square / Round	4-Port Door	SLIMLINE	01-001-00-0024 / 01-001-00-0025				
	Square	4-Port Chilled MirrorDoor	M36 Connectors	01-001-00-0010				
	Square	2-Port Door	M36 Connectors	01-001-00-0028				
Grommets	Port Type	Size (in)	Size (mm)	Part Number	Port Type	Size (in)	Size (mm)	Part Number
	M36	0.000"	0.000	01-004-09-0001	SLIMLINE	0.125"	3.175	01-004-09-0020
	M36	0.125"	3.175	01-004-09-0002	SLIMLINE	0.250"	6.350	01-004-09-0021
	M36	0.250"	6.350	01-004-09-0003	SLIMLINE	0.375"	9.525	01-004-09-0022
	M36	0.375"	9.525	01-004-09-0004	SLIMLINE	0.500"	12.700	01-004-09-0023
	M36	0.500"	12.700	01-004-09-0005	SLIMLINE	0.625"	15.875	01-004-09-0024
	M36	0.625"	15.875	01-004-09-0006	SLIMLINE	0.750"	19.050	01-004-09-0025
	M36	0.750"	19.050	01-004-09-0007	SLIMLINE	0.825"	20.950	01-004-09-0026
	M36	0.875"	22.225	01-004-09-0008	SLIMLINE	1.000"	25.400	01-004-09-0027
	M36	1.000"	25.400	01-004-09-0009				
Expansion Chamber	Description	Width	Depth	Height	Part Number			
	Standard Expansion Chamber	220mm	286mm	345mm	01-054-00-0000			
Additional	Description	Part Number	Note:					
	Desiccant Canister w/ Material Chamber Insert	01-201-11-0001 01-200-08-0025	(Various Desiccant Canisters and Expansion Chamber Available For This Unit.)					

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# **GEO** *Calibration*

## **MODEL 2000 SERIES EXPANSION CHAMBERS**

PRODUCT OVERVIEW

# STANDARD EXPANSION CHAMBER



## GENERAL SPECIFICATIONS

CONTROLLED RANGE	TEMPERATURE	Ambient $\pm$ 5 °C	
	HUMIDITY @ 23 °C	20 % to 80 % RH	
CALIBRATION SYSTEM ACCURACY	TEMPERATURE	$\pm$ 0.50 °C	
	HUMIDITY	$\pm$ 3.00 % RH @ 23 °C	
UNIFORMITY	TEMPERATURE	0.50 °C	
	HUMIDITY	3.00 % RH @ 23 °C	
STABILITY	TEMPERATURE	0.30 °C	
	HUMIDITY	1.00 % RH @ 23 °C	
RAMP / SOAK RATE OF CHANGE	TEMPERATURE	High $\rightarrow$ Low	1.50 °C / minute
		Low $\rightarrow$ High	5.00 °C / minute
	HUMIDITY	High $\rightarrow$ Low	1.00 % RH / minute
		Low $\rightarrow$ High	1.00 % RH / minute

\*In high humidity environment, please set the temperature first. Once temperature settled, then set the humidity.

## MECHANICAL \*Subject to Variations

GENERATOR DIMENSIONS	Measurement Type	Depth	Width	Height
	Metric	28.60 cm	22.00 cm	34.50 cm
	English	11.26 in	8.66 in	13.58 in
CHAMBER DIMENSIONS	Measurement Type	Depth	Width	Height
	Metric	16.80 cm	19.40 cm	29.40 cm
	English	6.62 in	7.64 in	11.58 in
	Volume	8.00 Liters Effective Working Volume		
WEIGHT	Metric	7.00 kg		
	English	15.44 lb		
PROBE PORTS	Port Total	1		

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# EXPANSION CHAMBER



## GENERAL SPECIFICATIONS

CONTROLLED RANGE	TEMPERATURE	Ambient $\pm$ 5 °C	
	HUMIDITY @ 23 °C	20 % to 80 % RH	
CALIBRATION SYSTEM ACCURACY	TEMPERATURE	$\pm$ 0.50 °C	
	HUMIDITY	$\pm$ 3.00 % RH @ 23 °C	
UNIFORMITY	TEMPERATURE	0.50 °C	
	HUMIDITY	3.00 % RH @ 23 °C	
STABILITY	TEMPERATURE	0.30 °C	
	HUMIDITY	1.00 % RH @ 23 °C	
RAMP / SOAK RATE OF CHANGE	TEMPERATURE	High $\rightarrow$ Low	1.50 °C / minute
		Low $\rightarrow$ High	5.00 °C / minute
	HUMIDITY	High $\rightarrow$ Low	1.00 % RH / minute
		Low $\rightarrow$ High	1.00 % RH / minute

\*In high humidity environment, please set the temperature first. Once temperature settled, then set the humidity.

## MECHANICAL \*Subject to Variations

GENERATOR DIMENSIONS	Measurement Type	Depth	Width	Height
	Metric	24.38 cm	30.48 cm	40.64 cm
	English	9.60 in	12.00 in	16.00 in
CHAMBER DIMENSIONS	Measurement Type	Depth	Width	Height
	Metric	21.30 cm	22.30 cm	24.65 cm
	English	8.40 in	8.80 in	9.70 in
	Volume	11.00 Liters Effective Working Volume		
WEIGHT	Metric	9.30 kg		
	English	20.50 lb		
PROBE PORTS	Port Total	1		

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**GEO**  
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