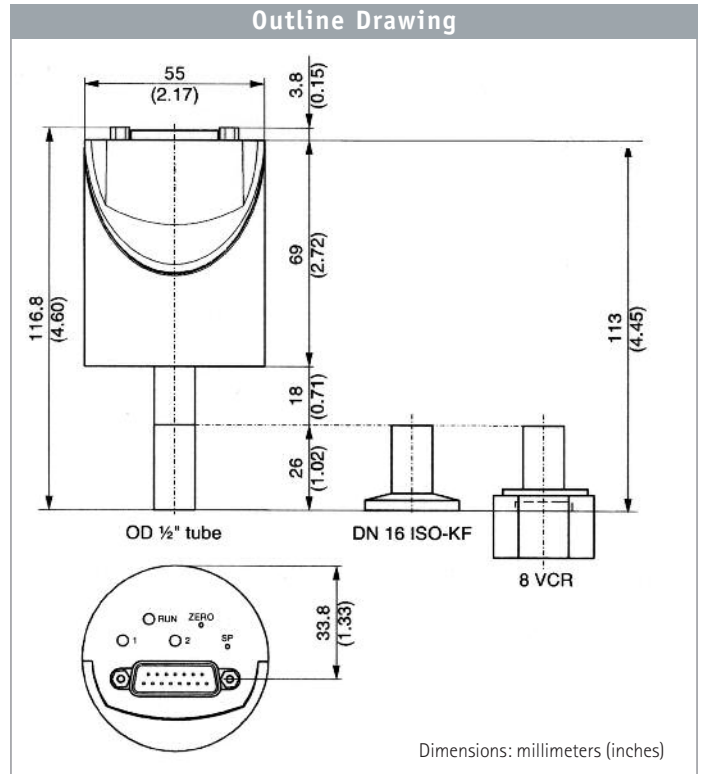


# CDG-500



The Varian CDG-500 series of temperature compensated Capacitance Diaphragm gauges provides a high level of accuracy in the high pressure region. Full scale measurement ranges are available from 1000 Torr to 1 Torr. The CDG-500 series uses a corrosion resistant ultra pure alumina ceramic diaphragm providing exceptional signal stability, fast recovery from atmosphere, short warm-up times and unparalleled robustness.



## Applications

- General thin film and vacuum processes
- Industrial vacuum processes
- Data storage and display manufacturing
- Etch, CVD, PVD and other semiconductor production processes
- Reference sensor for monitoring of test instruments
- Transfer standard for traceability measurements

## Features

Full scale ranges from 1 to 1000 Torr with push button zeroing and optional set point control

Excellent long term signal stability and repeatability

Fast recovery from atmospheric pressures and rapid stabilization after start-up

Corrosion resistant ceramic sensor with sensor shielding protection

## Benefits

Ease of integration

Long term performance – comparable to competitor's heated versions

Reduces process cycle times

Application robustness

NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to [www.agilent.com/chem](http://www.agilent.com/chem).

# CDG-500

Technical Specifications						
Measurement range (full scale)	Torr	1000	100	10	1	
	Pa	133,322	13,332	1,333	133	
	mbar	1333	133	13.3	1.3	
Accuracy <sup>1</sup>	% of reading	0.2	0.2	0.2	0.2	
Temperature effect	on zero	% F.S./°C	0.005	0.005	0.005	0.015
	on span	% of reading/°C	0.01	0.01	0.01	0.01
Resolution	% F.S.	0.003	0.003	0.003	0.003	
Pressure, maximum	kPa (absolute)	400	260	260	260	
Lowest reading	% F.S.	0.01				
Lowest suggested reading	% F.S.	0.05				
Lowest suggested control pressure	% F.S.	0.05				
Temperature	Operation (ambient)	Bakeout (at flange) <sup>2</sup>		Storage		
	5 to 50 °C	≤ 110 °C		-40 to 65 °C		
Supply voltage	14 to 30 VDC					
Power consumption	≤ 1 W					
Output signal (analog)	0 to 10 VDC					
Response time	30 ms					
Degree of protection	IP30					
Electrical connection	D-sub, 15 pole, male					
Setpoints <sup>3</sup> – Two (2) setpoints, SP 1 and SP 2	Relay Contact	Hysteresis				
	30 VDC; ≤ 0.5 ADC	1% of F.S.				
Materials exposed to vacuum	Aluminum oxide ceramic (Al <sub>2</sub> O <sub>3</sub> ), Vacon 70 <sup>4</sup> , stainless steel (AISI 316L <sup>5</sup> ) AgCuTi hard solder, sealing glass					

<sup>1</sup> Non-linearity, hysteresis, repeatability at 25°C ambient operating temperature without temperature effects after 2 hours operation

<sup>2</sup> Non operating

<sup>3</sup> CDG-500 setpoint versions only

<sup>4</sup> 28% Ni, 23% Co, 49% Fe

<sup>5</sup> 18% Cr, 10% Ni, 3% Mo, 69% Fe

Ordering Information		
Description	KF16	VCR8
CDG-500 Capacitance Diaphragm Gauge (1000 Torr)	CDG500T1000KF16	CDG500T1000VCR8
CDG-500 Capacitance Diaphragm Gauge (100 Torr)	CDG500T0100KF16	CDG500T0100VCR8
CDG-500 Capacitance Diaphragm Gauge (10 Torr)	CDG500T0010KF16	CDG500T0010VCR8
CDG-500 Capacitance Diaphragm Gauge (1 Torr)	CDG500T0001KF16	CDG500T0001VCR8
CDG-500 Capacitance Diaphragm Gauge (1000 Torr) with setpoints	CDG500T1000KF16S	CDG500T1000VCR8S
CDG-500 Capacitance Diaphragm Gauge (100 Torr) with setpoints	CDG500T0100KF16S	CDG500T0100VCR8S
CDG-500 Capacitance Diaphragm Gauge (10 Torr) with setpoints	CDG500T0010KF16S	CDG500T0010VCR8S
CDG-500 Capacitance Diaphragm Gauge (1 Torr) with setpoints	CDG500T0001KF16S	CDG500T0001VCR8S

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