

Operation Manual for DG3100/DG3110 Degasser

V1.0.8

In liquid chromatographic analysis, especially in multivariate gradient analysis, the gas dissolved in the mobile phase is very easy to form bubbles when different mobile phases are mixed, resulting in pressure fluctuations, inaccurate flow rate, reduced column separation efficiency, unstable detector baseline, and decreased detection sensitivity. It is the best choice to configure the on-line degassing machine to degass the mobile phase in the liquid chromatography analysis system.

DG3100/DG3110 degassing machine removes the gas dissolved in the mobile phase by automatic continuous vacuum degassing method. It has the characteristics of high degassing efficiency, continuous operation, low noise, etc., which can ensure the continuous normal performance of liquid chromatographic analysis, and can greatly meet the various application needs of high performance liquid chromatograph. It can also be applied to any other occasion that requires online degassing. The DG3100 degasser is a two-channel degasser, and the DG3110 degasser is a four-channel degasser. Two models are available.

1. Structure and technical parameters

Figure 1 shows the appearance and front and rear panels of DG3100 degasser.

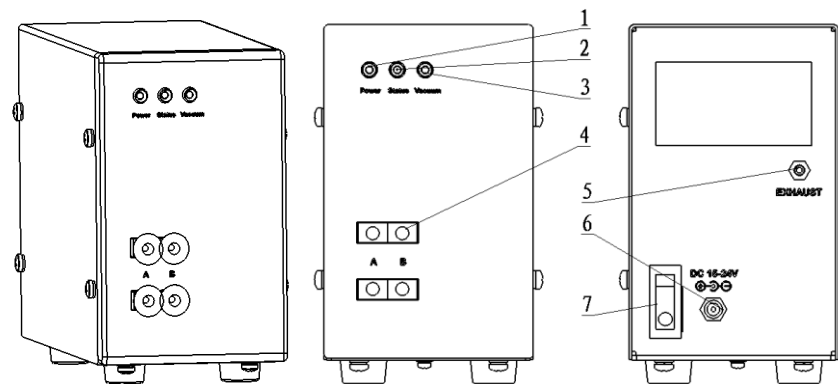


Figure 1 Appearance and front and rear panels of DG3100 degasser

The functions of the front and rear panels of the deaerator are shown in Table 1.

Table 1 Functions of front and rear panels of deaerator

NO.	Key	Function description
1	Power indicator light	The degasser will light up after the power is connected.
2	Status light	The indicator lamp is illuminated when power is on and goes out when the setting vacuum degree is reached. If some trouble appears, the lamp will flash: Flashing every second: the setting vacuum degree can't be reached, possibly caused by leak. Light one second, then go off two second: an error occurred in the vacuum signal.
3	Vacuum indicator light	The indicator lamp is illuminated when the vacuum degree is normal.
4	Solvent In/Out	Solvent In/Out.
5	Exhaust port	The gas pumped out of the vacuum chamber leaves the unit through the exhaust port.

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6	Power Socket	It is recommended to use the original power adapter. Pay attention to the negative and positive when using other brand power adapter.
7	Power switch	Power on/off.

The main technical parameters of the deaerator are shown in Table 2.

Table 2 Main technical parameters of degasser

Vacuum chamber	2 channel (DG3100) or 4 channel (DG3110)
Maximum traffic per channel	10mL/min
Inside diameter of degassed fluid channel	1.143mm(0.045in)
Standard channel volume	480 μ L/ channel
Contact liquid material	PEEK, Teflon AF
Chemical adaptability	Resistance to common acids, alkalis, organic solvents and surfactants
pH range	0 ~ 14
Degassing channel pressure rating	0.48 MPa
Power adapter Input power	220VAC \pm 10%, 50 to 60Hz(\pm 3Hz)

2. Installation

Parts confirmation: Remove the deaerator and related accessories from the packing case. Check the integrity and integrity of the parts. If you have any questions, please contact your local agent or our company.

Table 3 Deaerator accessories list

NO.	Item	Description	Unit	Quantity
1	Degasser	DG3100 or DG3110	set	1
2	Deaerator power adapter	15V/1.2A	ea	1

3	Flangeless-Nuts	Green	ea	0.4(DG3100)/ 0.8(DG3110)
4	Flangeless-Ferrules	Yellow	ea	0.4(DG3100)/ 0.8(DG3110)
5	PTFE tubing	OD1/8"*ID1.6mm	m	1.2(DG3100)/ 2.4(DG3110)

Power supply and power adapter: In order to ensure the normal and safe operation of the instrument, be sure to use the supplied power adapter within the specified voltage range.

Connect with the supporting instrument pipeline: The recommended connection between the degasser and other supporting instruments is shown in Figure 2.

Table 4 Recommended degasser configurations and pipe connections

NO.	Item	NO.	Item
1	Solvent bottle tray	5	High pressure constant pump
2	Detector	6	Valve bracket
3	Column oven	7	Injection valve
4	Degasser		

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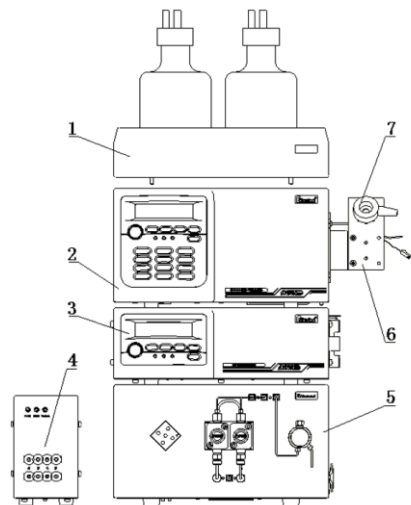


Figure 2 Recommended deaerator configuration and pipeline connection diagram



Note: Unless otherwise specified, this instrument does not have explosion-proof function.

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