Date :2011.01.12
Spec No.MIJ07-SP01A

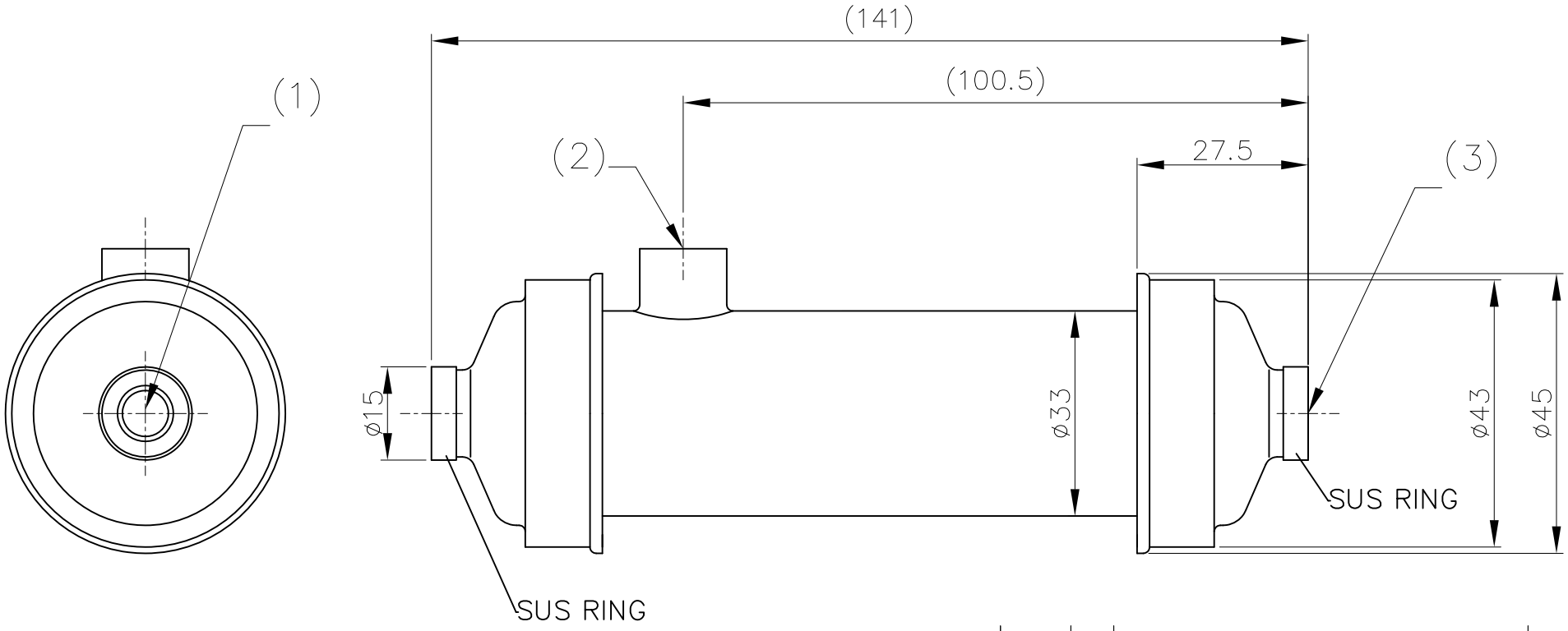
Specification Sheet of SEPAREL EF-G3-B

DIC Corporation
Membrane Division

1	Product name		SEPAREL EF-G3-B
2	Size		141mm × φ43mm
3	Drawing No.		MIJ07-DF01A
4	Weight		Approximately 100g
5	Materials		
	5.1	Hollow fiber	Poly 4Methylpenten-1
	5.2	Housing	Polypropylene
	5.3	End cap	Polypropylene
	5.4	Sealing resin	Epoxy Resin
	5.5	O-ring	EPDM
6	Surface area of membrane		Approximately 0.2m^2
7	Performance of module(with water)		
	7.1	Treated water DO	Less than 1.5mg/L (Under the following test conditions)
	7.2	Pressure drop	Less than 0.1kPa (Under the following test conditions)
	7.3	Test conditions	
		①Vacuum pressure	13.3 kPa(abs)
		②Inlet water pressure	0.2MPa
		③Water flow rate	100ml/min
		④Inlet water temperature	25±0.5℃
		⑤Inlet water DO	8.0mg/L
		⑥Test room temperature	20～30℃
8	Inspection item		Appearance,Water Leakage,Vacuum Leakage Degassing perfroamnce, Pressure Drop
9	Use conditions		
	9.1	Liquid temperature	2～45℃
	9.2	Maximum liquid pressure	0.2MPa
	9.3	Vacuum pressure (Water-based	Saturation vapor pressure ～0.1MPa(abs)
		Vacuum pressure(UV)	1kPa(abs)～0.1MPa(abs)
	9.4	Operating temperature	2～45℃
10	Use/Storage conditions		Keep dry and in door with temperature between 2℃ to 40 ℃. Do not expose to sunlight. Handle with care. Do not freeze remaining water in a module after used for any purpose.
11	Connecting joint		
	11.1	Water inlet/outlet	NPT 1/8
	11.2	Vacuum port	NPT 1/8
12	Warranty		
	12.1	Warranty period	The warranty provided in this specification applies only if a specific warranty period is agreed upon by the customer and DIC in writing based on the results of compatibility tests of the module with inks, cleaners and other liquids which may come in contact with the module. It is the customer's responsibility to conduct the compatibility tests and provide the results thereof to DIC. The maximum length of the warranty period that DIC will provide under the conditions set forth in this specification for a module used in water based ink is one year from the date of delivery of the module to the customer. The maximum length of the warranty period that DIC will provide under the conditions set forth in this specification for a module used in UV jet ink is six months from the date of delivery of the module to the customer.
	12.2	Warranty remedy	Any defective module will be replaced at free of charge by DIC in case such defect is found under the normal use in accordance with "Handling Instruction for SEPAREL series module (For IJ)"and aforementioned use/storage conditions. The above remedy is the sole remedy available to the customer under this warranty. DIC will not have any liability to the customer in connection with any costs and damages arising directly or indirectly from any defective products.

Caution

Please conduct compatibility tests of the module with inks, cleaners and other liquids which may come in contact with the module and provide the results thereof to DIC before using the module. The warranty contained in this specification will not apply to the modules unless DIC and the customer separately agree in writing the specific warranty period for the module based on the compatibility test results conducted by the customer.



(1)	Vacuum Port	NPT1/8
(2)	In or Out Port	NPT1/8
(3)	In or Out Port	NPT1/8
NO.	Name	Standard Thread

DATE	SYMBOL	DESCRIPTION	NAME
BLOCK FOR REVISION DESCRIPTION			

NAME OF PRODUCT	NAME OF PART	SHEET No.
SEPAREL EF-G3-B	Assembly Drawing	

Outside Drawing	MATERIAL	SCALE	DRAWING NUMBER
		1/1	MIJ07-DF01

APPROVAL	CHECK	DESIGN	DRAWING	RELEASE
SUGANUMA	001	*****	FUJIEDA	2008.05.26

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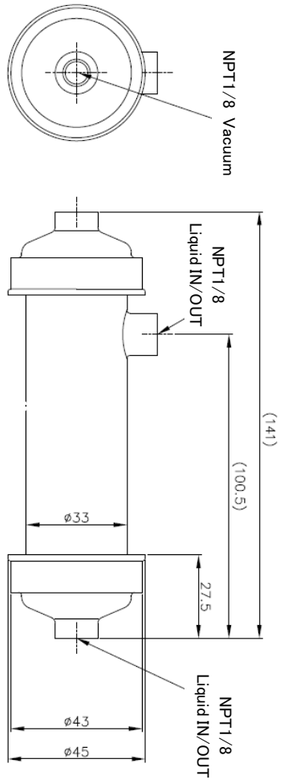
SEPAREL EF-G3-B Technical Information

SEPAREL



Module Characteristics		
Flow type		External Flow
Materials	Hollow fiber	Poly-4-Methylpenten-1
	Casing	Polypropylene
	End Cap	Polypropylene
	Sealing Resin	Epoxy Resin
	O-ring	EPDM
Surface Area of Membran		Approximately 0.2 m^2
Module Weght		Approximately 100g
Inner Content		Approximately 40ml

Operating Characteristics	
Water temperature	2～45℃
Maxmum Water pressure	0.2MPa
Vaccum side perssure	(Water) saturation vapor pressure ～ atmospheric pressure
	(UV) 1kPa(abs) ～ atmospheric pressure

Connector	
Water Inlet and outlet	NPT1/8
Vacuum port	NPT1/8

Instruction for use

1. Setting vacuum trap is recommended for protection of a vacuum pump against liquid leakage from the degassing module.

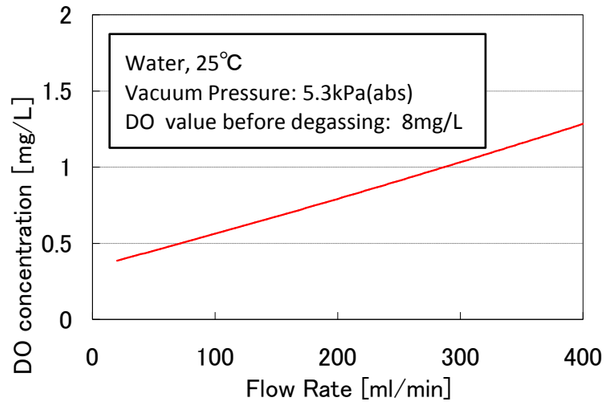
2. Refering to a diagram of degassing rate and water flow rate,please set up vacuum pressure .

3.Please do not set up vacuum pressure below saturated steam pressure of ink components not to accelerates theire evaporation through the membrane.If over-evaporate occur,ink quality may change,or evaporated components may give damage for poerformance of the vacuum pump.

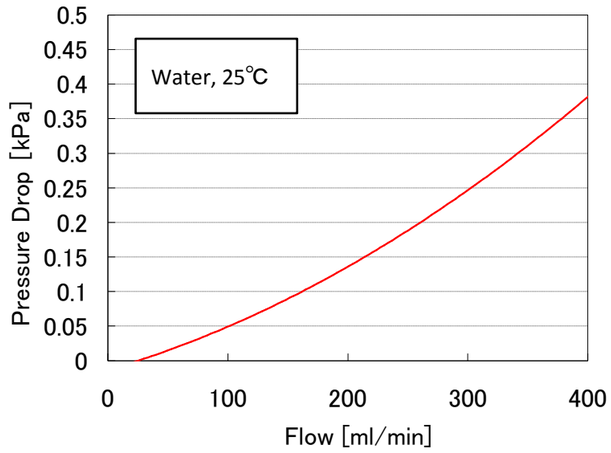
SEPAREL EF-G3-B Technical Information

Reference date(Water)

Degassing Performance



Pressure Drop(Temp.25℃)



Caution

Please conduct compatibility tests of the module with inks, cleaners and other liquids which may come in contact with the module and provide the results thereof to DIC before using the module. The warranty contained in this specification will not apply to the modules unless DIC and the customer separately agree in writing the specific warranty period for the module based on the compatibility test results conducted by the customer.

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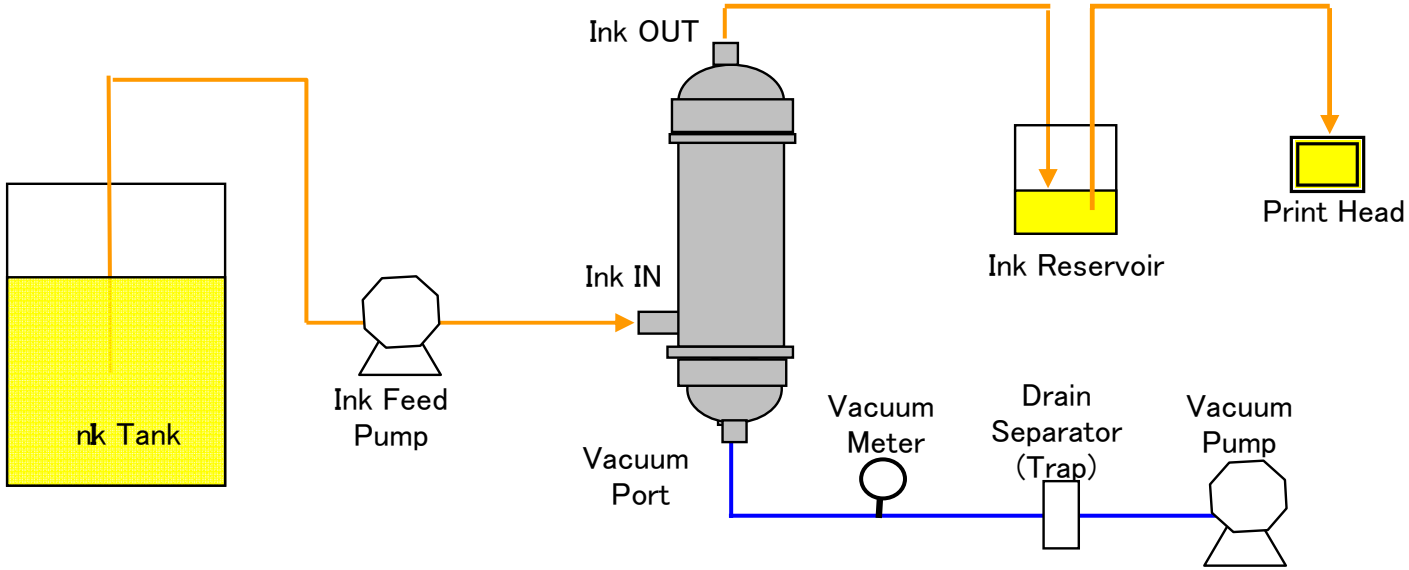
Example of Degassing Module Connection for Installation into IJ Printer
EF-MICRO, EF-G2, EF-G3



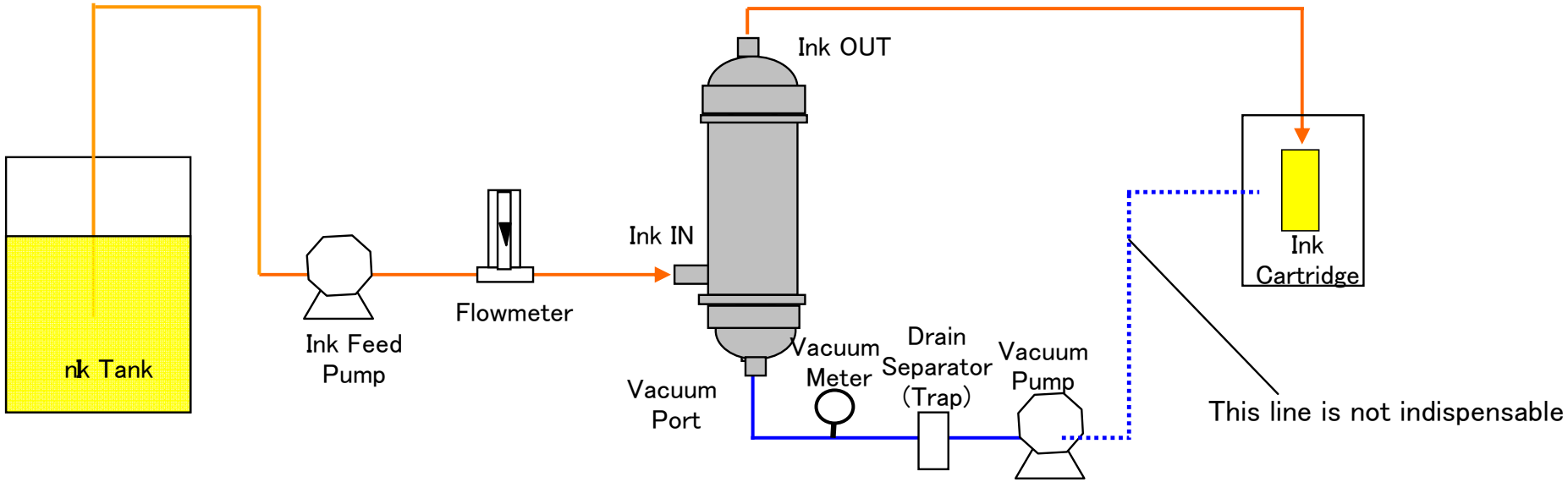
<Setting>

1. We recommend to set a trap to protect a vacuum pump against damage caused by water vapor and ink leaked from degassing module. This trap is also good for finding the occurrence of ink leakage.
2. When you flow water-based ink, please set vacuum port of degassing module downward. By this setting, you can avoid the performance degradation caused by water vapor and ink leaked from degassing module.
3. For safety, we recommend to set a filter in this line.
4. To measure the performance, Dissolved Oxygen meter and differential-pressure meter may be needed.
5. Depending on the system, degassing module is set between ink reservoir and print head.

<Usage>

1. When you fill liquid into a module for the first time, please flow ink little by little from the lower port. This process is good for pushing air out of the degassing module. And if you can take this process with vacuuming, the air will be disappear earlier.
2. Please do not set the vacuum pressure below saturated vapor pressure not to accerate evaluation through membrane. If overevaporation occurred, liquid component may change, or evaporated components may damage the vacuum pump.

Example of Degassing Module Connection for Ink Cartridge Filling System
EF-MICRO, EF-G2, EF-G3



<Setting>

1. We recommend to set a trap to protect a vacuum pump against damage caused by water vapor and ink leaked from degassing module. This trap is also good for finding the occurrence of ink leakage.
2. When you flow water-based ink, please set vacuum port of degassing module downward. By this setting, you can avoid the performance degradation caused by water vapor and ink leaked from degassing module.
3. For safety, we recommend to set a filter in this line.
4. To measure the performance, Dissolved Oxygen meter and differential-pressure meter may be needed.

<Usage>

1. When you fill liquid into a module for the first time, please flow ink little by little from the lower port. This process is good for pushing air out of the degassing module. And if you can take this process with vacuuming, the air will be disappear earlier.
2. Please do not set the vacuum pressure below saturated vapor pressure not to accerate evaluation through membrane. If overevaporation occurred, liquid component may change, or evaporated components may damage the vacuum pump.