



FLYER SHORT PATH EVAPORATOR

GSPE-B

MADE IN INDIA

AKOWN™

AKOWN LABORATORY PROCESS TECHNOLOGIES PVT. LTD.
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The perfect equipment for challenging evaporation application

Our GSPE-B short path evaporator guarantee excellent results when evaporating, concentrating, distilling, or devolatilising temperature-sensitive, high-boiling mixtures. The internal condenser minimises the pressure loss due to its short distance from the evaporation surface. Therefore, short path evaporators can operate under fine vacuum and with correspondingly low boiling temperatures. Even extremely heat-sensitive products can also be distilled without causing any thermal damage.



Why should you choose GSPE-B?

- GSPE-B is highly efficient, providing high evaporation rates, short residence times, and contamination-free operation
 - PTFE wiper design that forms uniform thin film and pushes the film downwards with every rotation
 - Magnetic stirrer sealing to achieve low pressure condition
 - Magnetic stirrer sealing and greaseless valves and joints allow for contamination-free material processing using GSPE-B wiped film systems.
 - Use of wetted part such as glass, PTFE, PEEK, FKM/FFKM which are FDA compliant and highly chemical resistant
- Adjustable feed rate that allows manipulation of film thickness which in turn modifies residence time on the heated evaporation surface
 - GSPE-B short path evaporator systems is easy to clean and maintain, with easy accessibility to all parts of the systems
 - Feasibility studies using GSPE-B short path evaporator systems can be performed with minimal cost. For example, large scale processes can be miniaturized, and pilot scale studies can be performed to plan scale-up

Design Highlights:

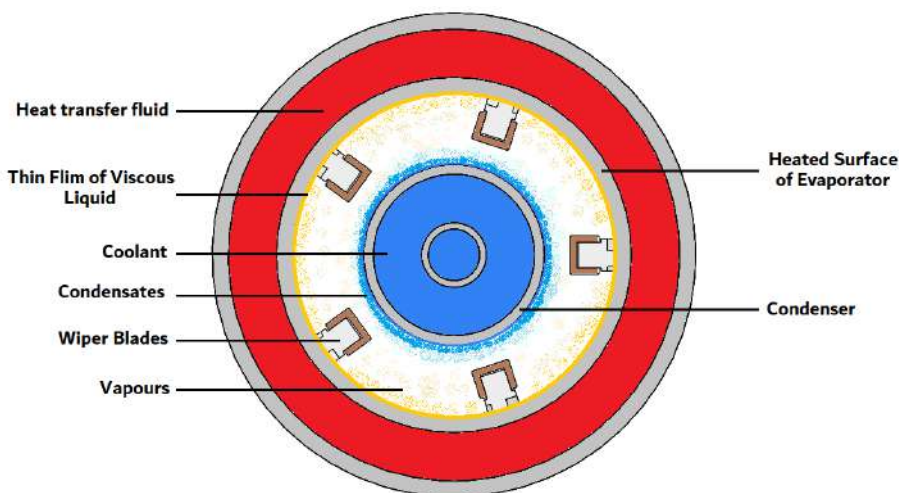
The wiper assembly consists of parts made up of thermoplastic materials only (i.e., PTFE, PEEK etc.) which are highly chemical resistant and FDA compliant; makes complete system safer to operate due to non-metallic parts inside the evaporator still.

The wiper assembly is fully modular, and blades are replaceable.

Due to its unique design, it pushes the liquid downward while forming the thin film of the liquid over heated surface of evaporator. The resident time can also be adjusted by changing the rotational speed of the wiper blades.

Our wiper blade design and its material varies according to the viscosity range of the liquid and operating temperature.

Wiper assembly can be easily removed from the evaporator still for cleaning & maintenance, without worrying glass parts getting damaged.



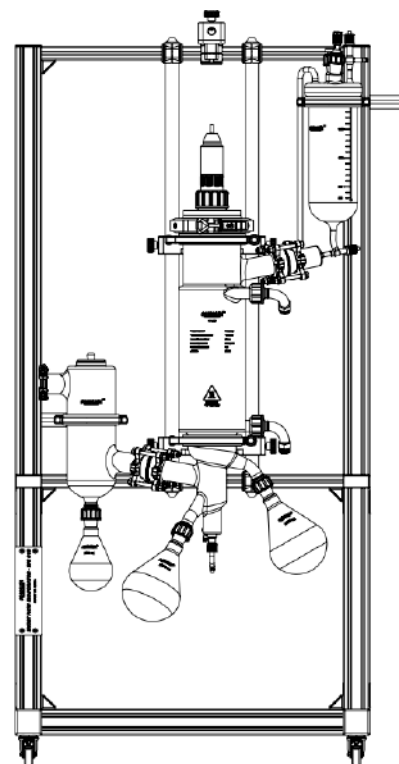
The distance between heated surface of evaporator and cooled surface of the condenser is very short due to which generated vapours of low boiling components gets condensed immediately which minimise the pressure drop and ultimately keeps the purity of condensates high.

Standard Package:

GSPE-B Short Path Evaporator has an internal condenser co-axially positioned alongside the wiper and evaporation surface area. Vapours gets condensed immediately due to minimum distance between evaporating surface area & condensing surface area which makes it possible to operate under fine vacuum. (i.e., 0.001mbar).

GSPE-B is a batch type short path evaporator system.

- Continuous feed configurations are also available. Please contact us.
- All O-rings are consumable parts
- Overhead stirrer motor is not included



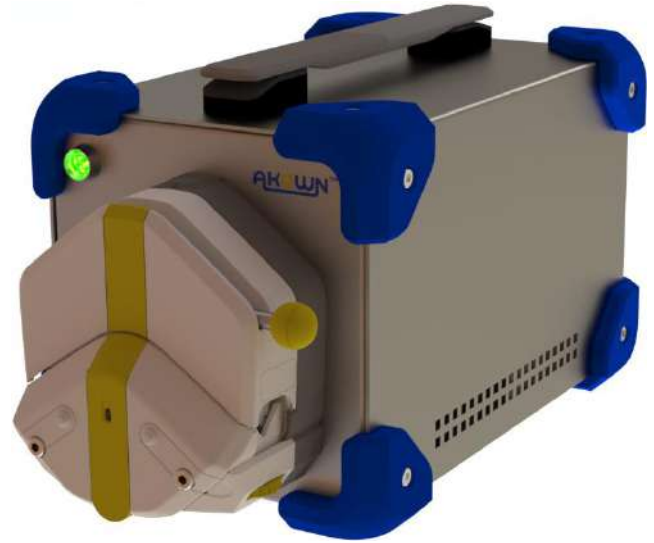
No.	Part	DN60	DN100
1	Jacketed Evaporator	ID 60 mm Evaporation Surface Area: 0.05 m ² Borosilicate Glass 3.3	ID 100 mm Evaporation Surface Area: 0.1 m ² Borosilicate Glass 3.3
2	Magnetic coupling (seal) with Lid		Torque: 0.9 N.m., Lid: PTFE
3	Stirrer Shaft		SS 316 core PTFE sleeved
4	Wiper		PTFE Wiper: +200 °C
5	Feed Vessel	Feed Vessel: 1000 mL Vent Valve: φ10 Thermometer Pocket Rodaviss 24/29-GL14, φ8, 245(L) Cap Needle Valve, NGTV-12L	Feed Vessel: 2000 mL Vent Valve: φ10 Thermometer Pocket Rodaviss 24/29-GL14, φ8, 310(L) Cap Needle Valve, NGTV-12L
6	Trap	DN 50, 200 H, NW 40 Borosilicate Glass 3.3	DN 50, 200 H, NW 40 Borosilicate Glass 3.3
7	Receiver for distillates	500 mL Borosilicate glass 3.3	1000 mL Borosilicate glass 3.3
8	Receiver for residue	500 mL Borosilicate glass 3.3	1000 mL Borosilicate glass 3.3
9	Receiver for cold trap	300 mL Borosilicate glass 3.3	500 mL Borosilicate glass 3.3

Upgradation for continuous configuration (GSPE-C):

Peristaltic dosing pump:

Adding the Peristaltic Dose Pump to your wiped film evaporator will increase productivity by saving your operator's time!

The Peristaltic Dose Pump can be retrofitted to nearly any wiped film evaporator on the market. Acting as a conduit between feed and still body, the Peristaltic Dose Pump transports fluid seamlessly. There will be no need to break vacuum to reload the feed flask! From the feed tank, the material moves through a tube. The tubing is inserted and clamped between pump rollers. As the rotor spins, a roller will pinch the tubing and will force the feed to flow onward. This cycle continues until you decide you're done! When the tubing loses integrity, simply replace, and continue production!



Specs:

Dosing rate 0.0053 –3000 ml /min

Maximum possible vacuum is 2 mbar

Item includes with Power supply and controller. Tubing is optional.

Dosing/Outlet Pump:

The Outlet Pump (also known as a Gear Pump or Discharge Pump), regulates output dosage from 0-7L/hr. This allows the operator to have control over things like residence time, flow rate, and overall time management. Attaching the Outlet Pump to your Wiped Film Evaporator or Falling Film means there is no longer a need to break deep vacuum to swap flasks. It also means you can distil as slow or as fast as needed.

The gears within the Outlet Pump create a suction and pull oil towards the outlet. Oil is transported through the external cavities of the gears' and out the check valve. The stainless-steel gearbox maintains temperature via high density heat pad. As a result, you will have a consistent distribution of discharge material.

Note: The Outlet pump can also be used as a Dosing pump.



Customisation options:

We can take up your all process related challenges and customise a system that meets your process specification requirements.

- Customised glass parts for GSPE-*



- Integration of vacuum pump system



- Integration of heating/cooling circulators, Immersion circulator



- Integration of instruments/sensors



- Automation system



- Fittings and connectors



Contact us for further information
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