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苏州微流纳米生物

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- 乳剂、微球、纳米粒和混悬液
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MINI DeBEE SYSTEMS AND FLOWRATES

The operating capacity of the Mini DeBEE, which is made up of the maximum pressure capability and the maximum flowrate capability, is listed in the system specification of each machine. There are two Mini DeBEE systems, Mini45 and Mini30, with the following specifications:

Mini45	Mini DeBEE 45 Ultra-High Pressure Homogenizer
Operating Pressure	2,000 - 45,000 psi (150 - 3,100 bar)

Mini30	Mini DeBEE 30 High Pressure Homogenizer
Operating Pressure	2,000 - 30,000 psi (150 - 2,000 bar)

Capacity	6.3 GPH (24 LPH) Actual flow rate varies depending on operating parameters and product characteristics
Drive	Electric Motor, 5.5 hp (4 kW)
High Pressure Pump	1 Single-acting Intensifier
Standard Nozzle(s)	1 Zirconia, 0.005" (0.13 mm) diameter 1 Zirconia, 0.008" (0.2 mm) diameter (Other materials and sizes are available)

Flowrate for Mini DeBEE:

The operating capacity of the Mini DeBEE is determined by its overall horsepower of 5.5 HP. This horsepower enables the Mini DeBEE to reach different combinations of maximum pressure and maximum flowrate. The ability to reach the pressure and flowrate maximums is also influenced by;

- The nozzle size installed in the Mini DeBEE's Emulsifying cell,
- The processed product viscosity,
- The system's timers' settings.

The table below gives a brief overview of the maximum Pressure and Flowrate combination of the Mini45 when operating with various nozzle sizes and **water**:

Nozzle Diameter (inch)	Max. Pressure (PSI)	Max. Flow ^{1, 2} (LPH)
0.005	45,000	15
0.006	40,000	21
0.007	35,000	24

0.008	25,000	27
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- 1- The flow shown is based on water or water like substances. Increased viscosity reduces the flowrate for any combination of nozzle and pressure.
- 2- Flow is also dependent on machine setup such as optimum Forward and Backward stroke timer settings.

Effect of viscosity on flowrate:

As the viscosity of fluid increases, the flowrate decreases. Because of this, it may be necessary to increase the nozzle size in order to achieve the maximum flow capacity of the Mini DeBEE. The table below is an example of a product that would have a viscosity **higher** than that of water. Compare this table to the table on page 1 to see that a larger nozzle size is needed to achieve the same flow at the corresponding pressure:

Nozzle Diameter (inch)	Max. Pressure (PSI)	Max. Flow (LPH)
0.006	45,000	15
0.007	40,000	21
0.008	35,000	24
0.009	25,000	27

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