



**MICROSPARGER**  
ADVANCED GAS DISPERSION

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**DATASHEET**



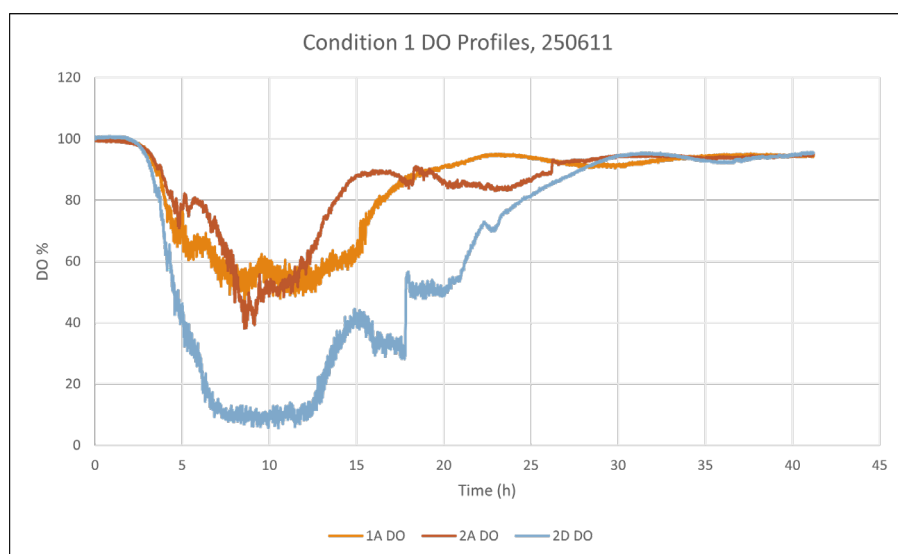
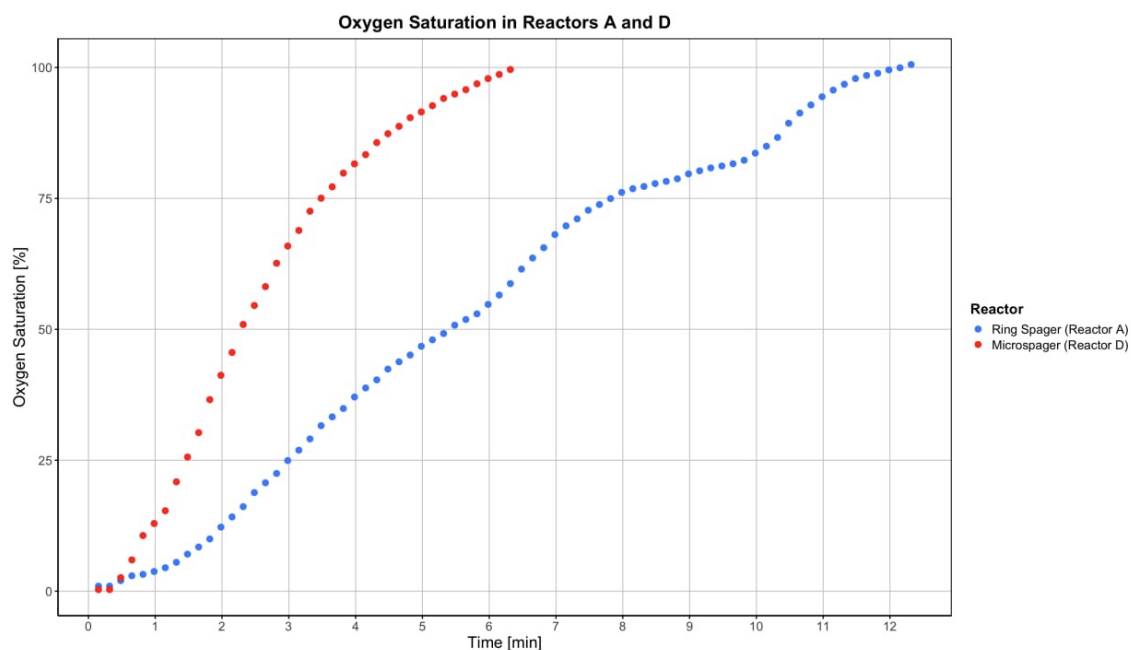
## GENERAL OVERVIEW

Our innovative sintered disc sparger is designed for optimal gas dispersion in bioreactors, ensuring efficient mass transfer. Featuring a removable and interchangeable disc, it allows for easy cleaning and maintenance, even inside the sparger.

Made from electropolished AISI 316L stainless steel, it guarantees durability, chemical resistance, and high performance in demanding bioprocessing applications.

| MICROSPARGER                         |                                                                        |
|--------------------------------------|------------------------------------------------------------------------|
| <b>Total Length</b>                  | Please refer to Table 1.<br>Custom lengths available upon request.     |
| <b>Outer Diameter</b>                | Please refer to Table 1.                                               |
| <b>Pore Diameter</b>                 | From 1 to 50 $\mu\text{m}$ (larger pore sizes available upon request). |
| <b>Material</b>                      | Electropolished AISI 316L stainless steel                              |
| <b>Gas Flow Rate:</b>                | 0.2 – 30 L/min                                                         |
| <b>Weight</b>                        | 100 g                                                                  |
| <b>Operating Pressure Range:</b>     | 0.5 – 12 barg                                                          |
| <b>Maximum Operating Temperature</b> | 130 °C                                                                 |
| <b>Chemical Compatibility</b>        | Resistant to solvents, acids, and bases (pH 2–12).                     |

## GASSING OUT PROFILE



| Reactor   | C <sub>1</sub> | C <sub>2</sub> | T <sub>1</sub> | T <sub>2</sub> | Volume | k <sub>L</sub> a (s <sup>-1</sup> ) | OTR (mg/s)              |
|-----------|----------------|----------------|----------------|----------------|--------|-------------------------------------|-------------------------|
| Reactor A | 0.961%         | 65.58%         | 0 s            | 409 s          | 675 mL | 2.36 · 10 <sup>-3</sup>             | 4.29 · 10 <sup>-3</sup> |
| Reactor D | 0.319%         | 54.55%         | 0 s            | 149 s          | 675 mL | 5.07 · 10 <sup>-3</sup>             | 1.22 · 10 <sup>-2</sup> |

**Table 1**

| MODEL    | D  | I  | H   |
|----------|----|----|-----|
| DSPR-500 | 33 | 35 | 190 |
| DSPR-1   | 33 | 35 | 255 |
| DSPR-2   | 33 | 46 | 290 |
| DSPR-3   | 48 | 57 | 300 |
| DSPR-5   | 48 | 65 | 350 |
| DSPR-7   | 60 | 65 | 415 |
| DSPR-10  | 60 | 50 | 460 |

