

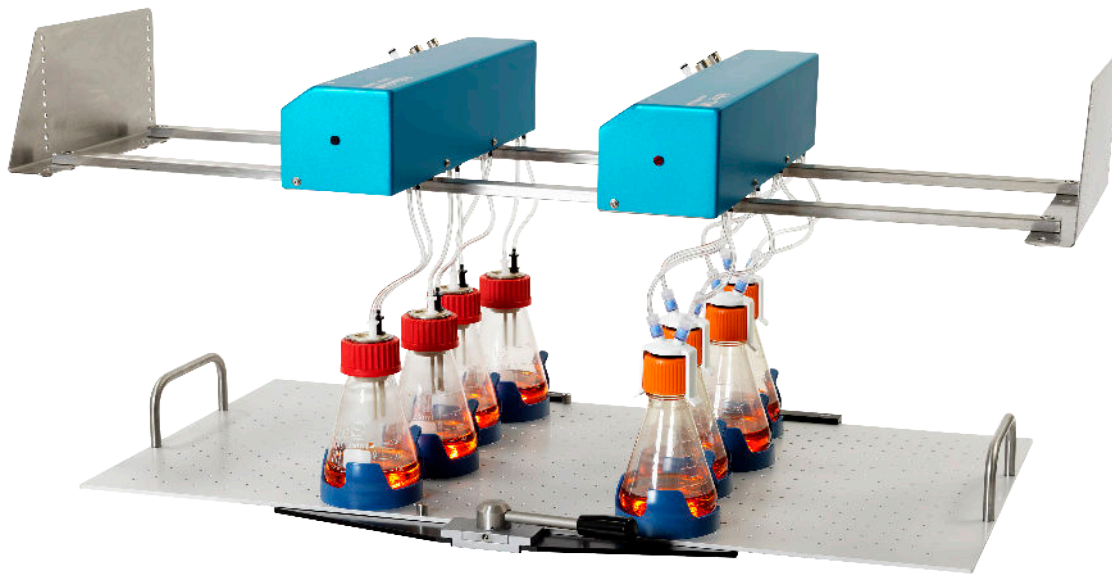
Kuhner TOM

Online Data from your shaken culture

Kuhner TOM (Transfer-Rate Online Measurement) measures online oxygen transfer rate (OTR), carbon dioxide transfer rate (CTR) and the respiratory quotient (RQ) in up to 16 individual shake flasks for better process understanding and informed process development. TOM is easily installed in any Kuhner shaker and can be operated with various flask types and sizes including single use shake flasks.

Learn more about your cells

- growth rate
- identification of oxygen limitation
- carbon balancing
- substrate limitations
- cell viability
- cultivation progress



Facts about Kuhner TOM

- Measures online OTR, CTR and RQ in up to 16 shake flasks
- Modular design: choose between 4, 8, 12 or 16 shake flasks
- Zero footprint on the shaker tray as TOM is mounted above
- Robust: Durable sensors and static electronics
- Available for Kuhner ISF1-X, LT-X and Kuhner Kelvin+ incubators
- Various glass and single use flasks can be connected
- Individual aeration for each shake flask with humidity and CO₂ controlled air from the incubator



Check if TOM is suitable for your process

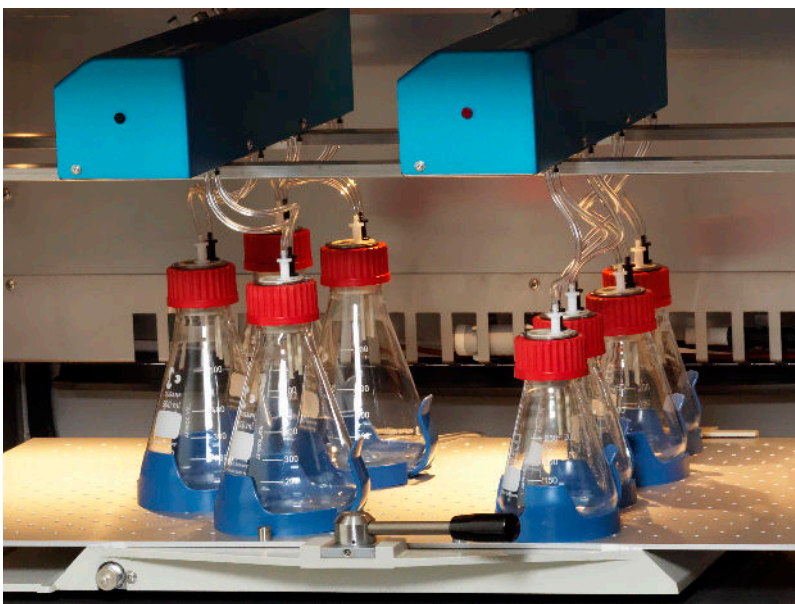
Technical Data

Temperature range	15-40°C
Shaking speed	< 600 rpm
Orbital shaking diameter	3 mm – 70 mm
Flask size	125 mL – 500 mL (large flasks on request) 250 mL – 500 mL (cell culture flasks)
Filling volume	> 4% of nominal flask volume
Humidity	< 85% rel. humidity
Concentration range	CO ₂ < 16% O ₂ < 30%
Maintenance	CO ₂ sensor calibration once per month Pump adjustment after 1 year
Lifetime	O ₂ Sensor < 2 years CO ₂ Sensor < 3 years Pumps < 3 years

Technical data subject to change

Order information

SMT050003	TOM starter kit – pump aeration
SMT000006	Cell culture aeration cap 250 mL



Kuhner TOM Expert

Feel free to ask our team of global Kuhner TOM experts for detailed information.