

Laboratory UV and Ozonization Reactor (LUVOR)



DIMENSIONS

Dimension	approx. 1500 x 600 x 1950 mm (L x B x H)
Weight	approx. 250 kg
Material (wetted parts)	FEP / PTFE / POM / PEEK / FKM / PVC / Glass and stainless steel (group V4A)
IP protection class	IP 54

ELEKTRICAL DATA

Connection for power supply	400V / 50 Hz / 3-phase / 16 A-CEE
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DATA

Storage tanks	1 reactor (approx. 11 l, stainless steel, heatable or coolable with double jacket) 1 feed and outgas tank (approx. 11 l, stainless steel)
Pumps	1 gear pump (liquid phase), 13,3 l/h, up to 2 bar 1 measuring gas pump (gas phase), 12 l/h, up to 7 bar
Ozone	2 ozone micro cells (electrolytic ozone generator) or via an external ozone generator

UV light	1 LED immersion lamp 100 W in borosilicate glass (365 nm, incl. cooling, power corresponds to a 1000 W medium pressure radiation source)
Ozone destructor	1 residual ozone destructors (active carbon)
Temperature range	up to 50 °C
Pressure range	up to 0,3 bar

(The specified technical data are maximum values. They do not coincide all at the same time!)

SENSORS	MEASURING RANGE	QUANTITY
Pressure	0 - 6 bar	(2 pieces)
Volume flow (liquid phase) (magnetic-inductive flow meter)	0,1 – 25 l/min	(1 piece)
Volume flow (gas phase) (float flow meter)	0,1 – 0,55 l/h	(1 piece)
Volume flow (gas phase) (float flow meter)	0,4 – 3,4 l/min	(2 pieces)
Volume flow (gas phase) (float flow meter)	1 – 42 l/min	(1 piece)
Level control (outgas tank)	Guided microwave	(1 piece)
pH-measurement (liquid phase)	pH-Glass electrode	(1 piece)
Temperature (PT 100)	0 – 100 °C	(1 piece)
Ozon-measurement	10 – 1000 ppb	(1 piece)
UV-sensor	W/m ² , mW/cm ² oder %	(1 piece)

FIELD OF USE

Comparison of oxidation experiments in the liquid and gaseous phase

Experiments to combine different oxidation methods

Experiments on the long-term behavior of various materials in an oxidative environment

Experiments to optimize oxidation processes

Schematic view of Laboratory UV and Ozonization Reactor

