

Dome Diffusers KTL™

Mass-Transfer Equipment

OZONE

Following production it is necessary to introduce the ozone to the process medium. One of the most popular methods is by means of porous diffusers mounted in a contact chamber.

APPLICATIONS

- Drinking water treatment
- Waste treatment
- Process related applications

MAIN CHARACTERISTICS

- High mass-transfer efficiency
- Even bubble formation
- Long service life

DOMES DIFFUSERS KTL™ TECHNOLOGY

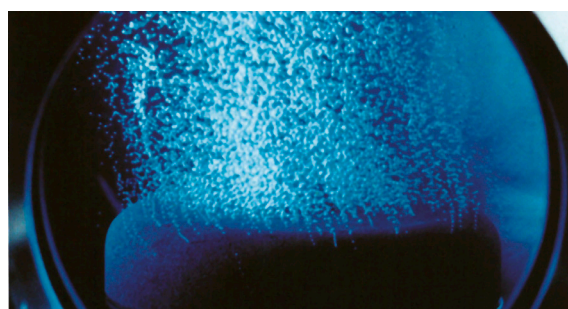
It is important that the ozone is introduced to the process in the most efficient way. One of the more popular methods is to install dome type diffusers at the bottom of a contact tank and to bubble the ozone containing gas through the water volume in the tank.

The application, medium flow rate and ozone dose rate are critical factors which will determine the size and number of dome diffusers required and will also influence the geometry of the contact tank. As an example, drinking water applications require a relatively low ozone dose, short contact time and one ozonation chamber with diffusers whereas waste treatment plants require a much higher ozone dose, longer contact times and a multiple of ozonation chambers.

HOW IT WORKS

After leaving the generator the ozone containing feed gas is routed to the process as quickly as possible. When porous diffusers are used to introduce the ozone to the process, these are typically located at the bottom of the ozonation chamber in a contact tank with a hydraulic head of five to six meters.

The diffuser elements are designed that a cloud of homogeneous small-sized bubbles are produced creating a large bubble/water contact area to ensure a maximum mass-transfer rate.

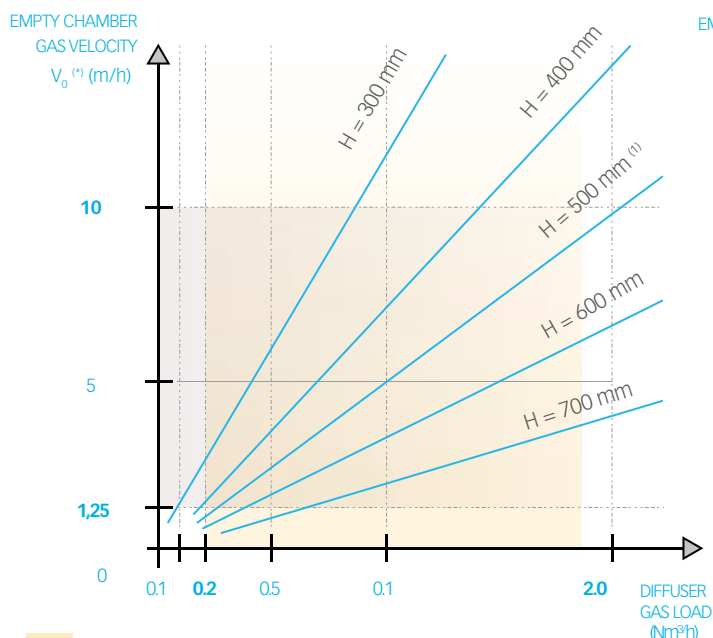


PRODUCT HIGHLIGHTS

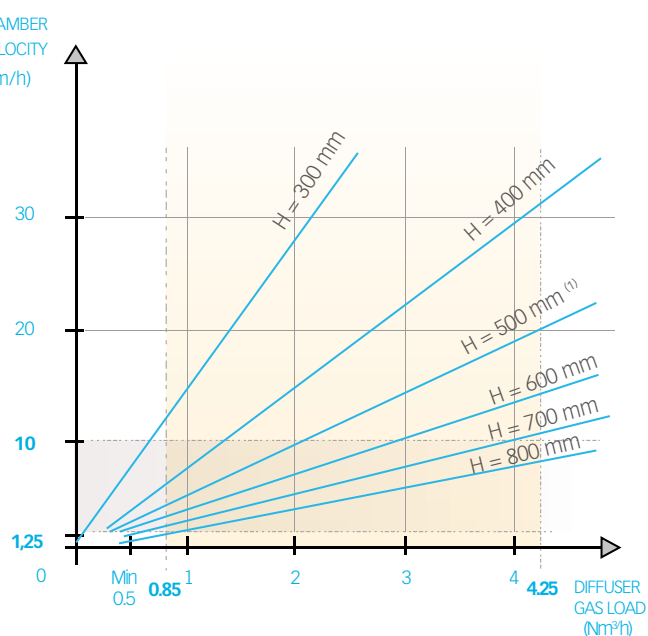
- > Mass-transfer rate >90%
- > Homogeneous bubble formation
- > Highly resistant ceramic material
- > Extreme stability over long service periods
- > Easy installation
- > Maintenance-free
- > Widely accepted technology

TECHNICAL DATA

Diffuser Type 120 KTL



Diffuser Type 180 KTL



■ NORMAL OPERATION FOR DISINFECTION

■ NORMAL OPERATION RANGE

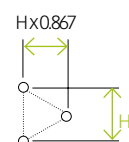
(1) Standard Diffusor Spacing

(*) $V_0 = 1.1534 \times \frac{\text{GAS LOAD}}{H^2}$

KTL™ MODEL	Gas Flow Rate (Nm³/h)	Materials
120 KTL	0.2 to 2.0	ANSI 316/ceramic/PTFE
180 KTL	0.85 to 4.00	ANSI 316/ceramic/PTFE

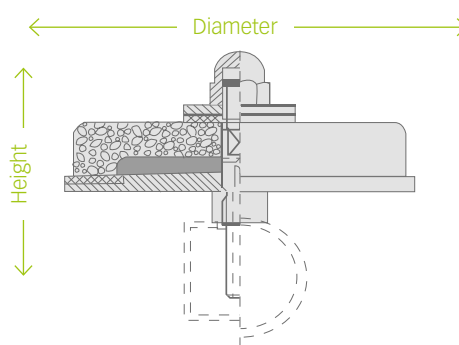
KTL™ MODEL	LxHxW (mm)	Height (kg)
120 KTL	120	~70
180 KTL	180	~90

Suitable for welding on round or square manifold pipes at the bottom of the contact tank



"STAGGERED PATTERN"

Average surface occupied by one diffusor = $0.867 H^2$



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