



ceram
austria

**CERAMIC
HONEYCOMBS
FOR RTOs**



GLOBAL SUPPLIER

Ceram Austria GmbH has produced technical ceramics for over 100 years. We are a world leading supplier of industrial honeycomb ceramics. In addition to honeycomb and plate catalysts for stationary, marine and automotive applications, our specialized know-how also comprises the production of non-catalytic honeycomb ceramics for regenerative thermal processes.

Research and development play a key role at our company. We continually develop and improve our products, adapting them to meet the demands of new requirements and applications.



Ceram Austria GmbH is a global supplier of industrial ceramics.

In addition to our production site in Austria, we operate design, sales and service-based subsidiaries in the USA and South Korea, as well as a liaison office in China. Furthermore, we maintain additional sales partnerships to complete our global footprint.

The brand name “CERAM” has been the company's core name and logo since 1990. Our products and services have been recognized and appreciated worldwide under the CERAM brand ever since.



Production capacity
up to 40.000 m²/a



More than
400 employees

USP

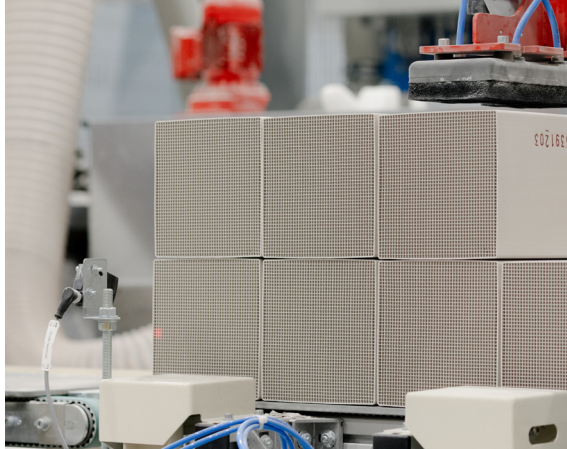
Core competencies
across the entire
value chain



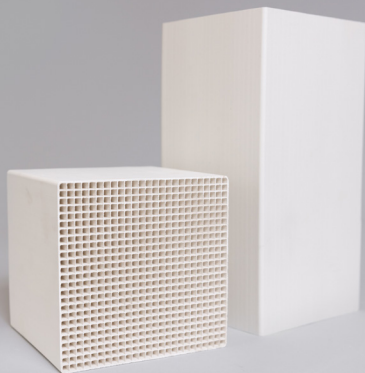
Successful
since
1921

Ceramic honeycombs – the advanced heat storage media for Regenerative Thermal Oxidizers (RTO)

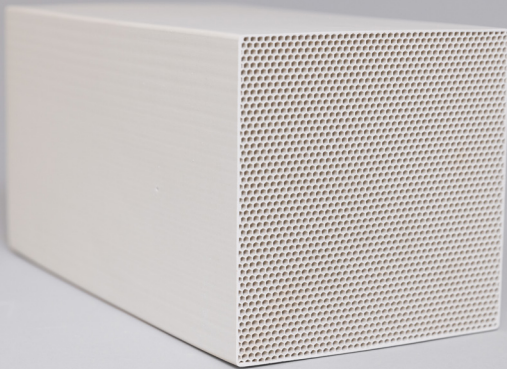
The most important advantage of structured honeycomb packings over conventional random packing technologies is that it provides an optimum heat recovery efficiency at a low pressure drop. A defined laminar gas flow prevents particle adsorption and corrosion attacks. Honeycomb units are easy and cost- efficient to operate and maintain, making them an extremely reliable and economical solution for the design of Regenerative Thermal Oxidizers.



CERAMIC HONEYCOMBS



+ 5 Million t
CO₂ saved per year
through CERAM heat
storage media additionally

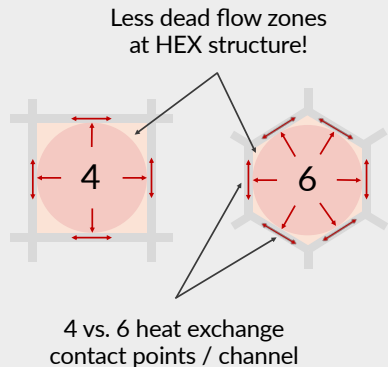


CERAM ceramic honeycomb elements are available in various structures and materials. This enables the RTO system maker to provide the optimum design for every emission problem. Standard dimensions (l x w x h) of CERAM honeycomb elements are 150 x 150 x 300 mm and 150 x 150 x 150 mm.

Two general honeycomb cell structures are available: standard square-celled and advanced hexagonal cell structures.

HEX Cell Tech

The advantages of honeycombs with hexagonal channels are manifold. Hexagonal cell structures represent the densest packing of channels per area. Compared to square shaped cells there are 15 % more channels based on same hydraulic diameter, which results in a 15 % higher active flow through area and corresponding lower pressure drop at same flow rates. Furthermore, it provides approx. 72 % more active heat exchange points than the standard cell structure which leads to significantly higher thermal recovery rates. In total approx. 10 - 15 % less gas consumption vs standard square cell types.



STANDARD CELL STRUCTURES**GEOMETRICAL**

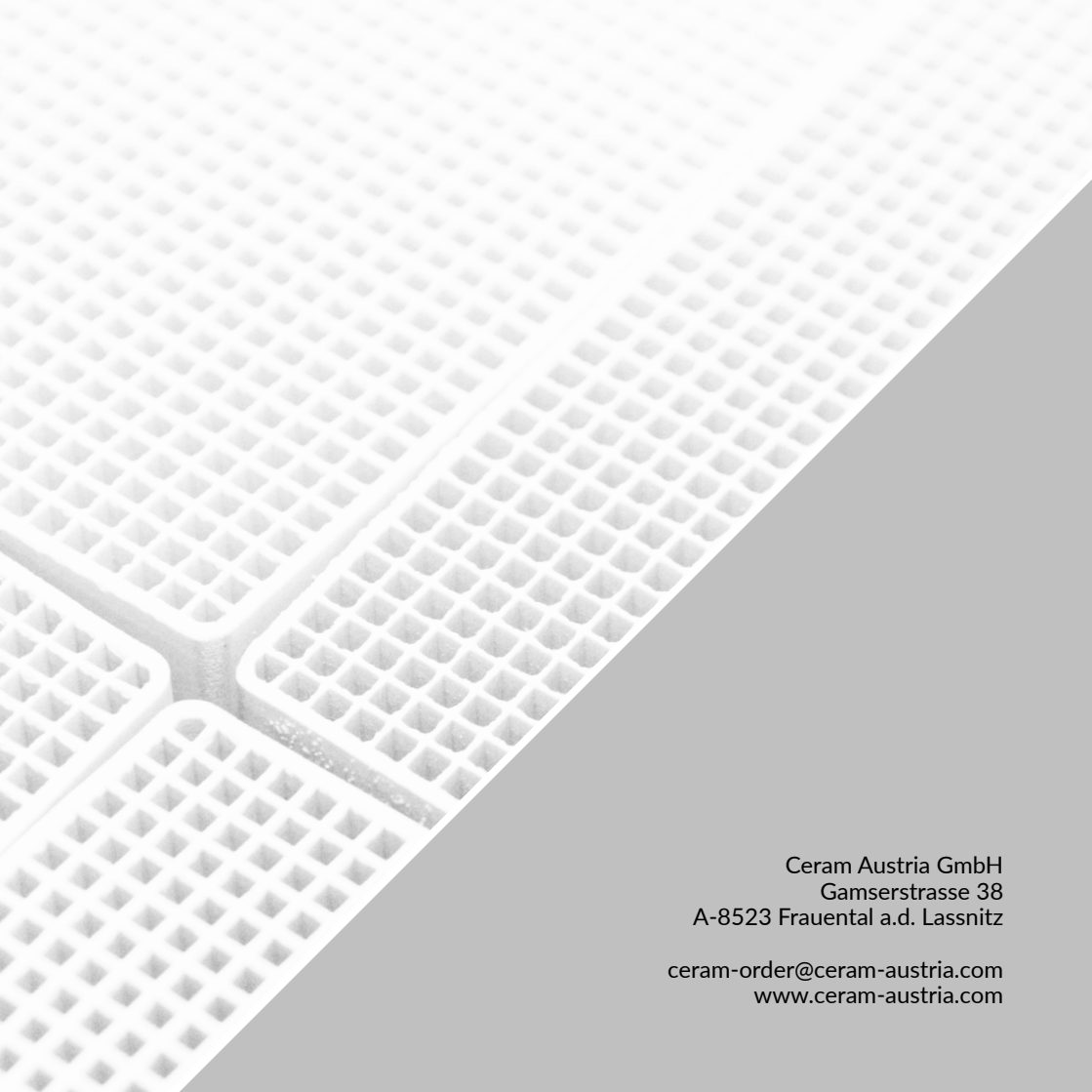
Cell count area [150 x 150 mm]	Channel opening [mm]	Cell wall thickness [mm]	Open frontal area [%]
25 x 25	4,9 x 4,9	0,9	68
HEX25	$d_{\text{hyd}} = 4,9$	0,9	68
32 x 32	3,8 x 3,8	0,8	66
HEX32	$d_{\text{hyd}} = 3,8$	0,8	65
37 x 37	3,4 x 3,4	0,6	72
40 x 40	2,9 x 2,9	0,7	63
43 x 43	2,9 x 2,9	0,5	72
HEX43	$d_{\text{hyd}} = 2,9$	0,55	68
46 x 46	2,7 x 2,7	0,5	69
50 x 50	2,4 x 2,4	0,55	64
50L x 50L	2,5 x 2,5	0,45	69
60 x 60	2,0 x 2,0	0,45	64

PROPERTIES

Specific surface area [m ² /m ³]	MAIN APPLICATION
580	High dust / SiO ₂ / Bio Ethanol
582	High dust / SiO ₂ / Bio Ethanol
724	High dust / Alkaline Attacke i.e.: WPI ¹ and Index (top layer CR20)
690	High dust / Alkaline Attacke i.e.: WPI and Index (top layer CR20)
851	Standard application high TER ² , low Δp
880	Standard application high TER
1000	Standard application high TER
972	Standard application high TER
1039	Standard application high TER, low Δp
1090	Standard application very high TER, low dust
1139	Standard application very high TER, low dust
1310	Standard application very high TER, no dust

¹ Wood Products Industry

² Thermal Efficiency Rate



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