

TURBOdek®

Maximum Cooling to Optimize
Combustion Turbine Output

ADVANTAGES

- Increase turbine power
- Output 1% per °F
- Improved thermal efficiency
- Greater NOx emission reduction
- Sound attenuation



TURBOdek® Evaporative Media

High Performance Cooling Media for Gas Turbine Applications

TURBOdek is a high efficiency, low pressure drop, low drift media that delivers maximum cooling to optimize combustion turbine output. TURBOdek features Munters' patented unequal angle, unequal flute design for high velocity evaporative cooling up to 750 fpm. Manufactured from Munters' heavy cellulose media, that has been treated to resist deterioration and is protected by Munters' algae and weather resistant edge coating, makes TURBOdek easier to clean and maintain as well as extends media life.



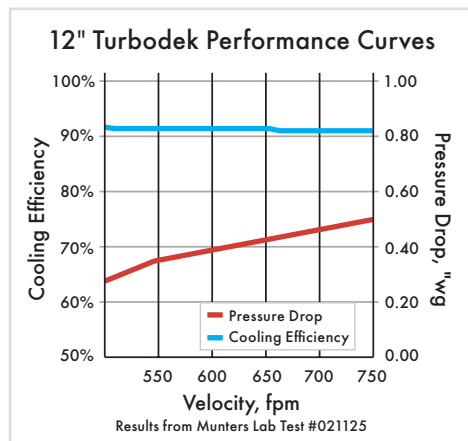
Produce 20% More Electricity with Inlet Air Cooling

Cooler air, being denser, gives turbines a higher mass flow rate and pressure ratio, resulting in an increase in power output and efficiency. It has been determined that the reduction of air inlet temperature improves the gas turbine output by as much as 1% per °F. Turbines utilizing evaporative cooling systems

have reported an increase in capacity as high as 20% during peak summer demand. Increasing the water vapor in the air stream tends to lower the amount of oxides of nitrogen produced in the combustion process.

At the same time, the air scrubbing effect of Munters' evaporative cooling

media contributes to the removal of many airborne contaminants and particulates before they enter the turbine. This effectively extends the life and decreases the maintenance required on filters and other equipment.



Estimated Annual MWHR Gains from Replacing Current Media with TURBOdek

City	Titan130	LM6000	FT8 Twin	7EA	7FA	9FA	501F	701F
Phoenix, AZ	213	722	854	1421	2858	4254	3099	4203
Houston, TX	63	213	252	420	844	1256	967	1241
Tampa, FL	72	245	290	482	970	1443	1110	1426
New York, NY	50	168	199	331	665	990	721	976
Chicago, IL	43	145	171	284	572	851	620	841
Atlanta, GA	59	201	238	395	796	1185	863	1170

Estimations based on weather bin data for selected cities and Munters lab test for 12" CELdek vs. TURBOdek media at 750 fpm average face velocity.

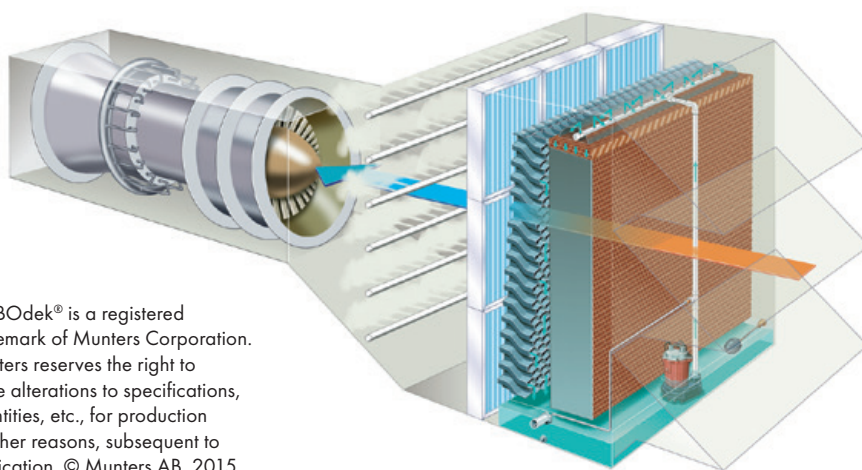
Pre-cooling Systems Available for New and Retrofit Applications

In new turbine construction, a TURBOdek evaporative cooling system is integrated into the inlet housing. In retrofits, TURBOdek is frequently installed in front of filters that remove particulates from inlet air. This simple retrofit installation typically involves

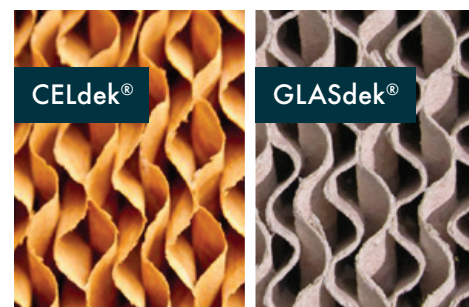
removing the turbine inlet weather hoods and bolting the cooling system to the inlet. Whether a new installation or retrofit application, Munters' TURBOdek systems simply produce more electricity per cubic meter of natural gas.

Self-cleaning Design

TURBOdek's unique self-cleaning design produces significant improvement in cooling efficiency with less than 0.21"wg at 500 ft/min and 91% efficiency. Consequently, turbine air inlet houses can be smaller and still achieve the cooling needed, resulting in reduced material.



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In addition to TURBOdek evaporative cooling media, Munters offers standard CELdek® and the UL fire rated GLASdek® media for applications requiring adherence to fire codes.

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