ColdLogik™

Hybrid adiabatic cooler

State of the art ambient cooling

ENERGY SAVING
Green Product

Product overview and technical data

U Systems

Key benefits of our hybrid solution

- Water savings - the system operates dry for the majority of the year, only when the ambient air temperature gets close to the set point will the adiabatic system operate. This can be as little as 1 or 2% of the year.
- From 82kW to 572kW
- No spray or pooling - mains water is delivered directly to pads via a pumping system to ensure adiabatic water is correctly distributed.
- No risk of bacteria - excess water is re-circulated via a UV filter before being delivered back to the pads and adiabatic water is refreshed on a regular basis.
- No risk of contamination - process water operates in a closed circuit.
- Plume free - as saturated air passes through the coil it is heated away from saturation and creates no plume.
- No need for chemical water treatment.
- Flexibility with siting - can be located around other pland and machinery without any risk of equipment getting wet from adiabatic spray.

ColdLogik CL20 rear cooler solution

Leak prevention system (LPS) on a skid

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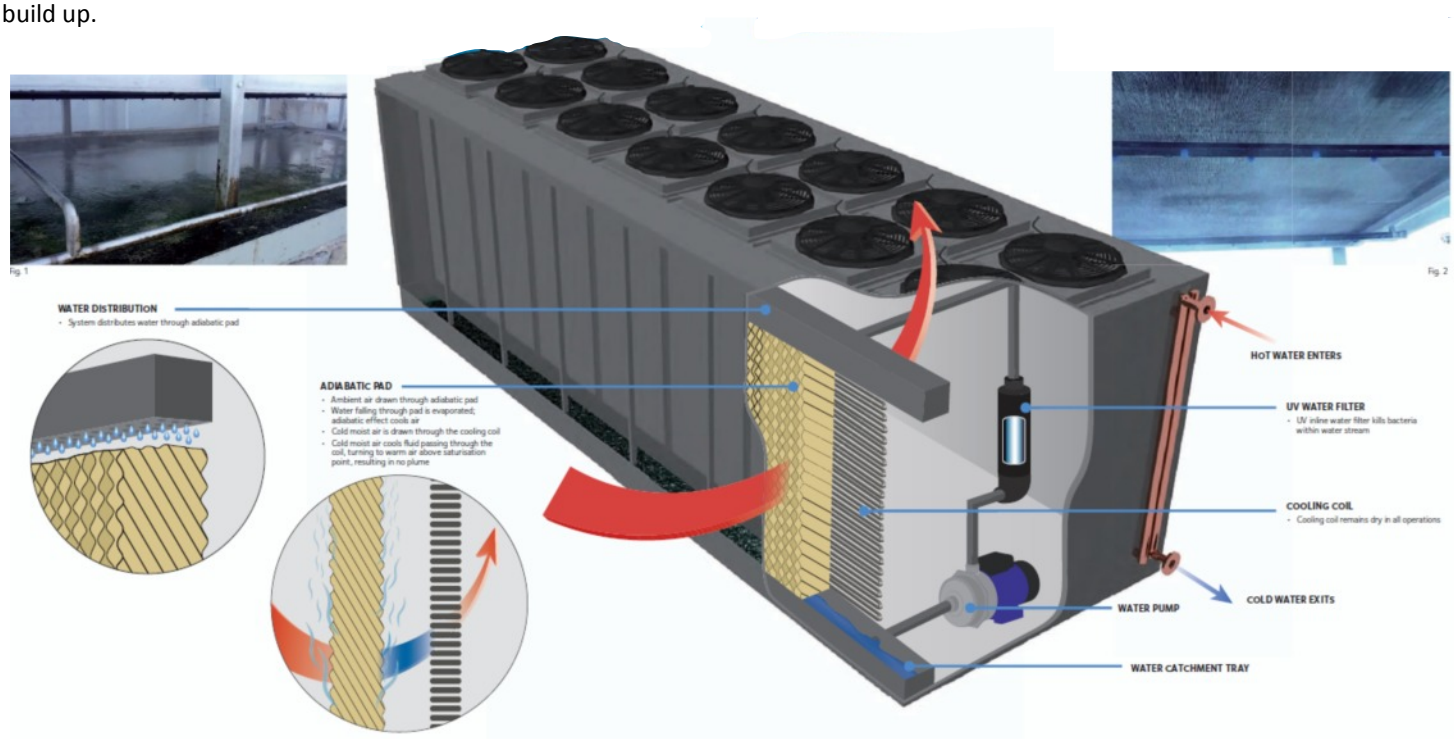
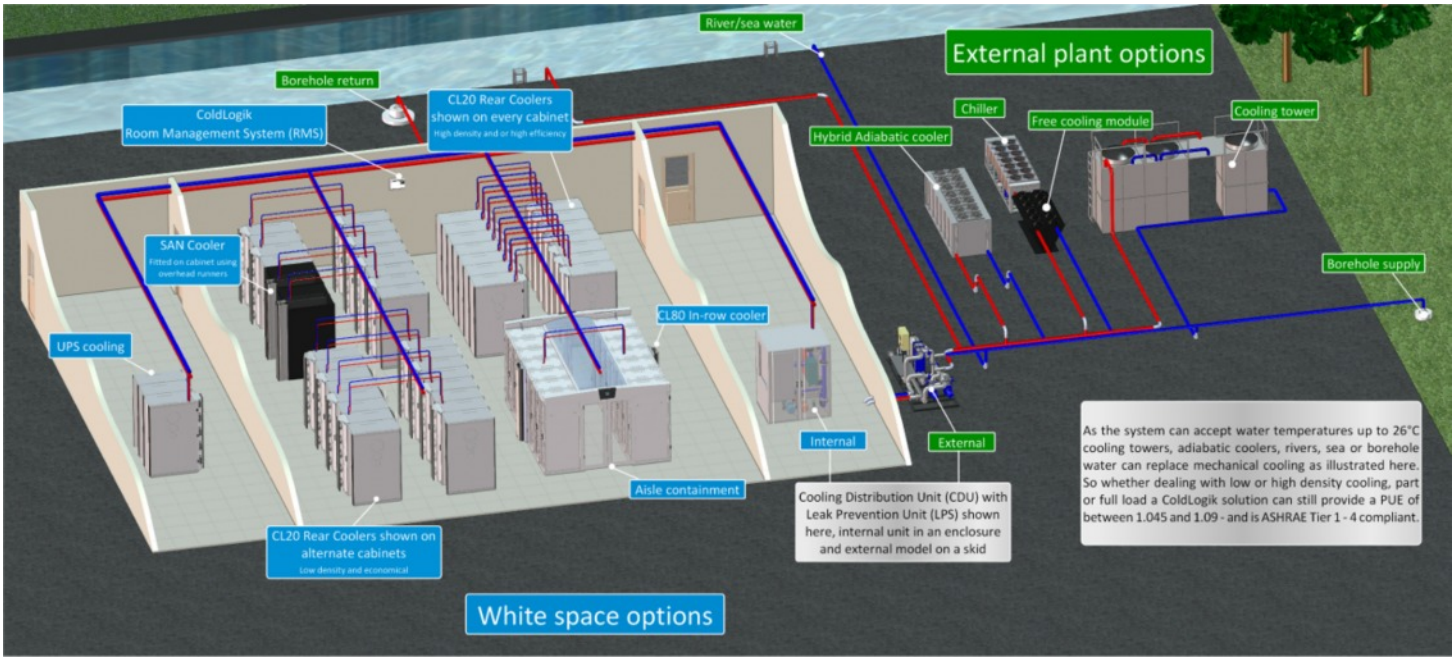
Why choose adiabatic hybrid cooling

Standard design adiabatic coolers use spray headers to inject water into air streams. If excess water spray isn't evaporated by ambient air, pooling results (fig. 1). As well as causing a slip hazard, there's a risk of Legionella bacteria breeding within the water pool.

In addition, adiabatic coils can easily become blocked by salt, even with the use of softened water. Water softeners simply change hard salt in water to soft salt which will still attach to the coils (fig. 2). If the coils aren't totally clean, there is a substantial loss of air flow and cooling capacity, giving a very inefficient cooling system.

If cooling towers are used as an alternative, regular maintenance and water treatment is required to eradicate any risk of bacterial build up.



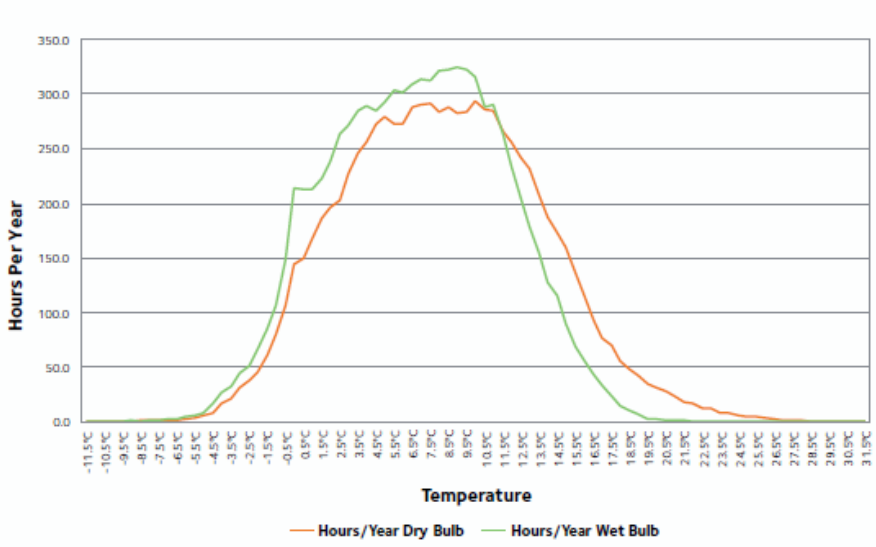


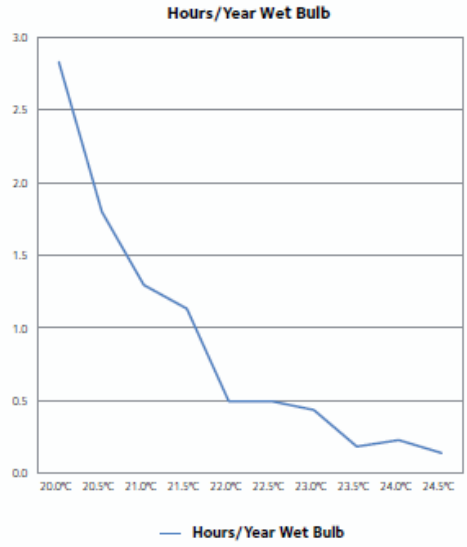
Overview of white space and external plant options - featuring a variety of ColdLogik solutions

Dimensional and Technical information

Model ADB-EC		100	200	300	400	500	600	700	800	900	1000
Duty kW*	kW*	82	162	248	322	364	410	458	478	526	572
Air volume	m³	11.1	22.3	33.4	44.5	50.1	55.6	61.2	66.8	72.3	78.0
Fluid entering temp	°C	31	31	31	31	31	31	31	31	31	31
Fluid leaving temp	°C	25	25	25	25	25	25	25	25	25	25
Glycol	%	25	25	25	25	25	25	25	25	25	25
Ambient	°C	35	35	35	35	35	35	35	35	35	35
Wetbulb	°C	21	21	21	21	21	21	21	21	21	21
Fluid flow rate	m³/hr	3.6	7	10.7	14.4	15.7	17.8	19.8	20.6	22.7	24.7
2 x inlet/outlet		40	65	80	80	80	80	80	100	100	100
Coil surface	m³	322	644	967	1289	1450	1611	1773	1934	2095	2257
Internal volume	litres	82	153	223	288	321	356	386	421	456	491
Fans	No.	2	4	6	8	10	10	10	12	12	14
Type		EC	EC	EC	EC	EC	EC	EC	EC	EC	EC
Total fan power input	KW	5.074	10.148	15.222	20.296	25.37	25.37	25.37	30.444	30.444	35.518
75% fan power		42%	42%	42%	42%	42%	42%	42%	42%	42%	42%
50% fan power		12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
Total FLC	Amps	7.8	15.6	23.4	31.2	39	39	39	46.8	46.8	54.6
Noise level	dB(A) @ 10m	59	62	64	65	66	66	66	67	67	68
Height	mm	2718	2718	2718	2718	2718	2718	2718	2718	2718	2718
Width	mm	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900
Length	mm	1345	2545	3745	4945	5545	6145	6745	7345	7945	8545
Dry weight	kg	1247	1945	2623	3290	3732	4056	4284	4653	4893	5238
Water consumption	Litres per min	5.4	10.8	16.2	21.5	24.2	26.9	26.9	32.3	35.0	37.7
Annual water usage	m³	6.79	13.43	20.54	27.49	30.14	33.95	37.92	39.58	43.56	47.36

** Duty based on cooling 30% ethylene glycol/water 31°C to 25°C. Dry bulb 32°C/wet bulb 21°C*





Graph depicts the average wet and dry bulb condition for Leeds, Yorkshire. Assuming a 26°C water/glycol temperature, the unit works dry for almost all the year with only little use as an adiabatic cooler.

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