

Sensible Cooler Range

Meeting the required ASHRAE server inlet conditions with reduced energy cost and without mechanical refrigeration

Environmental legislation leading to phase down of HFC refrigerants initiated our latest development programme giving rise to the new Hydro-DENCO® sensible cooler range

Apart from EC fans on both indoor and outdoor units, very high efficiency coils and touch screen controls, further refinements mean that the required pump, expansion vessel and controls for the low energy side can all be factory fitted, integral to the room unit.

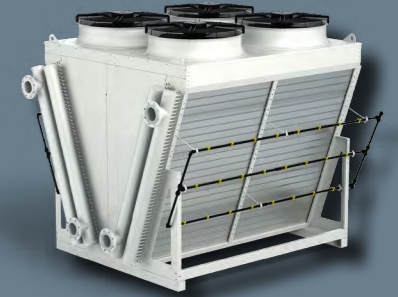
Hydraulic pressure losses are kept to an absolute minimum, there are no concerns with heat exchanger fouling, and the electronically commutated pump motor will have a much lower power consumption than with alternative systems.

A nominal 300 kW cooling system would merely require the installation of 80mm flow and return pipework

Units can be installed as autonomous, stand alone systems or on a conventional pipework distribution system as required.



A very high efficiency indoor cooling coil allows the use of relatively high fluid temperatures, obtainable all year round from external evaporative coolers, particularly in temperate Northern European Climates



The design philosophy with our Hydro-Denco® systems is to achieve acceptable data centre server cooling requirements without using any mechanical refrigeration, or the high Global Warming Potential (GWP) refrigerants associated with some such systems.

Units are designed to operate with low cost heat rejection such as evaporative fluid coolers, district cooling or heat reclaim systems, all with minimum complexity and risk.

- Reliable
- Energy Efficient
- Scalable
- Flexible
- Zero ODP/GWP
- Integrated Controls



Hydro-DENCO		HD 102	HD 202	HD 302
Sensible Cooling - Hydro	kW	100	150	200
Sensible Cooling - CHW 10° C	kW	250	350	500
Control Air Temperature (Nom)	°C	25	25	25
Control Air Temperature (Max)	°C	28	28	28
Air Volume Flow	m³/s	8	12	16
External Static Pressure	Pa	50	50	50
Fan Motor Power (Total)	kW	5.0	8.0	10.0
Total System Power Input	kW	6.6	10.8	12.2
Fluid Flow Rate (Max)	l/s	5.0	7.5	10.0
Fluid Temperature (Max)	°C	27	27	27
Hydro Denco Pressure Loss	kPa	45	50	45
Fluid Cooler Pressure Loss	kPa	45	48	28
Fluid Concentration	%	25	25	25
Connection Size (Nom)	mm	65	65	80
Hydro Denco Unit Total Height	mm	3200	3200	3200
Hydro Coil Section Height	mm	2500	2500	2500
Hydro Fan Section Height	mm	700	700	700
Hydro Denco Unit Width	mm	1995	2500	3100
Hydro Denco Unit Depth	mm	900	900	900
Hydro Denco Unit Weight	kg	700	850	1400
Matched Fluid Cooler Height	mm	1690	1690	2521
Matched Fluid Cooler Width	mm	1130	1130	2260
Matched Fluid Cooler Length	mm	2066	3466	3970
Fluid Cooler Weight (Wet)	kg	640	1008	2460