

CL80 INROW COOLER

PRODUCT OVERVIEW

ColdLogik CL80 InRow Coolers ensure efficient thermal and energy performance by removing the heat generated by active equipment, preventing hot exhaust air entering space where it is not permitted.

The InRow solution works in conjunction with racks in aisle containment and is available to suit both CAC and HAC configurations.

Warm exhaust air passes over the InRow heat exchanger matrix, either by its own velocity or being pulled through via EC centrifugal fans mounted in the CL80. Heat is rejected to fluid and chilled air is passed back into the ambient space at predetermined temperature.

The InRow coolers can be sited within an existing data centre to work with existing computer room air-conditioning to provide additional cooling. They also reduce energy consumption and remove hot spots.



Performance Examples

Performance examples—these three examples are showing the IRC options , with differing duties attainable when regulating or changing the water temperature. Other performance duties are attainable when calculating bespoke project specific requirements.

Maximum Duty

Our highest duties offer high performance cooling based on an Industry Standard 14/20°C (57.2/68°F) water supply/return from mechanically cooled external plant, and has the ability to offer cooling capacities of up to 74 kW per rack.

CL80 Cooling Capacity		300w	600w
Maximum Duty	kW	69	74
Air flow (50Hz 230v)	m ³ /h (cfm)	8535 (5027)	8535 (5027)
DB Air On	°C (°F)	45 (113)	45 (113)
DB Air Out	°C (°F)	19 (66.2)	17 (62.6)
Water In	°C (°F)	14 (57.2)	14 (57.2)
Water Out	°C (°F)	20 (68)	20 (68)
Volume Fluid Flow	m ³ /h (l/s) / USGal/m	9.88 (2.7) / 43.5	10.67 (3.0) / 47.0
Fluid Velocity	m/s (ft/s)	1.95 (6.2)	1.76 (5.6)

Nominal Duty

This is a more general, workable duty with 18°C/64.4°F water inlet and covers most requirements in Europe while also maintaining a room temperature of 27°C/80.6°F or lower. Delivering performance of up to 63kW per rack.

CL80 Cooling Capacity		300w	600w
Nominal Duty	kW	58	63
Air flow (50Hz 230v)	m ³ /h (cfm)	8535 (5027)	8535 (5027)
DB Air On	°C (°F)	45 (113)	45 (113)
DB Air Out	°C (°F)	23.1 (79.3)	21.2 (75.2)
Water In	°C (°F)	18 (64.4)	18 (64.4)
Water Out	°C (°F)	25 (77)	25 (77)
Volume Fluid Flow	m ³ /h (l/s) / USGal/m	7.14 (2.0) / 31.5	7.77 (2.2) / 34.2
Fluid Velocity	m/s (ft/s)	1.41 (4.6)	1.28 (4.2)

Efficient Duty

Taking advantage of warmer water temperature inlets of 20°C/68°F the necessity of mechanical cooling is reduced, and allows for most day free cooling. This will provide customers with higher efficiency cooling and lower running costs thus beginning to obtain a return on their investment while maximising real estate.

CL80 Cooling Capacity		300w	600w
Efficient Duty	kW	49	54
Air flow (50Hz 230v)	m ³ /h (cfm)	8535 (5027)	8535 (5027)
DB Air On	°C (°F)	45 (113)	45 (113)
DB Air Out	°C (°F)	26.5 (79.7)	24.6 (76.3)
Water In	°C (°F)	20 (68)	20 (68)
Water Out	°C (°F)	30 (86)	30 (86)
Volume Fluid Flow	m ³ /h (l/s) / USGal/m	4.23 (1.2) / 18.6	4.67 (1.3) / 20.6
Fluid Velocity	m/s (ft/s)	0.84 (2.8)	0.77 (2.5)

Cooling capacity data is shown for illustration purposes.

Legend

DB - Dry Bulb

ΔT - Delta T / difference supply and return temperatures

Air On - Air onto coil / air off active equipment

Air Off - Air off coil / air out from ColdLogik cooler



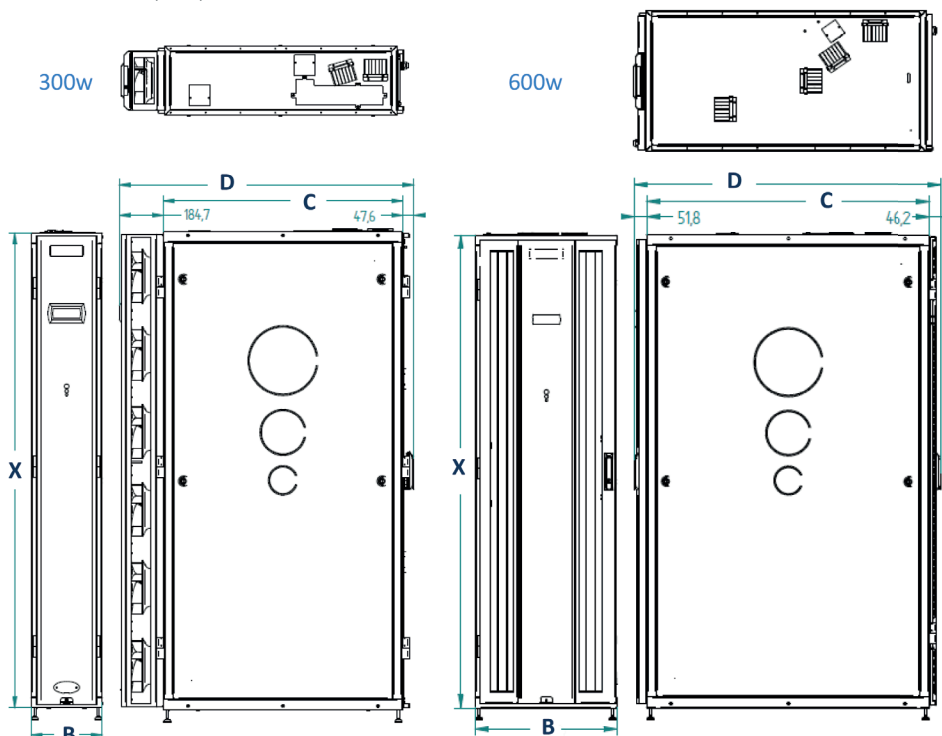
Technical Data

		CL80			
Technical Information		42U*			
		300w		600w	
		1000d	1200d	1000d	1200d
Height (X)	mm (")	2000 (78.4)			
Width (B)	mm (")	300 (11.8)		600 (23.6)	
Depth (C)	mm (")	1000 (39.4)	1200 (47.2)	1000 (39.4)	1200 (47.2)
Max Depth (D)	mm (")	1232 (48.5)	1432 (56.4)	1098 (43.2)	1298 (51.1)
Dry Weight	kg (lb)	140 (308.6)	168 (370.4)	200 (440.9)	240 (529.1)
Wet Weight	kg (lb)	150.7 (332.2)	170.7 (376.3)	212.9 (469.3)	252.9 (557.5)
Paint	Finalised on order	RAL 7035 (Light Grey) RAL 9005 (Black)			
Communication Protocol		MODBus over TCP/IP (BACnet, SNMP optional)			
Connections	mm (")	25 (1)			
Water Volume Capacity	L (USGal)	10.7 (2.8)		12.9 (3.4)	
Maximum RDC Current Draw	A	9.5			

CL80 Combined Fan Performance			
Type: Backward Curved Centrifugal			
Number of fans		6	
Air flow	m ³ /h (CFM)	30%	2561 (1508)
		70%	5975 (3519)
		100%	8535 (5027)
Current 50Hz 230v / 60Hz 208v	A	30%	0.76 / 0.84
		70%	3.54 / 3.91
		100%	9.03 / 9.98
Power Input 50Hz 230v	W	30%	64
		70%	379
		100%	1014
Total Fan Noise	dB	30%	68
		70%	83
		100%	89

**Based on positive pressure environment. PF 1. Others may vary.

*Blanking panels available for 47U, 48U, 52U



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