

THERMOELECTRIC COOLING UNIT SPECIFICATION SHEET

COLTEC

Certificates

- CE Compliant

Application

Thermoelectric Cooling Units are used for the most demanding industries such as industrial and electronic enclosures, medical equipment, laboratory instruments, aerospace, semiconductors & telecommunications equipment. Uses range from simple food and beverage coolers for an afternoon picnic to extremely sophisticated temperature control systems in missiles and space vehicles. A thermoelectric cooling unit permits the lowering of the temperature of an object below ambient temperature as well as stabilizing the temperature of objects above ambient temperature. A thermoelectric cooler is different from a heat sink because it provides active cooling, unlike a heat sink, which provides only passive cooling. Ariel Technology Inc. provides a variety of solutions for different application as follows:

- Air to Air Thermoelectric Cooling unit (COLTECN series) Telecommunication Battery Temperature Control, Industry Equipment Power Cabinet Cooling, etc.
- Air to Plate Thermoelectric Cooling unit (COLTECAP series) Medical Devices, Instrument and Laboratory Test Equipment, Direct Contact Cooling Design, etc.
- Air to Liquid Thermoelectric Cooling unit (COLTECAL series) Medical Hairdressing Devices, Laser Equipment, or other needed cooling device applications.
- Liquid to Liquid Thermoelectric Cooling unit (COLTECLL series) LED Manufacturing Evaporating Systems, Analytic Instruments, etc.

Features

- Zero maintenance, no filters, compressors, or refrigerant required
- Safe for the environment
- No air exchange between ambient and cabinet air
- Continuous worry-free operation
- Installs vertically or horizontally. Can be installed on any plate thickness by means of screws
- Uses quality ball bearing fans
- Standard direction airflow
- Ingress Protection is NEMA 12/ IP 55



CE

THERMOELECTRIC COOLING UNIT

Colors

- RAL 9003 – White

Advantages

Thermoelectric Cooling Units have no moving parts and do not require the use of chlorofluorocarbons. Therefore, they are safe for the environment, reliable, and virtually maintenance-free. They can be operated in any orientation and are ideal for cooling devices that might be sensitive to mechanical vibration. Their compact size also makes them ideal for applications that are size or weight limited, and where even the smallest compressor would have excess capacity.

Air to Air Thermoelectric Cooling Unit (COLTECN series)

Model	Cooling Capacity	Voltage	Stable Current	Dimensions		Weight		Ambient Temp. Range	
	(W-BTU/hr)			(Vdc)	(A)	(mm)	(Inch)	(Kg)	(lb)
COLTECN01512-55	19-65	12	2.2 ±10%	121x100x80	4.76x3.94x3.15	0.6	1.32	-10 TO +60	14 TO +140
COLTECN02512-55	25-85	12	2.5 ±10%	108X100X80	4.25X3.94X3.15	0.6	1.32	-10 TO +60	14 TO +140
COLTECN03512-55	35-120	12	3.9 ±10%	144X120X103	5.67X4.73X4.05	1.1	2.43	-10 TO +60	14 TO +140
COLTECN05012-55	50-170	12	8.2 ±10%	148X160X123	5.83X6.30X4.84	1.8	3.97	-10 TO +60	14 TO +140
COLTECN05024-55	50-170	24	4.0 ±10%	160X122X147	6.30X4.80X5.79	1.8	3.97	-10 TO +60	14 TO +140
COLTECN-08024-55	80-270	24	5.0 ±10%	241X156X210	9.49X6.14X8.27	2.8	6.17	-10 TO +60	14 TO +140
COLTECN10012-55	100-340	12	12.6 ±10%	241X156X210	9.49X6.14X8.27	2.8	6.17	-10 TO +60	14 TO +140
COLTECN10024-55	100-340	24	8.2 ±10%	200X180X89	7.87x7.09x7.09	3.0	6.61	-10 TO +60	14 TO +140
COLTECN10048-55	100-340	48	2.5 ±10%	200x180x180	7.87x7.09x7.09	3.0	6.61	-10 TO +60	14 TO +140
COLTECN20048-55	200-680±10%	48	7.5 ±10%	400X200X180	15.75X7.87X7.09	7.5	16.53	-10 TO +60	14 TO +140

THERMOELECTRIC COOLING UNIT

Air to Plate Thermoelectric Cooling Unit (COLTECAP series)

Model	Cooling Capacity	Voltage	Stable Current	Dimensions		Weight		Ambient Temp. Range	
	(W-BTU/hr)			(Vdc)	(A)	(mm)	(Inch)	(Kg)	(lb)
COLTECAP04012	42-145	12	4.1 ±10%	122X100X82	4.80X3.94X3.23	0.8	1.76	0 TO +60	32 to +140
COLTECAP05012	50-170	12	8.5 ±10%	160x122x82	6.30x4.80x3.23	1.1	2.43	0 TO +60	32 to +140
COLTECAP05024	50-170	24	4.3 ±10%	160x122x82	6.30x4.80x3.23	1.1	2.43	0 TO +60	32 to +140
COLTECAP08024	80-270	24	4.3 ±10%	203x155x152	7.99x6.10x4.98	3.6	7.94	0 TO +60	32 to +140

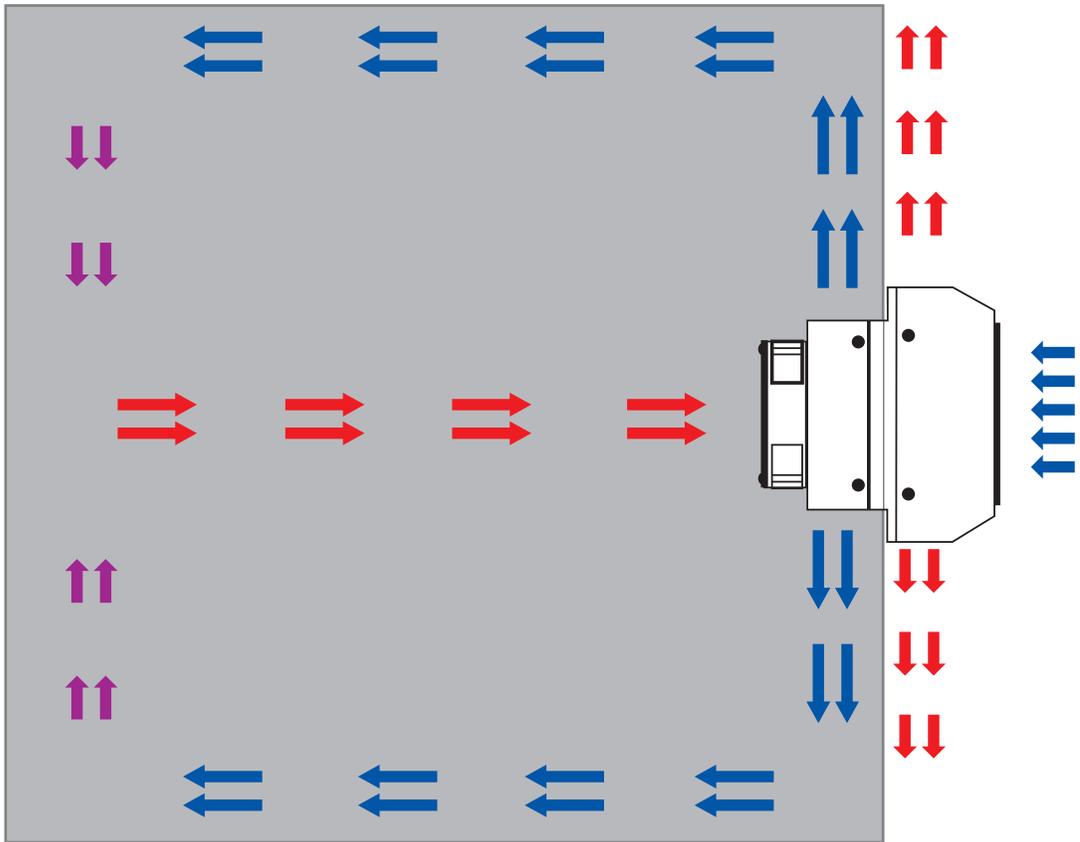
Air to Liquid Thermoelectric Unit (COLTECAL series)

Model	Cooling Capacity	Voltage	Stable Current	Dimensions		Weight		Ambient Temp. Range	
	(W-BTU/hr)			(Vdc)	(A)	(mm)	(Inch)	(Kg)	(lb)
COLTECAL05012	50-170	12	8.0 ±10%	160X120X84	6.30X4.7X3.3	1.5	3.30	-10 TO +55	14 to +131
COLTECAL05024	50-170	24	4.0 ±10%	160X120X84	6.30X4.7X3.3	1.5	3.30	-10 TO +55	14 to +131
COLTECAL08024	80-270	24	5.1 ±10%	203x155x147	7.99x6.10x5.8	3.1	6.83	-10 TO +55	14 to +131
COLTECAL10012	100-340	12	14.3 ±10%	203x155x147	7.99x6.10x5.8	3.1	6.83	-10 TO +55	14 to +131
COLTECAL10024	100-340	24	5.7 ±10%	124X122X97	8.66X6.10X3.8	1.8	3.96	-10 TO +55	14 to +131
COLTECAL15024	150-510	24	8.2 ±10%	160X155X150	6.3X6.1X5.9	3.1	6.83	-10 TO +55	14 to +131
COLTECAL30024	300-1025	24	14 ±10%	275X161X161	10.83X6.34X6.34	5.0	10.91	-10 TO +55	14 to +131

Liquid to Liquid Thermoelectric Cooling Unit (COLTECLL series)

Model	Cooling Capacity	Voltage	Stable Current	Dimensions		Weight		Ambient Temp. Range	
	(W-BTU/hr)			(Vdc)	(A)	(mm)	(Inch)	(Kg)	(lb)
COLTECLL08024	80-270	24	4.2	200x36x60	7.87x1.42x2.36	1.2	2.65	0 TO +60	32 to +140
COLTECLL32024	320-1090	24	13.3	240x102x60	9.45x4.00x2.36	3.7	8.16	0 TO +60	32 to +140

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